



## Vehicle Availability and Access

Over 7 percent of households in the City of Lincoln have no access to a vehicle in contrast to less than 2 percent of Lancaster County households outside of the City of Lincoln (see Table 7). In general, Lancaster County households outside of the City of Lincoln tend to have much greater access to vehicles (82.8% have access to 2 or more vehicles) as compared with households located within the City of Lincoln (56.5% have access to 2 or more vehicles) (see Table 7).

**Table 7. Vehicles Available (2000 Households)**

	City of Lincoln		Remainder of the County		Entire Lancaster County	
None	6,618	7%	147	2%	6,765	7%
1	32,751	36%	1,350	15%	34,101	34%
2	36,660	40%	3,550	41%	40,210	40%
3 or more	14,459	16%	3,652	42%	18,111	18%

Source: U.S. Bureau of the Census

In 2000, nearly 7 percent of all households in Lancaster County do not have access to any vehicles, of which one-person households make up over 68 percent of the total (CTPP 2000).

## Employment

According to the 2000 Census, there is an approximately 2.8 percent unemployment rate in the City of Lincoln and approximately 2.7 percent in Lancaster County as a whole (see Table 8). Between 1990 and 2001, the average annual unemployment rate for Lancaster County ranged from a low of 2.1 percent to a high of 2.8 percent.

**Table 8. Employment Status 2000 (Population 16 years and over)**

	City of Lincoln		Remainder of the County		Entire Lancaster County	
Employed	126,176	70%	13,385	71%	139,561	70%
Unemployed	5,027	3%	230	1%	5,257	3%
Armed Forces	488	0.3%	36	0.2%	524	0.3%
Not In Labor Force	47,799	27%	5,166	27%	52,965	27%
Total Pop (16+)	179,490	100%	18,817	100%	198,307	100%

Source: U.S. Bureau of the Census



## ***Key Demographic Findings***

From a review of the compilation of data and information, key findings can be identified and conclusions can be drawn about the impact of changes in the geographic, economic and residential profiles of the City of Lincoln and Lancaster County.

1. Most of the current population of the City of Lincoln is clustered in well-defined areas; however, many newer areas of the City tend to be less dense and less contiguous than older areas.
2. The City of Lincoln has in recent history been adding approximately 32 square miles of land for every 100,000 population added, and is projecting to continue that trend into the future.
3. Significant growth in population and housing is expected over the next 25 years for the City of Lincoln and Lancaster County.
4. Over 30 percent of the current population can be classified as either youth or seniors.
5. Most of the current youth population of the City of Lincoln is clustered in well-defined but different locations than the senior population which is more scattered throughout the community.
6. The population of the City of Lincoln is primarily homogenous (white); however, there is a notable minority population, primarily Asian, concentrated in the downtown area and near the airport.
7. Higher income households are concentrated around the periphery of the City with a heavy concentration of the highest income households exclusively in the eastern portion of the City while the lowest income households are concentrated in the northwest portion of the City near the airport.
8. The gap between the number of owner-occupied and renter dwelling units in the City of Lincoln has grown to a difference of more than 20,000, the largest gap ever.
9. There are many areas of the City where little to no multi-family dwelling units exist.
10. Nearly 57 percent of households within the City of Lincoln have access to 2 or more vehicles while a little more than 7 percent have access to no vehicles. Over 68 percent of those households with access to no vehicles are one-person households.

## TRAVEL BEHAVIOR

The purpose of this task is to produce a valid information base for determining current travel behavior characteristics across a range of user populations.

### Mode Split

Nearly 81 percent of commuters in the City of Lincoln drive alone while less than 2 percent use public transportation to get to work (see Table 9 below). Public transportation use by those who live outside of city limits is nearly non-existent (see Table 9 below). The mean travel time to work for Lancaster County commuters who drive alone is 17.3 minutes as compared to 29.7 minutes for those commuters who use public transportation (CTPP 2000).

**Table 9. Commuter Mode Split (2000)**

	City of Lincoln		Remainder of the County		Entire Lancaster County	
Drive Alone	100,761	81%	10,655	80%	111,416	81%
Carpooled	12,603	10%	1,487	11%	14,090	10%
Public Transportation	1,576	1%	23	0.2%	1,599	1%
Walked	4,221	3%	243	2%	4,464	3%
Other Means	2,096	2%	90	0.7%	2,186	2%
Worked at Home	3,625	3%	771	6%	4,396	3%
Total	124,882	100%	13,269	100%	138,151	100%

Source: U.S. Bureau of the Census

Between 1990 and 2000, Lancaster County experienced a combined 49 percent decrease in the use of alternatives to driving alone (carpool, public transportation, bicycle and walk) (see Table 10).

**Table 10. Change in Lancaster County Commuter Mode Split (1990 to 2000)**

	1990		2000		Change 1990 to 2000	
Drive Alone	87,909	76%	111,416	81%	23,507	27%
Carpooled	14,828	13%	14,090	10%	(738)	(5)%
Public Transportation	2,310	2%	1,599	1%	(711)	(31)%
Bicycle or Walked	6,561	6%	5,692	4%	(869)	(13)%
Motorcycle or Other	678	0.6%	958	0.7%	280	41%
Worked at Home	3,699	3.2%	4,396	3.2%	697	18.8%

Source: U.S. Bureau of the Census, Census Transportation Planning Package (CTPP 2000)

**Journey-to-Work and Place-of-Work**

Approximately 5.5 percent of the current civilian labor force residing in Lancaster County (145,342) works outside of Lancaster County (7,993). The number of journey-to-work, one-way trips departing Lancaster County increased at an average annual rate of 9 percent between 1970 and 2000 ((7,993/2,960)/30). Saline County, located southwest of Lancaster County, has consistently drawn the most trips of any county adjacent to Lancaster County since 1970; however, the rate of attraction has decreased since 1990 (see Table 11). Seward County, located west of Lancaster County, has experienced a steadily increasing rate of attraction since 1970 (see Table 11). The Omaha Metropolitan Area has been steadily increasing its rate of attraction since 1970 to the point that it is the highest drawing employment area for Lancaster County residents outside of Lancaster County in terms of both volume and percentage of total (see Table 11).

**Table 11. Journey-to-Work, One-Way Trips Departing Lancaster County**

	1970		1980		1990		2000	
Saline County	205	7%	529	15%	730	15%	795	10%
Saunders County	123	4%	198	6%	328	7%	556	7%
Seward County	90	3%	211	6%	329	7%	704	9%
Omaha Metro Area	647	22%	699	20%	1409	30%	3,521	44%
Other Ring Counties	377	13%	437	12%	460	10%	940	12%
Other	1,518	51%	1,494	42%	1,471	31%	1,477	18%
Total	2,960	100%	3,568	100%	4,727	100%	7,993	100%

Source: U.S. Bureau of the Census, Journey-to-Work/Place-of-Work

The number of journey-to-work, one way trips arriving in Lancaster County has increased at an average annual rate of 16 percent between 1970 and 2000. Seward County has consistently generated the most trips of the neighboring counties since 1970; however the rate of generation has steadily decreased since 1970 (see Table 12). The largest recent growth in trip generation is coming from areas outside of the neighboring counties and the Omaha Metro Area (see Table 12).

**Table 12. Journey-to-Work, One-Way Trips Arriving In Lancaster County**

	1970		1980		1990		2000	
Saline County	212	7%	300	5%	568	6.5%	1,100	7%
Saunders County	492	15%	991	18%	1,264	14%	1,853	12%
Seward County	754	23%	1,016	18%	1,532	17%	2,477	16%
Omaha Metro Area	396	12%	633	11%	1,255	14%	2,642	17%
Other Ring Counties	1,199	37%	2,252	41%	3,366	39%	4,699	31%
Other	166	5.2%	326	6%	778	9%	2,564	17%
Total	3,219	100%	5,518	100%	8,763	100%	15,335	100%

Source: U.S. Bureau of the Census, Journey-to-Work/Place-of-Work.

"Omaha Metro Area" includes Douglas, Mills, Pottawattamie, Sarpy, and Washington Counties.

"Other Ring Counties" include Butler, Cass, Gage, Johnson, and Otoe Counties.



## ***Driving and Transit***

### ***Average Auto Occupancy***

Both the a.m. and p.m. peak hour average auto occupancy rates for the City of Lincoln have steadily declined since 1980 reaching all time lows of approximately 1.14 in the a.m. and approximately 1.21 in the p.m. in the early 2000s (see Figure 14).

### ***Vehicle Miles Traveled***

Estimated daily vehicle miles traveled (VMT) in Lincoln has steadily grown from 2,184,000 in 1980 to 3,863,000 in 2000, and is expected to continue to grow at an average annual rate of 2.08 percent through 2025 (see Figure 15).

### ***Registered Vehicles vs. Driver Licenses***

The number of passenger vehicle registrations in Lancaster County has grown at an average annual rate of 2.2 percent since 1980 from 120,706 vehicles to 192,667 vehicles (see Figure 16). Conversely, the number of driver licenses issued in Lancaster County has grown at an average annual rate of 1.7 percent since 1980 from 134,108 to 193,167

### ***Transit Ridership***

Annual transit ridership grew from 2,642,300 in 1975 to an all time high of 3,491,751 in 1981, but has fallen to the current level of 1,512,002 in 2002. However, ridership has remained fairly constant for the past several years (see Figure 17). Annual transit ridership is expected to increase with overall population growth at an average annual growth rate of 1 percent through 2025.

Figure 14. Average Auto Occupancy Rate (1977 – 2025)

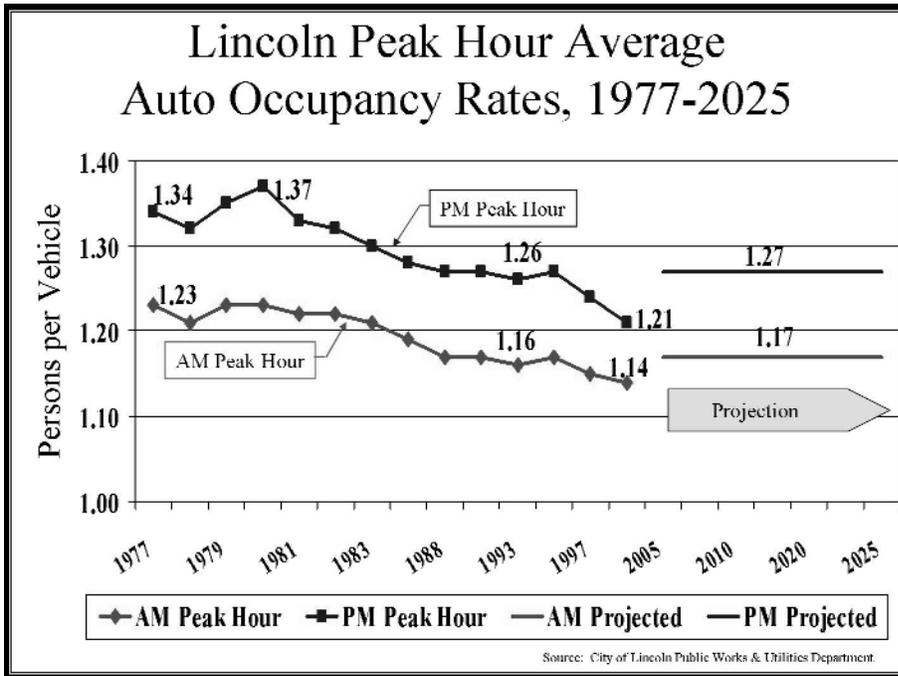


Figure 15. Estimated Daily Vehicle Miles Traveled (1980 – 2025)

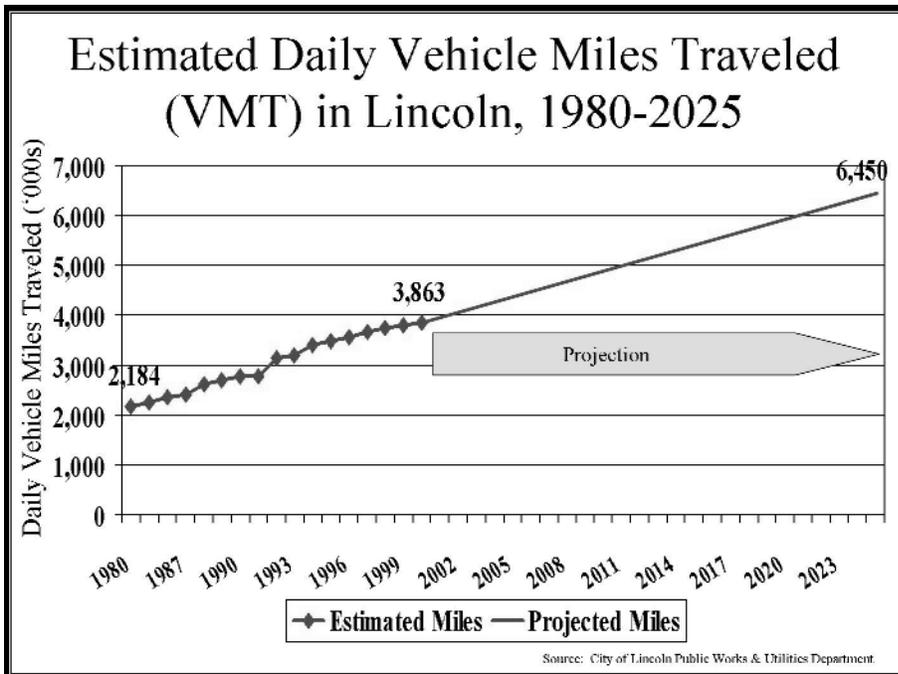




Figure 16. Licensed Drivers vs. Register Vehicles (1980-2002)

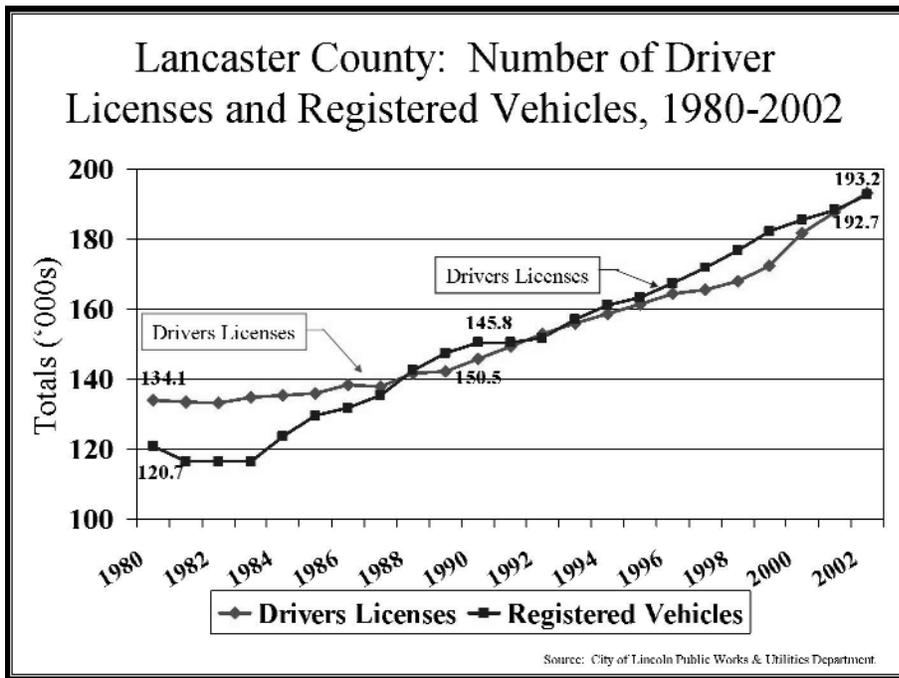
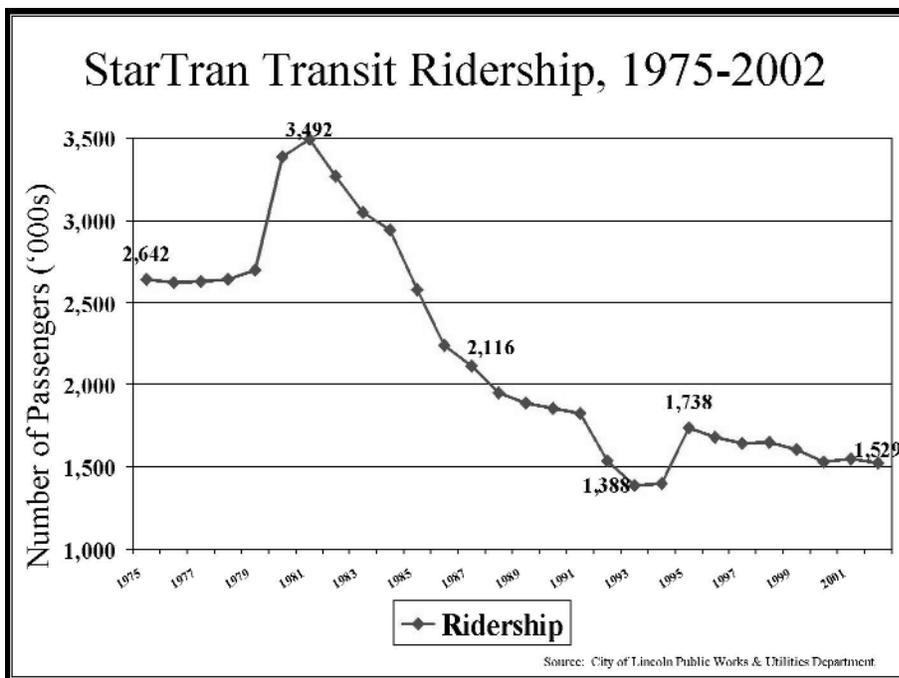


Figure 17. StarTran Transit Ridership (1975-2002)



## ***Key Travel Behavior Findings and Conclusions***

From a review of the compilation of data and information, key findings can be identified and conclusions can be drawn about the state of travel behavior impacting the City of Lincoln.

1. Transit is currently not time competitive with the automobile for home-to-work trips. The average commuter trip by auto is more than 12 minutes (42 percent) shorter than the average commuter trip by transit.
2. Carpooling is an equally attractive option for those living within the corporate limits of the City of Lincoln and for those living within the remainder of Lancaster County.
3. The use of commuting alternatives to driving alone in Lancaster County has seen a significant decrease over the last decade.
4. For nearly every Lancaster County resident that leaves the county for employment opportunities, Lancaster County attracts 2 residents from outside of the county for employment opportunities in Lancaster County.
5. Most of the Lancaster County residents seeking employment outside of the county are employed in the Omaha metropolitan area (44 percent). Conversely, most of those seeking employment in Lancaster County reside in Butler, Cass, Gage, Johnson or Otoe counties (30 percent).
6. Peak hour average auto occupancy in the City of Lincoln is currently at an all time low. Conversely, average daily vehicle miles traveled in the City of Lincoln is currently at an all time high.
7. Transit ridership in the City of Lincoln reached an all time low in 1993, but has remained fairly constant since 1999.
8. There is essentially one licensed driver for every registered vehicle in Lancaster County (1.003 drivers per vehicle).



## EXISTING TRANSPORTATION SERVICES

The purpose of this task is to define the breadth of transportation services available today, including summarizing the historic evolution of transportation and land use in Lincoln with the aim of drawing some insight about today's situation.

### Roadways

The primary addition to the Lincoln Urban Area Roadway System will come in the form of 500 miles of residential streets (see Table 13).

**Table 13. Functional Classification Summary (Centerline Miles)**

	Past System (1990)	Existing System (2003)	Future System	Percent Change (‘03-Future)
Interstate & Expressway	---	17.3	33.7	94.8%
Principal Arterial	83.6	76.8	122.8	59.9%
Minor Arterial	101.75	229	216.1	(5.6%)
Urban Collector	65.05	64.6	57.2	(11.5%)
Total Classified Roads	250.4	387.7	429.8	10.9%
Unclassified Roads	571.97	857.3	1357.3	58.3%
Est. Urban Area System	822.37	1,245.0	1,787.1	43.5%

Source: City of Lincoln.

The "Future Functional Classification" system indicates the "future" Land Use and Transportation Plans.

### Vehicle Miles Traveled

Estimated daily vehicle miles traveled (VMT) in Lincoln has steadily grown from 2,184,000 in 1980 to 3,863,000 in 2000, and is expected to continue to grow at an average annual rate of 2.08 percent through 2025 (see Figure 18).

### Peak Hour Congestion

There are several "hot spots (intersections operating at a LOS D or worse)" during the a.m. and p.m. peak hour (see Figure 19). Many of the "hot spots" fall within specific travel corridors, such as 27th Street, Highway 2, Capitol Parkway, and Highway 34 (see Figure 19).

Figure 18. Estimated Daily Vehicle Miles Traveled (1980 – 2025)

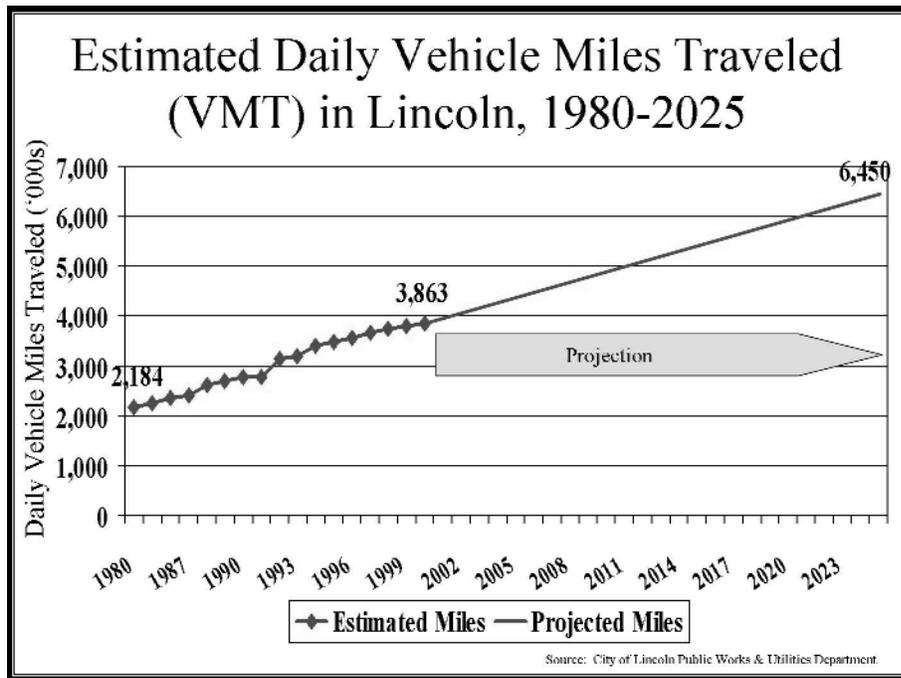
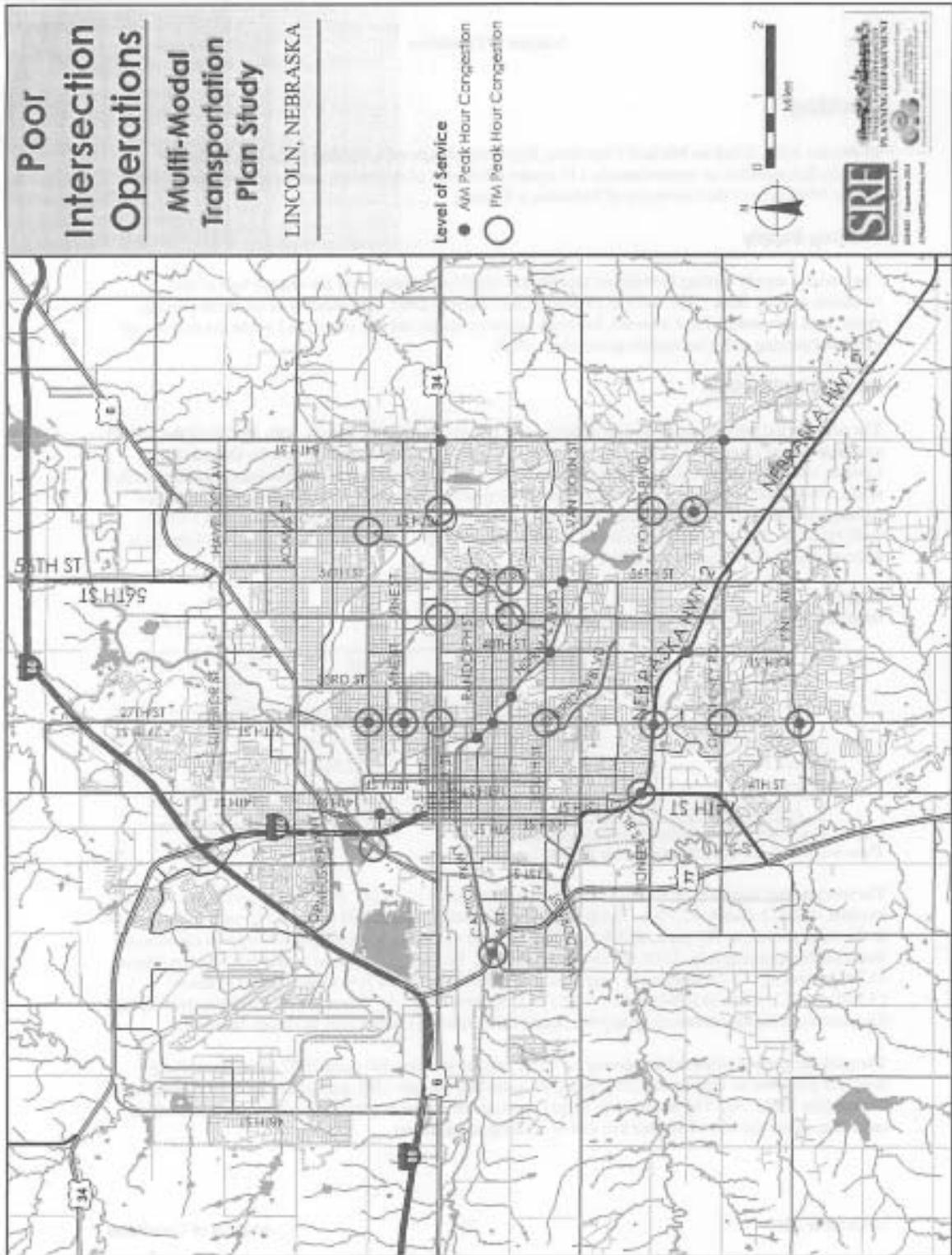


Figure 19. A.M. Peak Hour & P.M. Peak Hour Congestion



## Parking

In August 2001, Kirkham Michael Consulting Engineers completed a parking study for the City of Lincoln that included an approximately 135 square block area of downtown and an approximately 140 square block area of the University of Nebraska at Lincoln.

### Parking Supply

The parking supply serving Downtown Lincoln has steadily increased over the second half of the twentieth century from 7,817 stalls in 1950 to 22,423 stalls in 2000. The number of on-street parking stalls, both non-metered and metered, has been relatively stable and flat since 1963 while the number of off-street parking stalls has rapidly grown since 1950.

### Parking Utilization

The peak period parking utilization for Downtown Lincoln occurs at 10:00 a.m. with 15,710 of the 22,423 available spaces occupied in 2000. In 2000, the peak period parking utilization rate for Downtown Lincoln was 70 percent. Adjusting the total available parking supply to account for empty handicap-only stalls, private/patron stalls, and the industry-accepted practical capacity rate of 90 percent for on-street parking and public parking facilities, the adjusted parking supply for Downtown Lincoln was 17,172 stalls in 2000. So, in 2000, the functional peak period parking utilization rate for Downtown Lincoln is estimated to be 92 percent (see Table 14)

**Table 14. Downtown Lincoln Parking Supply & Demand Summary**

	Past Conditions (1993)	Existing Conditions (2000)	Change (1993 to 2000)	Future Conditions
Inventoried Supply	20,001	22,423	2,422 (12 %)	22,778
Adjusted Supply	15,744	17,172	1,428 (9 %)	---
Peak Period Demand	15,323	15,710	387 (2 %)	16,873
Utilization Rate	97%	91%	-6%	

Source: *Downtown Lincoln Parking Study, August 2001.*

*Does not include the new UNL garage nor the new Haymarket Garage.*

The raw parking supply in Downtown Lincoln has increased from 20,001 to 22,423 spaces since 1993, an increase of 2,422 spaces (12.1%). The peak parking demand has increased from 15,323 parkers to 15,710 in the same period, or 387 parkers (2.5%). Thus, the net availability of parking in Downtown Lincoln has increased by approximately 2,000 spaces (see Table 14). The adjusted parking supply has increased from 15,744 spaces to 17,172 resulting in a net availability for the public of 1,462 spaces (17,172 minus 15,710) vs. 421 spaces (15,744 minus 15,323) in 1993 (see Table 14). Thus, the net available parking for the general public has increased by approximately 1,040 spaces (1,428 minus 387) (see Table 14).

The peak demand is projected to increase by 1,163 parkers between 2001 and 2007 while the parking supply is projected to increase by 355 spaces, not including the new UNL garage nor the new Haymarket Garage (see Table 14). The increases in supply were primarily due to public garage construction, which more than offset the loss of surface lots due to building construction.



## Haymarket Area

The Haymarket Area, a sub-area of the Downtown Area, has seen a proportional increase in both supply and demand with the net available parking for the general public increasing by 144 spaces (see Table 15).

**Table 15. Haymarket Sub-Area Parking Supply & Demand Summary**

	Past Conditions (1995)	Existing Conditions (2000)	Change (1995 to 2000)
Adjusted Supply	1,853	2,087	234
Peak Period Demand	1,577	1,667	90
Utilization Rate	85.1%	79.9%	---

Source: *Downtown Lincoln Parking Study, August 2001*

## University of Nebraska-Lincoln

With the opening of the new UNL Garage in August of 2001, the UNL parking supply was projected to satisfy the campus parking demand until such time as surface lots are closed for the Antelope Valley Project or campus building construction (see Table 16).

**Table 16. University of Nebraska-Lincoln Parking Supply & Demand Summary**

	Existing Conditions (2000)
Inventoried Supply	11,465
Adjusted Supply	10,318
Peak Period Demand	9,262
Utilization Rate	89.8%

Source: *Downtown Lincoln Parking Study, August 2001*

## Public Transportation

The City of Lincoln has had a public transit system since 1883, when the Lincoln Street Railway initiated the first horse-car line operating between the Burlington Depot and 13th & "O" Streets. On July 15, 1971, the City of Lincoln took over operations of the transit system, naming it the Lincoln Transportation System. In April 1989, the bus system changed its name to StarTran and created a new information system including a full-color route map and easier to read bus schedules. In 2002, StarTran completed a major facility expansion, including enlarging the maintenance and bus storage areas, and remodeling/relocating the dispatch and employee areas.

### Ridership Profile

Over 28 percent of StarTran's ridership is derived from the University of Nebraska-Lincoln (see Table 17).

**Table 17. Ridership Breakdown**

Rider Type	Number	Percentage
UNL	419,042	28%
Transfers	105,272	7%
Elderly	69,060	5%
Lincoln Public School Students	182,671	12%
Other (Cash, Passports, Tickets)	716,599	48%
Total	1,492,644	100%

Source: StarTran

### Transfers

Transfers are free. There are two types of transfers: regular and stop over. Regular transfers allow passengers to board a different bus to get to their final destination. The transfer is good for one hour or until the connecting bus arrives. Stop over transfers allow passengers to stop for one hour along their route and re-board the same bus, going the same direction. Transfers represent approximately 7 percent of total ridership (see Table 18).

**Table 18. Transfers (Fixed Route Only)**

	FY 2000-2001	FY 2001-2002
Transfers	107,515	107,662
Total Ridership	1,550,713	1,529,340
Transfers as a Percent of Total	6.9%	7.0%

Source: StarTran



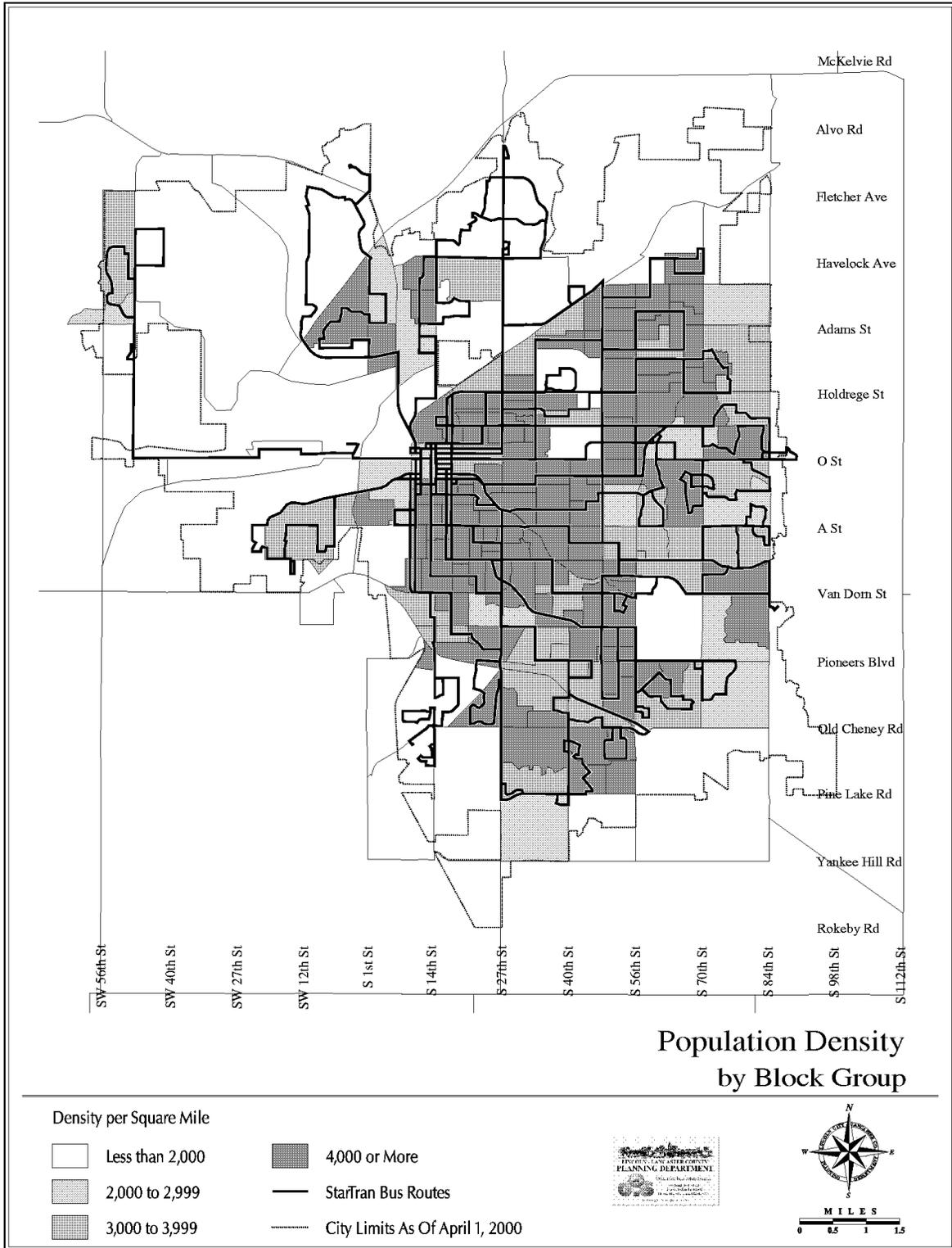
### ***Park-and-Ride System***

StarTran has a limited park-and-ride system, consisting of only 3 facilities: Food Bonanza at 1320 West "O" Street along Route 12; the ball field at 40th and Highway 2 along Route 16; and the parking lot in the northwest corner of 48th and R Street along Routes 9 and 18.

Figures 20 and 21 display the StarTran transit route system and population density.

StarTran installs benches and shelters at locations where 10 or more passengers and 15 or more passengers would board on an average day, respectively. Most stops on every route are marked by a blue and green bus stop sign. However, StarTran buses will stop at all corners outside the downtown loop.

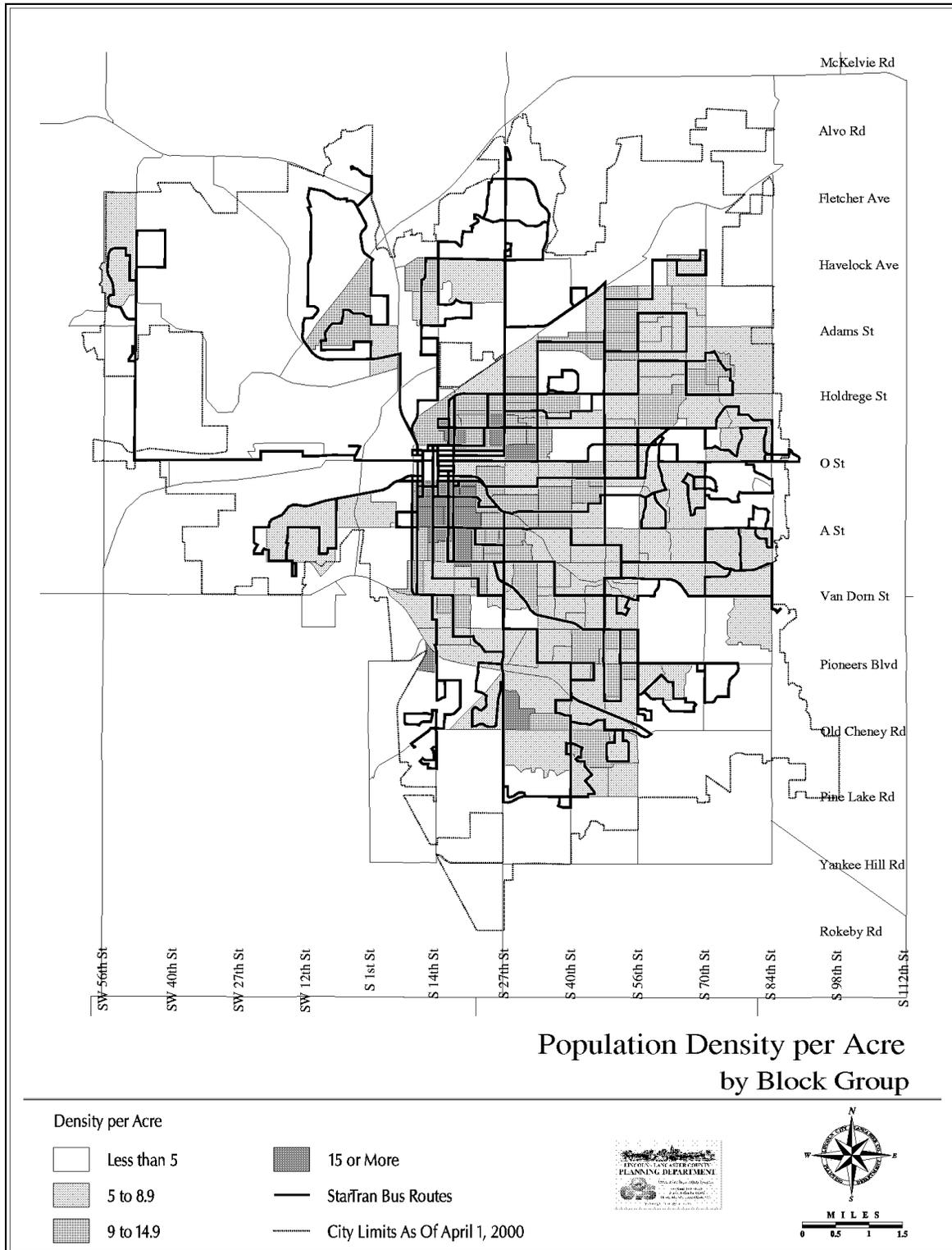
**Figure 20. Transit Route System w/ Population Density (square mile)**



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Oct 6, 2003

**Figure 21. Transit Route System w/ Population Density (acre)**



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**Profile of the Current StarTran Transit System**

Today (2003), StarTran serves over 1,500,000 riders annually through fixed route and special transportation services on an annual budget over of \$7,300,000. StarTran operates service on weekdays between 5:15 a.m. and 7:10 p.m. and on Saturdays between 5:55 a.m. and 7:10 p.m. In 2001, StarTran provided service to a 76 square mile area with a population of 200,767 persons.

**Table 19. Service Consumption (2001)**

	Fixed Route	Demand Response	System Total
Annual Passenger Miles	7,778,376	276,281	8,054,657
Annual Unlinked Trips	1,550,713	55,566	1,606,279
Average Weekday Unlinked Trips	5,765	208	5,973

Source: National Transit Database, 2001 System Profile

**Table 20. Service Supplied (2001)**

	Fixed Route	Demand Response	System Total
Annual Vehicle Revenue Miles	1,400,763	308,468	1,709,231
Annual Vehicle Revenue Hours	100,674	21,685	122,359
Vehicles Available for Maximum Service	57	44	101
Vehicles Operated in Maximum Service	47	43	90

Source: National Transit Database, 2001 System Profile

**Table 21. System Performance Measures (2001)**

	Fixed Route	Demand Response	System Total
<b>Service Efficiency</b>			
Operating Expense per Vehicle Revenue Mile	\$3.93	\$3.89	\$3.92
Operating Expense per Vehicle Revenue Hour	\$54.65	\$55.33	\$54.77
<b>Cost Effectiveness</b>			
Operating Expense per Passenger Mile	\$0.71	\$4.34	\$0.83
Operating Expense per Unlinked Passenger Trip	\$3.55	\$21.59	\$4.17
<b>Service Effectiveness</b>			
Unlinked Passenger Trips per Vehicle Revenue Mile	\$1.11	\$0.18	\$0.94
Unlinked Passenger Trips per Vehicle Revenue Hour	\$15.40	\$2.56	\$13.13

Source: National Transit Database, 2001 System Profile

Local funds are funded by discretionary local tax dollars. StarTran generates approximately \$60,000 annually through advertising.

**Table 22. Annual Operating & Capital Funding (2001)**

<b>Operating Funding</b>	
Passenger Fares	\$986,635
Local Funds	\$4,791,052
State Funds	\$109,548
Federal Assistance	\$747,115
Other Funds	\$67,159
<b>Total</b>	<b>\$6,701,509</b>
<b>Capital Funding</b>	
Local Funds	\$109,027
State Funds	\$0
Federal Assistance	\$912,959
<b>Total</b>	<b>\$1,102,986</b>

Source: National Transit Database, 2001 System Profile

As of October of 2002, StarTran had a fleet of 56 full-size coaches and 9 handivans. Note that full-size coaches have a seating capacity of 34 persons and a total capacity of 49 persons with passengers standing. StarTran buses are not equipped with bike racks.

**Table 23. Fleet (Fixed Route & Demand Response)**

Vehicle Type	Service Type	Age of Vehicle	Number of Vehicles
Flexible	Fixed Route	1986	10
Gillig	Fixed Route	1991	7
Flexible	Fixed Route	1993	4
Ford El Dorado	Demand Response	1993	1
Ford Champion	Demand Response	1995	7
Gillig	Fixed Route	1997	15
Ford Goshen	Demand Response	1997	1
Gillig	Fixed Route	2001	20

Source: StarTran

As of October of 2002, StarTran employed 111 full-time employees. Nebraska is a right-to-work state which means employees are represented by their Union but don't have to join or pay dues. StarTran dispatchers, accountant, planner and supervisors can belong to the Lincoln City Employee Association. StarTran office staff, such as receptionists and account clerks, can belong to the National Association of Government Employees. StarTran bus drivers and mechanics can belong to the Amalgamated Transit Union.

**Table 24. Employees**

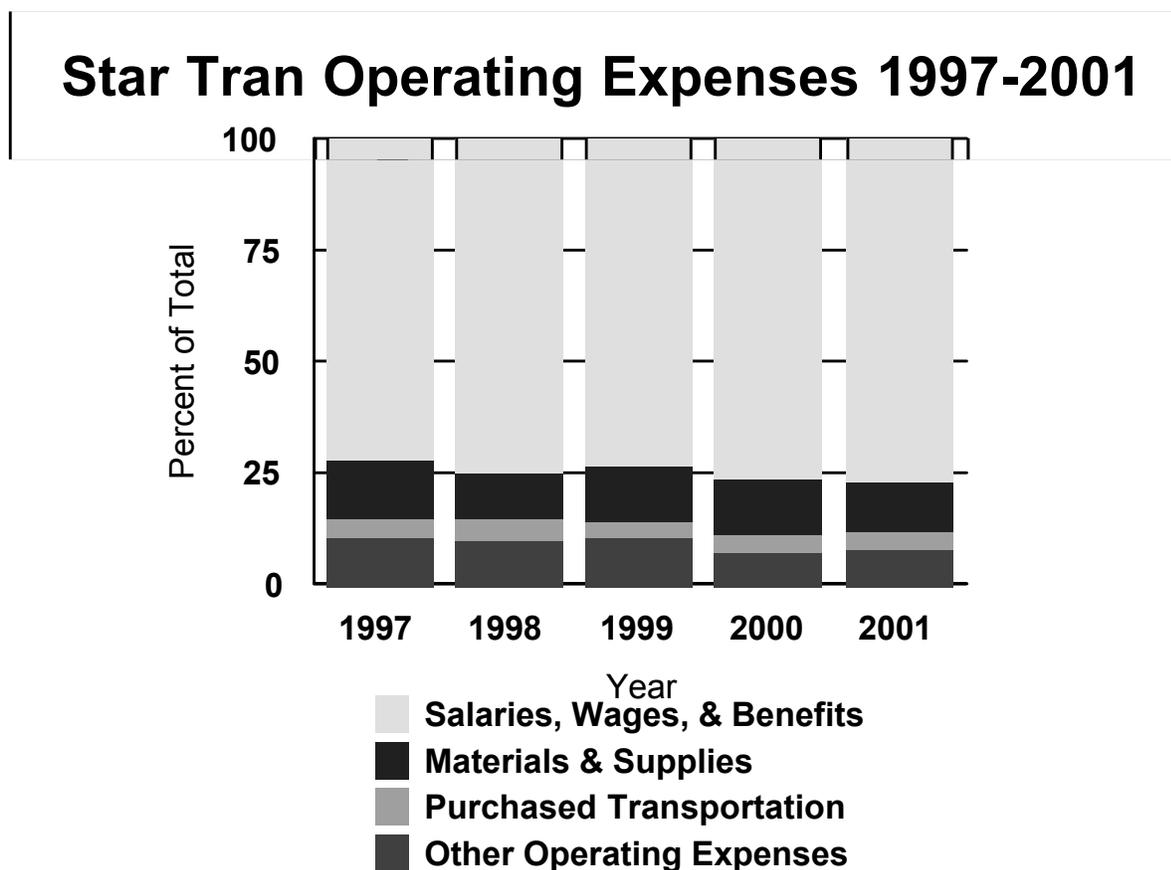
Type of Employee	Number of Employees
Bus Operators	73
Maintenance	20
Transit Supervisors	6
Administrative	12
Total	111

Source: StarTran

### Historical Trend of the StarTran Transit System

Salaries, wages and benefits comprise over 70 percent of StarTran's annual operating budget (see Figure 22).

**Figure 22. StarTran Operating Expenses (1997-2001)**



Source: National Transit Database, 1997-2001 System Profiles



StarTran's operating costs have been increasing due to labor costs while fare revenues have been decreasing (see Table 25).

**Table 25. Balance Sheet (1997 – 2001)**

	1997	1998	1999	2000	2001
Operating Expense	\$5,665,710	\$5,782,174	\$6,113,885	\$6,195,998	\$6,701,509
Fare Revenues	---	\$1,111,882	\$1,056,894	\$991,518	\$986,635
Unlinked Trips	\$1,434,302	\$1,659,263	\$1,652,970	\$1,652,543	\$1,606,279
Revenue Miles	\$1,556,900	\$1,588,344	\$1,584,484	\$1,596,228	\$1,709,231
Revenue Hours	\$114,828	\$115,575	\$117,114	\$116,867	\$122,359

*Source: National Transit Database, 1997-2001 System Profiles*

## Profile of the StarTran Fixed-Route Transit System

StarTran operates 21 different fixed routes (see Table 26).

**Table 26. Route Service Characteristics**

Route	Span of Service	Peak Period Frequency	Distance & Time
Star Shuttle	9:30am to 4:54pm Weekday No Saturday Service	12 minute	3.59 miles 24 minutes
Route 1 – Havelock	5:15am to 7:05pm Weekday 6:30am to 7:05pm Saturday	20-40 minute	16.13 miles 70 minutes
Route 2 – Bethany	5:45am to 7:05pm Weekday 6:30am to 7:05pm Saturday	30 minute	14.12 miles 65 minutes
Route 3 – College View	5:40am to 7:10pm Weekday 6:30am to 7:05pm Saturday	30-35 minute	12.73 miles 65 minutes
Route 4 – University Place	5:50am to 7:05pm Weekday 6:30am to 7:05pm Saturday	30 minute	12.88 miles 60 minutes
Route 5 – Bryan Trendwood	5:45am to 7:05pm Weekday 6:30am to 7:05pm Saturday	30-40 minute	15.58 miles 65 minutes
Route 6 – Arapahoe	5:35am to 7:05pm Weekday 5:55am to 7:05pm Saturday	30-35 minute	12.72 miles 60 minutes
Route 7 – Belmont	5:15am to 7:10pm Weekday 6:30am to 7:05pm Saturday	25-60 minute	15.3 miles 60 minutes
Route 8 – Veteran’s Hospital	6:15am to 7:00pm Weekday 6:30am to 7:10pm Saturday	25-65 minute	13.51 miles 70 minutes
Route 9 – “O” Street Shuttle	6:35am to 7:10pm Weekday 7:00am to 6:55pm Saturday	65-70 minute	17.11 miles 70 minutes
Route 10 – East Vine	5:45am to 7:05pm Weekday 6:30am to 7:05pm Saturday	30 minute	13.52 miles 60 minutes
Route 11 – Gaslight Village	5:45am to 7:10pm Weekday 6:30am to 7:05pm Saturday	60 minute	16.9 miles 60 minutes
Route 12 – Arnold Heights	5:40am to 7:00pm Weekday 7:40am to 7:05pm Saturday	30-60 minute	17.72 miles 60 minutes
Route 13 – Normal	5:45am to 7:05pm Weekday 6:30am to 7:05pm Saturday	30-35 minute	16.8 miles 65 minutes
Route 15 – Eastridge	6:15am to 7:05pm Weekday 6:30am to 7:10pm Saturday	30 minute	11.92 miles 65 minutes
Route 16 – Irving School	5:45am to 7:05pm Weekday 6:30am to 7:05pm Saturday	30-35 minute	16.71 miles 65 minutes
Route 17x – West “A” Express	6:20am to 5:50pm Weekday No Saturday Service	2 AM & 2 PM Trips	10.3 miles 50 minutes
Route 18 – 48th Street Shuttle	6:25am to 6:45pm Weekday 6:25am to 6:45pm Saturday	4 AM & 4 PM Trips	30.7 miles 105 minutes
Route 19 – Salt Valley	6:15am to 6:35pm Weekday 5:55am to 7:05pm Saturday	60 minute	14.92 miles 60 minutes
Route 24 – Holdrege	7:15am to 6:00pm Weekday No Saturday Service	10-60 minute	7.7 miles 45 minutes
Route 27 – 27th Street Shuttle	6:50am to 6:40pm Weekday 6:50am to 6:40pm Saturday	60 minute	16.1 miles 60 minutes

Source: StarTran

Between fiscal years 2000-01 and 2001-02, StarTran's average passengers per hour decreased from 14.7 passengers per hour to 14.5 passengers per hour. Between fiscal years 2000-01 and 2001-02, StarTran's system average fare box return increased 15.7 percent to 19.0 percent. All but two routes experienced an increase in fare box return. The last fare increase was put into effect on August 28, 2000.

**Table 27. Route Characteristics (FY 2001-2002)**

Route	Passenger	Hours	Miles	Operating Costs	Farebox Return
Star Shuttle	71,162	3,295	34,600	\$168,111	18%
Route 1 – Havelock	114,495	6,186	87,421	\$315,610	28%
Route 2 – Bethany	59,146	5,137	70,559	\$262,090	16%
Route 3 – College View	85,513	5,443	74,589	\$277,702	23%
Route 4 – University Place	125,561	5,996	74,624	\$305,916	27%
Route 5 – Bryan Trendwood	72,968	6,016	84,449	\$306,936	17%
Route 6 – Arapahoe	56,974	6,219	76,376	\$317,293	13%
Route 7 – Belmont	52,598	4,880	67,893	\$248,978	15%
Route 8 – Veteran’s Hospital	52,163	5,174	51,327	\$263,977	15%
Route 9 – “O” Street Shuttle	62,020	4,782	59,623	\$243,978	18%
Route 10 – East Vine	81,983	7,270	82,849	\$370,915	17%
Route 11 – Gaslight Village	21,348	2,377	73,022	\$121,275	13%
Route 12 – Arnold Heights	64,062	4,290	77,521	\$218,876	23%
Route 13 – Normal	54,382	5,055	77,974	\$257,906	14%
Route 15 – Eastridge	72,179	4,927	58,326	\$251,376	21%
Route 16 – Irving School	62,944	6,083	91,883	\$310,355	15%
Route 17x – West “A” Express	7,778	1,177	13,236	\$60,051	10%
Route 18 – 48th Street Shuttle	26,042	4,032	63,268	\$205,713	11%
Route 19 – Salt Valley	24,362	2,100	30,676	\$107,142	17%
Route 24 – Holdrege	172,945	4,416	42,851	\$225,304	35%
Route 27 – 27th Street Shuttle	103,096	8,381	124,688	\$427,599	18%
Big Red Express	---	---	---	\$63,416	---
System Total	1,529,340	98,820	1,344,904	\$5,330,517	---

Source: StarTran

StarTran transports on average 14.5 passengers per hour at a cost of \$3.49 per passenger. However, on a route-by-route basis, StarTran transports a high of 44.3 passengers per hour and a low of 6.5 passengers per hour at a high cost of \$7.90 per passenger and a low cost of \$1.30 per passenger (see Table 28).

**Table 28. Route Performance Measures (FY 2001-2002)**

Route	Passengers per Hour	Cost per Passenger
Star Shuttle	21.6	\$2.36
Route 1 – Havelock	18.5	\$2.76
Route 2 – Bethany	12.6	\$4.43
Route 3 – College View	15.7	\$3.25
Route 4 – University Place	20.9	\$2.44
Route 5 – Bryan Trendwood	12.1	\$4.21
Route 6 – Arapahoe	9.1	\$5.57
Route 7 – Belmont	10.8	\$4.73
Route 8 – Veteran’s Hospital	11.1	\$5.06
Route 9 – “O” Street Shuttle	14.1	\$3.93
Route 10 – East Vine	12.3	\$4.52
Route 11 – Gaslight Village	10	\$5.68
Route 12 – Arnold Heights	16.2	\$3.42
Route 13 – Normal	10.8	\$4.74
Route 15 – Eastridge	15.7	\$3.48
Route 16 – Irving School	10.4	\$4.93
Route 17x – West “A” Express	6.8	\$7.72
Route 18 – 48th Street Shuttle	6.5	\$7.90
Route 19 – Salt Valley	12.8	\$4.40
Route 24 – Holdrege	44.3	\$1.30
Route 27 – 27th Street Shuttle	12.3	\$4.15
Big Red Express	---	---
System Average	14.5	\$3.49

Source: StarTran

StarTran operates express bus service to and from UNL home football games from six outlying locations (Big Red Express). The special shuttle service begins operating 2 hours prior to kick-off time with continuous service to the east stadium with the last buses leaving the outlying locations approximately 45 minutes prior to kick-off. The one-way fare for the Big Red Express services is \$3.00. Buses depart the east stadium immediately after the end of the game.



## ***Analysis of StarTran Service Areas and Routes***

This section describes the best locations in Lincoln for transit service, the demographic characteristics associated with those locations, and the overall effectiveness of transit routes.

### ***Highest Transit Use Areas***

Some of the best StarTran routes in terms of total passengers carried and passengers per revenue hour of service are located in areas where population density is highest and income levels are, at most, moderate. As in other communities, users of transit in Lincoln tend to mostly come from areas where income levels and other transportation options may be limited. Figure 23 depicts the areas in Lincoln where the population per square mile is over 4,000 and where the annual household income levels are less than \$45,000. This area represents some of the best transit markets in Lincoln for fixed route service. Other factors to consider for quality of transit markets are employment centers, schools, commercial centers, medical centers, and universities or colleges.

There are other areas in Lincoln where fixed route transit service may also be appropriate but one would expect lower ridership than in the prime area. Figure 24 shows those parts of Lincoln where the population density is over 3,000 per square mile and where annual household income levels are less than \$70,000. The areas between 3,000 and 4,000 density and \$45,000 and \$70,000 income represent areas where fixed route service may be justified but people tend to have higher expectations for the service in terms of availability and directness than can usually be provided. As a result, these areas can present some real challenges to generating significant transit use.

Areas below 3,000-population density and above \$70,000 income represent very challenging conditions for fixed route transit. Other service types might be considered, but in areas like these there are usually many other transportation choices, and the resulting transit mode split is usually quite low.

### ***Core Transit Users***

In an effort to identify who some of those transit users are in the prime target area, we looked at several demographic indicators. Figures 25a and 25b show the parts of Lincoln with the highest concentration of seniors, youth, minorities and renters. In most cases, the highest concentrations fell within the prime fixed-route target area.

### ***Transit Route Performance***

The highest performing routes in terms of passengers carried, highest passengers per hour and lowest cost per passenger are:

- ◆ Route 1 – Havelock
- ◆ Route 3 – College View
- ◆ Route 4 – University Place
- ◆ Route 15 – Eastridge
- ◆ Route 24 – Holdrege

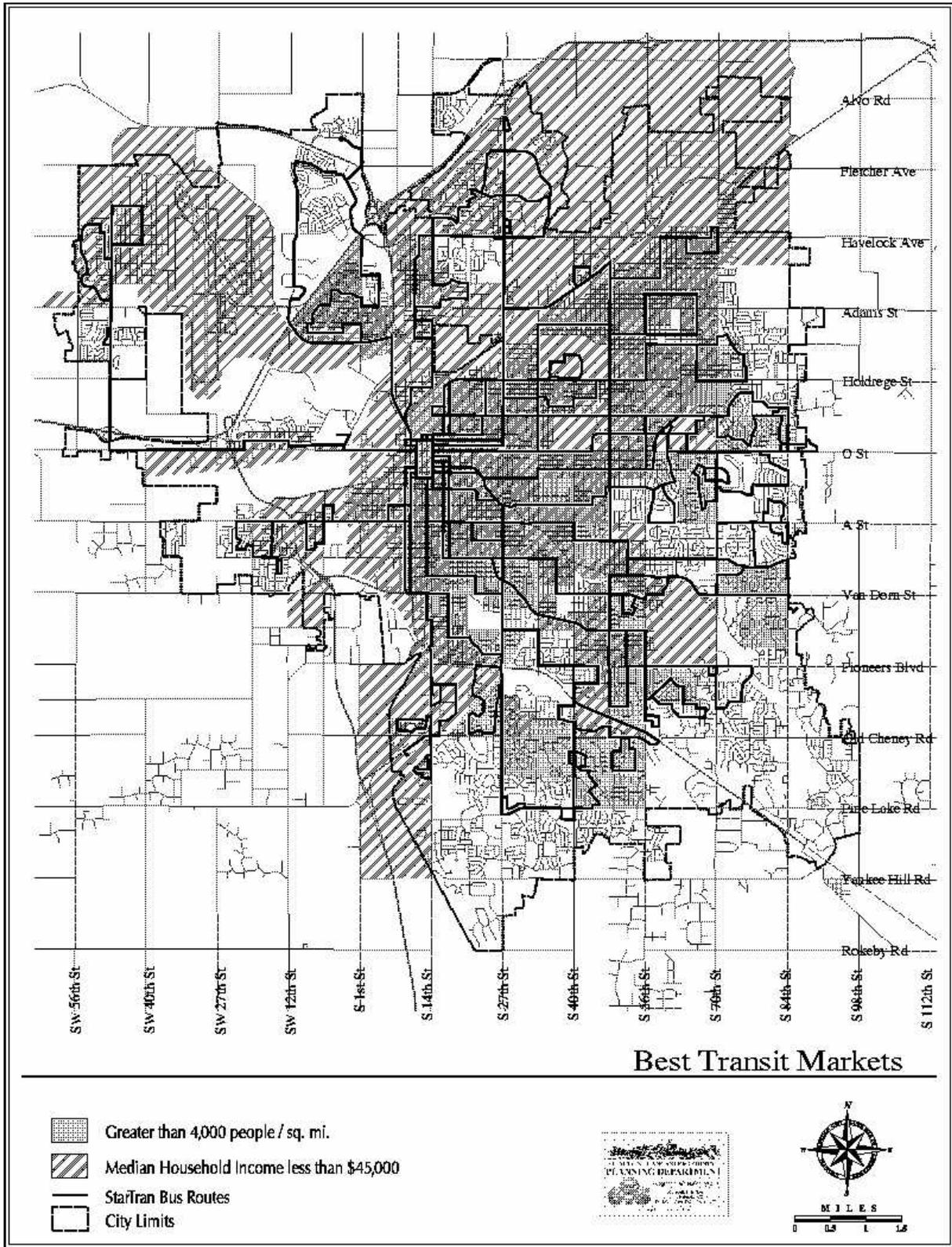
These routes all fall within the prime transit target area defined above. They tend to serve very high-use trip generators, and for the most part, are fairly direct. Figure 26, Highest and Lowest Performing Transit Route Locations, shows the location of these routes.

The lowest performing routes based on ridership and cost per passenger are:

- ◆ Route 6 – Arapahoe
- ◆ Route 11 – Gaslight Village
- ◆ Route 16 – Irving School
- ◆ Route 17x – West "A" Express
- ◆ Route 18 – 48th Street Shuttle

These routes stretch into parts of Lincoln that present much more challenging conditions in terms of density and income. Some of the routes are quite indirect (i.e. use of loops and turns) and connections to major trip generators is lacking. Figure 26 also shows the location of those routes.

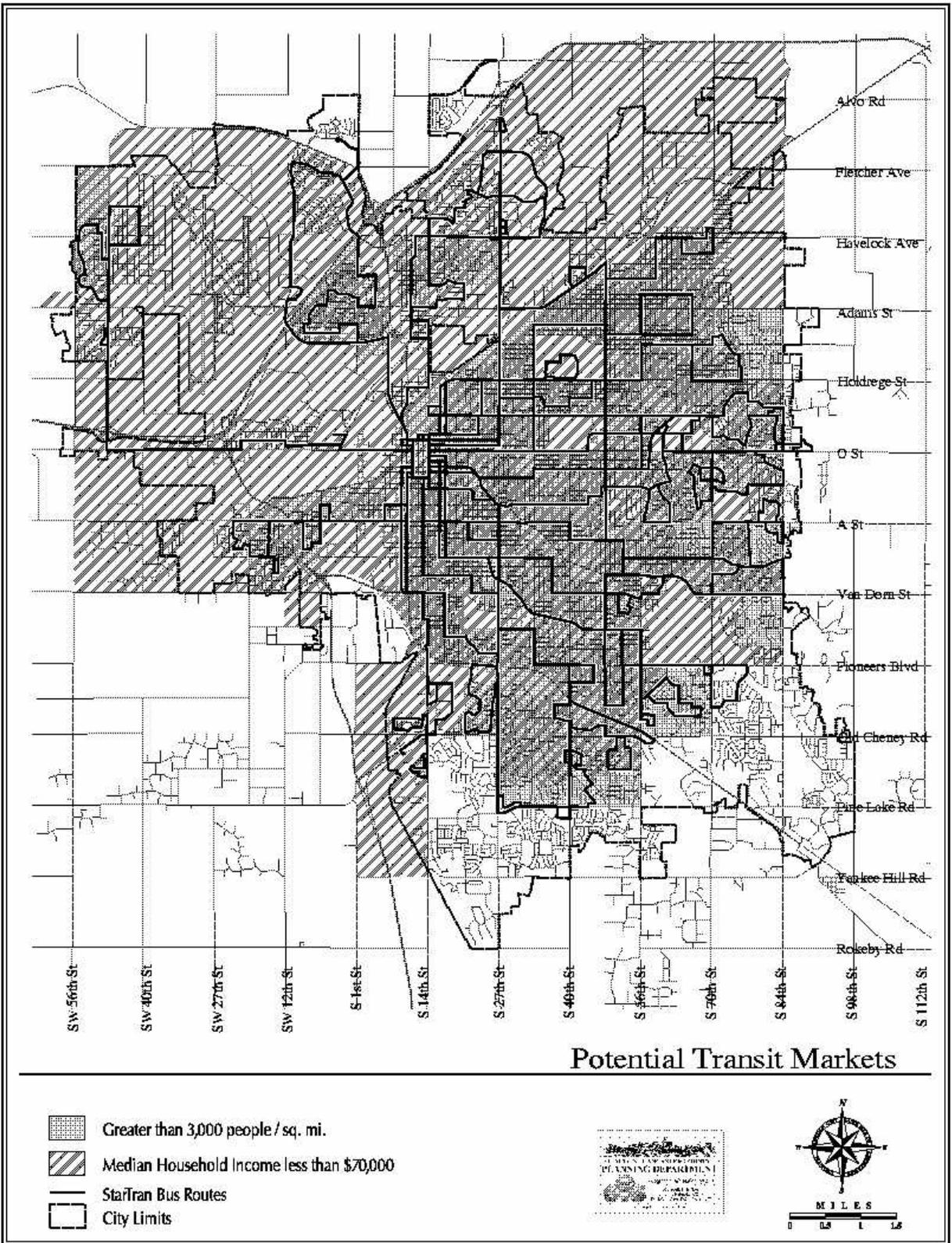
**Figure 23. Areas with Population per Square Mile over 4,000 and Annual Household Income Levels Less than \$45,000**



/plan/gis/coovers/multimodal/best\_transit.aml /plan/gis/coovers/multimodal/best\_transit.mxd

Sep 2, 2004

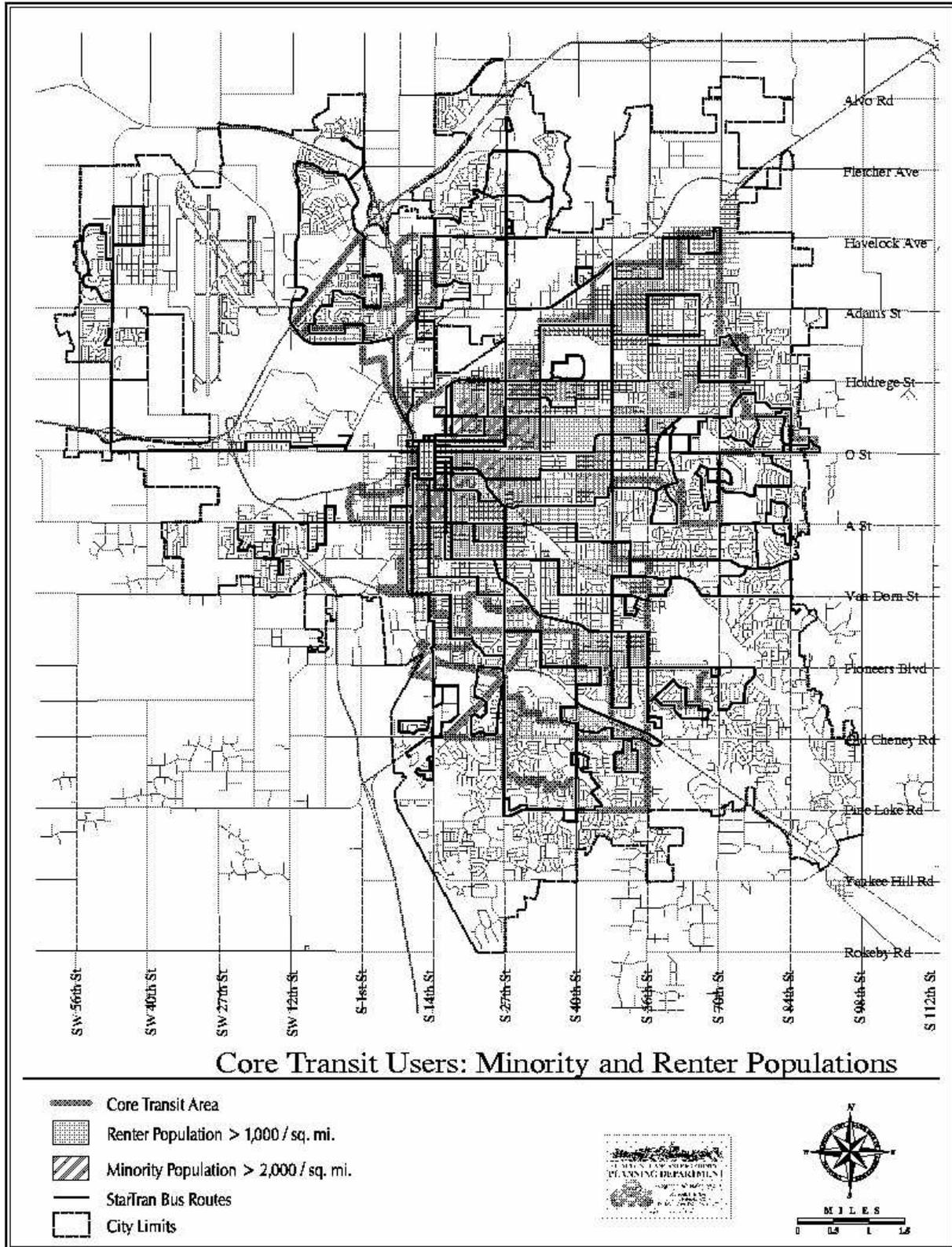
**Figure 24. Population Density over 3,000 per Square Mile and Annual Household Income less than \$70,000**



/plan/gis/cover/multimodal/pot\_transit.mxd /plan/gis/cover/multimodal/pot\_transit.ra

Sep 2, 2004

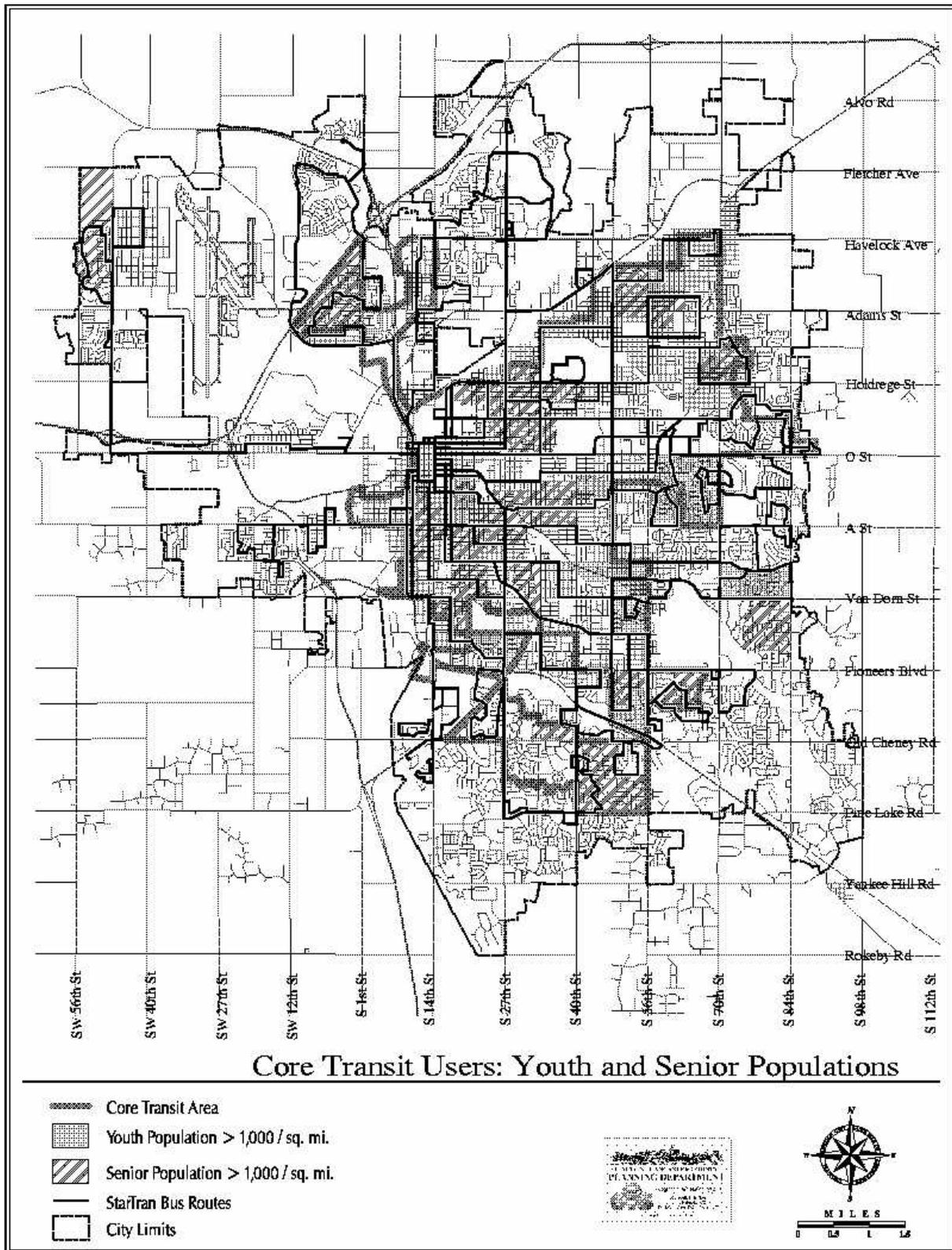
**Figure 25a. Areas with the Highest Concentration of Seniors, Youth, Minorities and Renters**



/plan/gis/covers/multimodal/min\_renter.a.m /plan/gis/covers/multimodal/min\_renter.raa

Sep 13, 2004

**Figure 25b. Areas with the Highest Concentration of Seniors, Youth, Minorities and Renters**



/plan/gis/covera/multimodal/youth\_sen.a.mil./plan/gis/covera/multimodal/youth\_sen.ras

Sep 14, 2004