

4.0 ANALYSIS OF EXISTING RIDERSHIP AND ROUTE PERFORMANCE

Ride check surveys of transit riders were carried out as part of this study in order to analyze current ridership and route performance. This section describes the results of the ride check surveys and the boardings at each stop, summarized for an average weekday, Saturdays and Sundays.

4.1 RIDE CHECK DATA

A comprehensive ride check survey was undertaken to inventory existing transit use and develop a better understanding of the current travel patterns in the sector. This section of the report summarizes the results of these data collection efforts. The numbers of passengers on and off by stop were surveyed for weekday, Saturday, and Sunday service periods for each route that operates in the sector. A total of approximately 1400 weekday, 800 Saturday, and 500 Sunday bus trips were surveyed.

The survey was completed between November of 2001 and February of 2002. Data were not collected during the weeks of the Thanksgiving, Christmas, and New Year's holidays. Because travel patterns can be notably different, data were not collected on Fridays. Two full weeks of data collection occurred in November before the Thanksgiving break. Four full weeks of data collection was conducted between the Thanksgiving and Christmas holidays. Following the New Years holiday, four weeks of full-time data collection occurred in January. Limited data collection was conducted in February to collect data from unscheduled/missed trips and express services.

Weekday Transit Ridership

Almost 700 hours of revenue transit service are provided each weekday in the Sector 8 study area. The distribution of these revenue hours is illustrated in the first chart of Exhibit 4.1.2. Approximately one quarter of these hours are provided during the AM peak period (6:00 to 9:00 am), another quarter during the mid-day period (9:00 am to 3:00 pm), a third quarter during the PM peak period (3:00 pm to 6:00 pm), with the remaining revenue hours provided during the evening hours (including less than 2% between 1:00 am and 5:00 am).

The second chart of Exhibit 4.1.2 also illustrates the distribution of the total number of passenger boardings or ons counted during the ride check surveys throughout the day. A total of about 30,200 boardings were counted, with 26% occurring during the AM peak period, 29% during the mid-day period, and 29% during the PM peak period.

The final chart in Exhibit 4.1.2 illustrates the average number of boardings per revenue hour for all weekday trips throughout the day. This chart shows that the level of transit service in Sector 8 throughout the day is reasonably well matched with the distribution of demand throughout the day.

Exhibit 4.1.2: Service and Boardings by Time of Day (Weekdays)

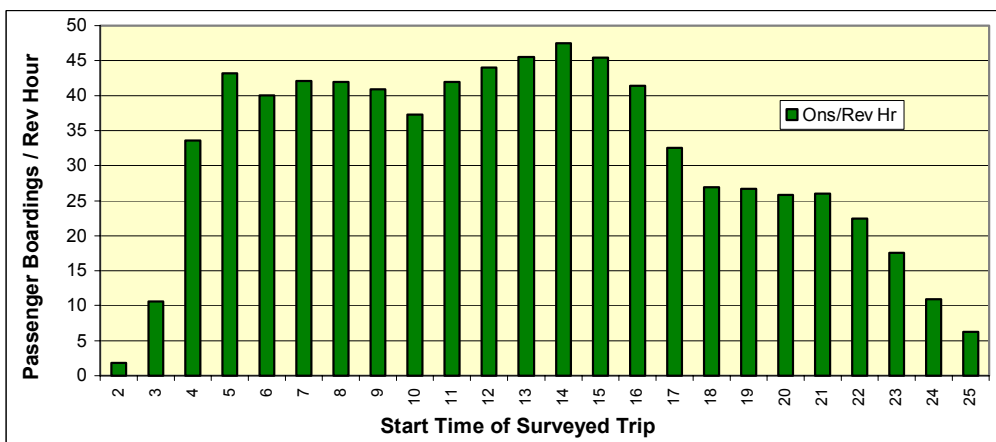
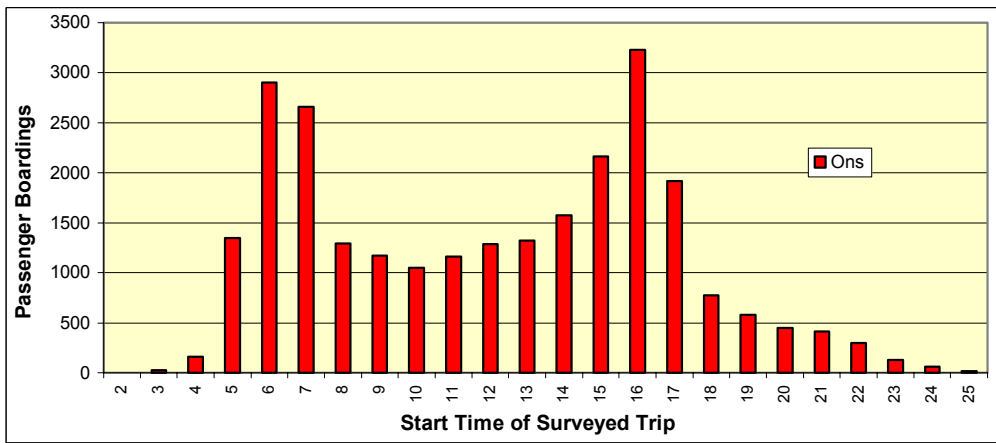
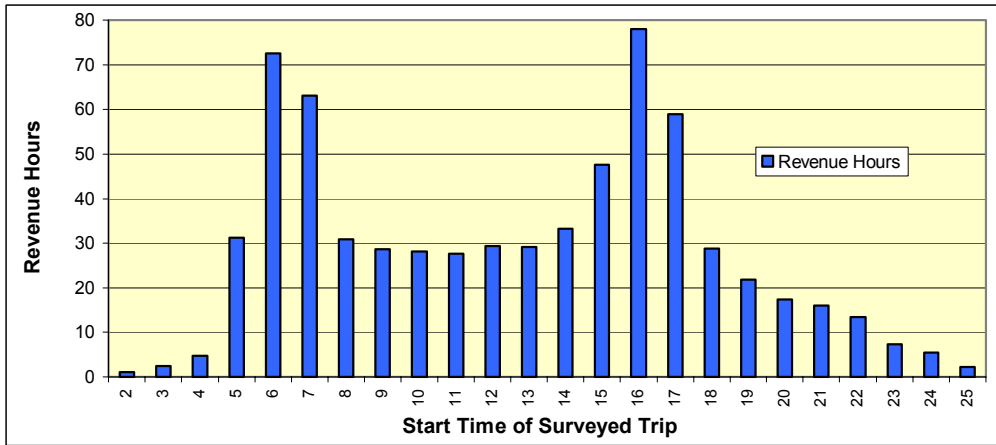


Exhibit 4.1.3 illustrates passenger boardings per revenue hour for the surveyed routes. The chart includes values for the peak direction during the AM and PM peak periods as well as an average value for the mid-day period. The peak direction was defined as that direction with the high value of passengers per hour.

Exhibit 4.1.3: Passengers per Revenue Hour by Route (Weekdays)

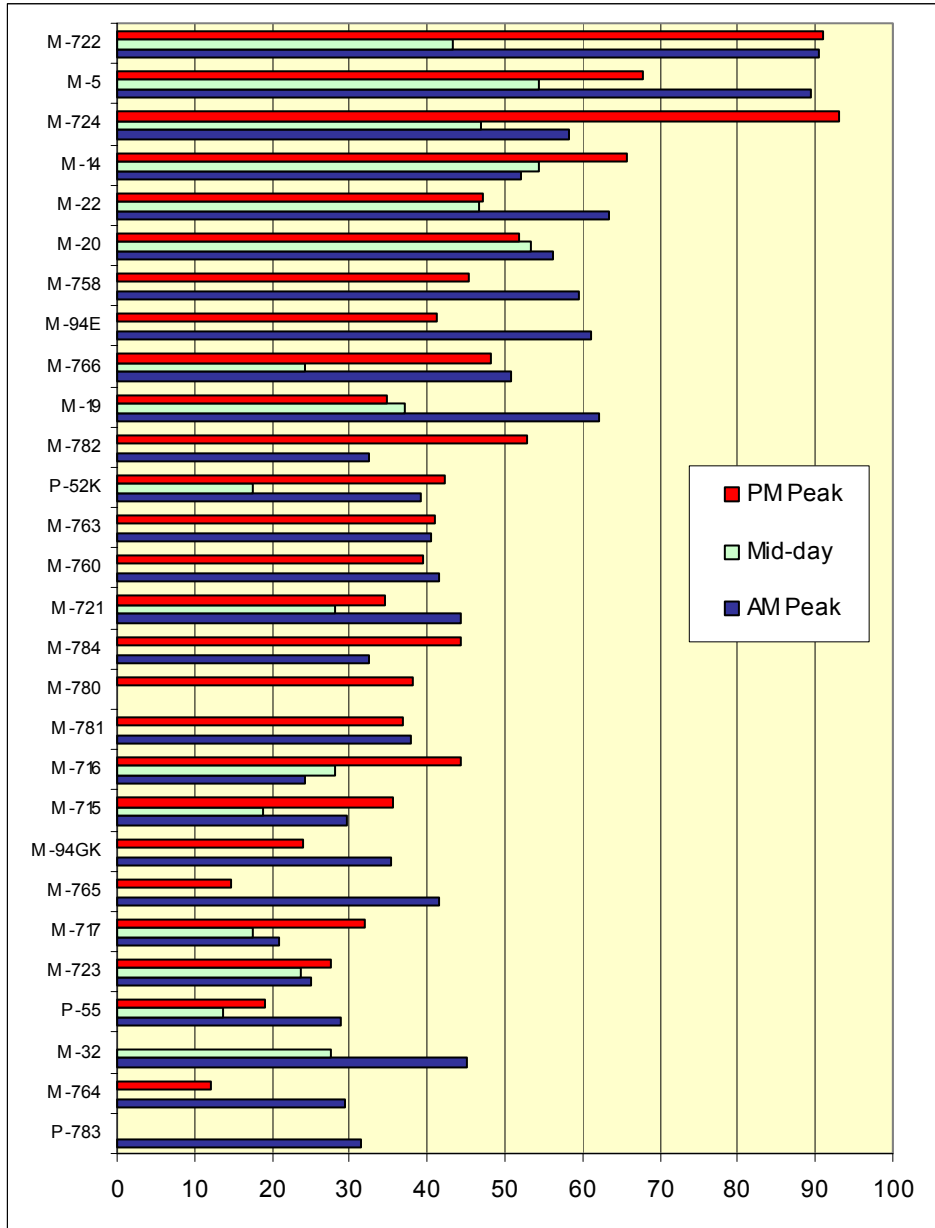


Exhibit 4.1.4A and Exhibit 4.1.4B illustrate the spatial distribution within the study area of the weekday passenger boardings over a whole day. As expected, concentrations of passenger boardings occur in downtown Minneapolis, along Broadway, at Robbinsdale Transit Center, at Brookdale Transit Center, and at selected park-and-ride locations.

Exhibit 4.1.4A: Weekday Passenger Boardings (Ons over 100)

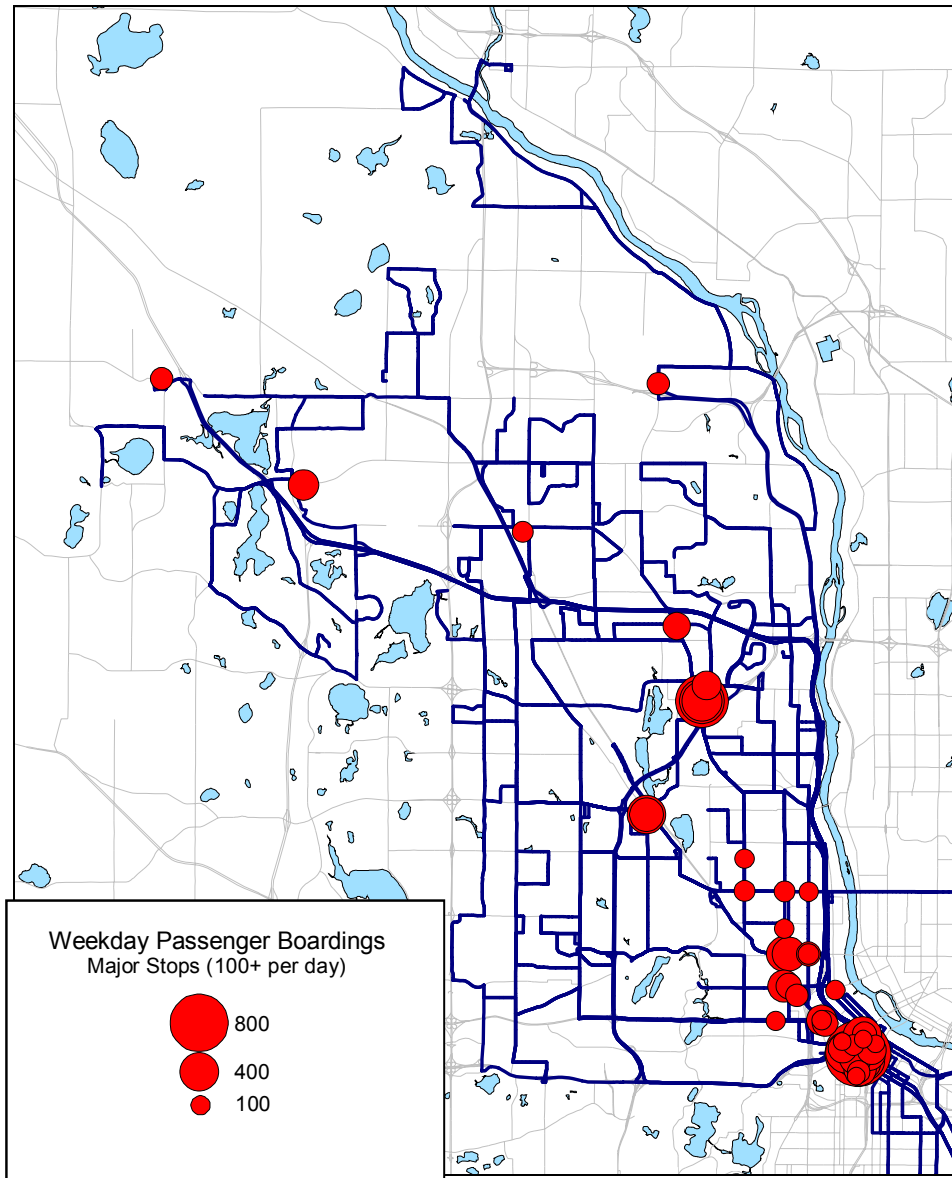
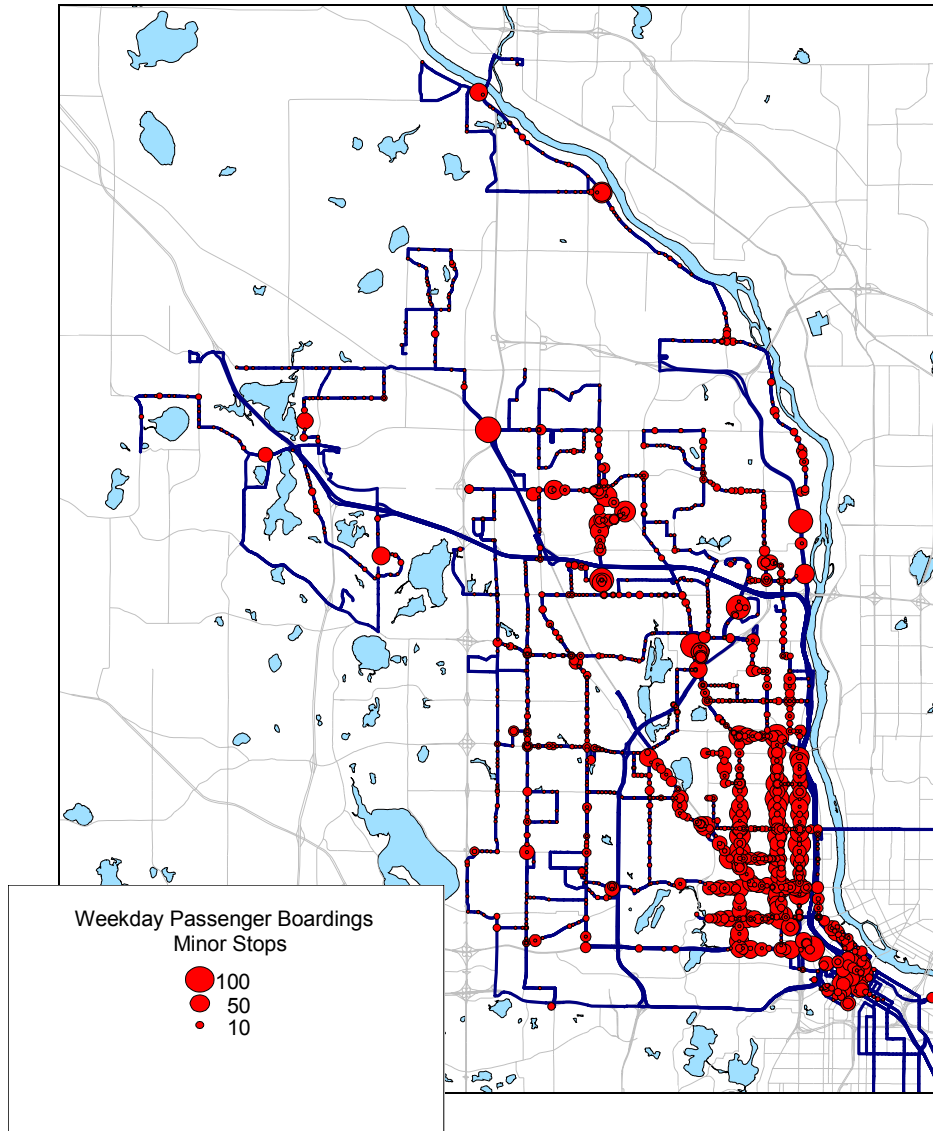


Exhibit 4.1.4B: Weekday Passenger Boardings (Ons under 100)



Weekend Transit Ridership

Approximately 320 hours of revenue transit service is provided each Saturday and 200 hours each Sunday in the Sector 8 study area. The distribution of these revenue hours is illustrated in the top chart of Exhibit 4.1.5. Approximately 60% of these revenue hours are provided between 9:00 am and 6:00 pm.

Exhibit 4.1.5 also illustrates the distribution of total number of passenger boardings or ons counted during the ride check surveys throughout Saturdays and Sundays. A total of about 11,000 boardings were counted on Saturday, with 65% occurring between 9:00 am and 6:00 pm. On Sunday, about 7,000 boardings were counted with 70% occurring between 9:00 am and 6:00 pm.

Exhibit 4.1.5 illustrates the average number of boardings per revenue hour for all weekend trips with start times during the same thirty minutes. This chart shows that the level of transit service in Sector 8 throughout weekend days is reasonably well matched with the distribution of demand throughout the day.

Exhibit 4.1.5: Service and Boardings by Time of Day (Weekends)

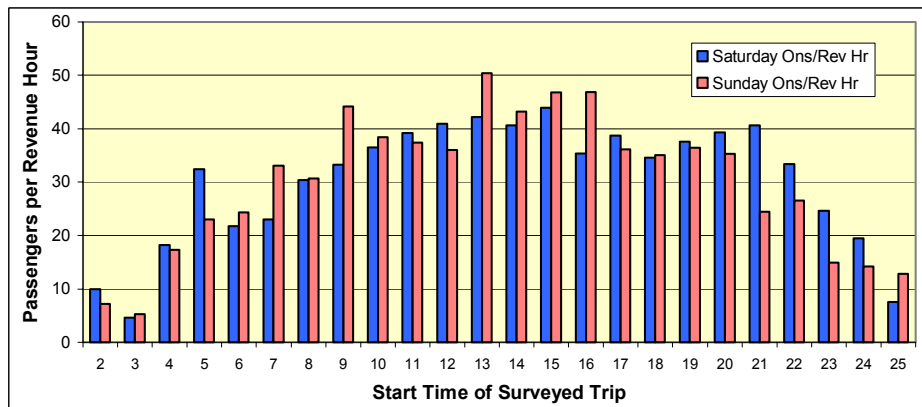
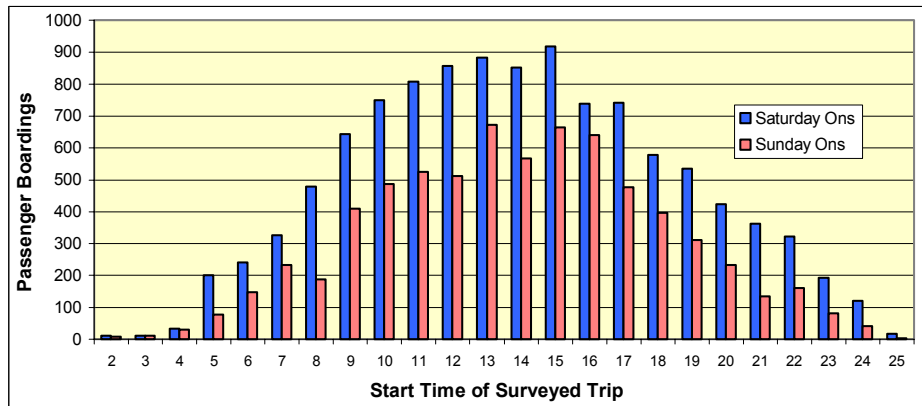
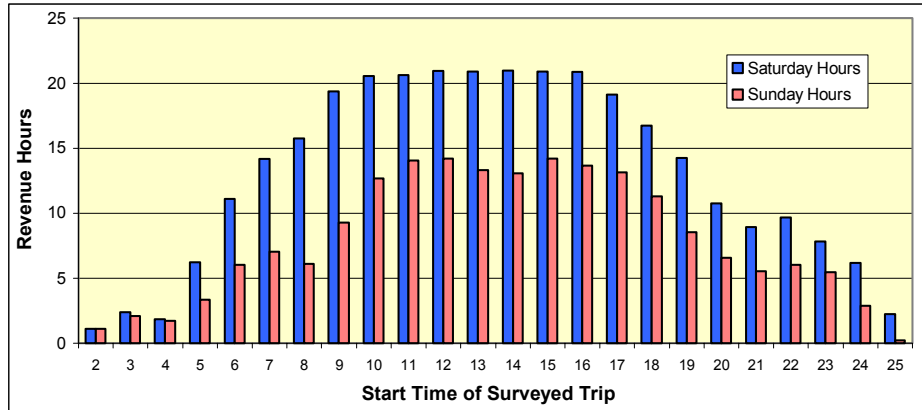
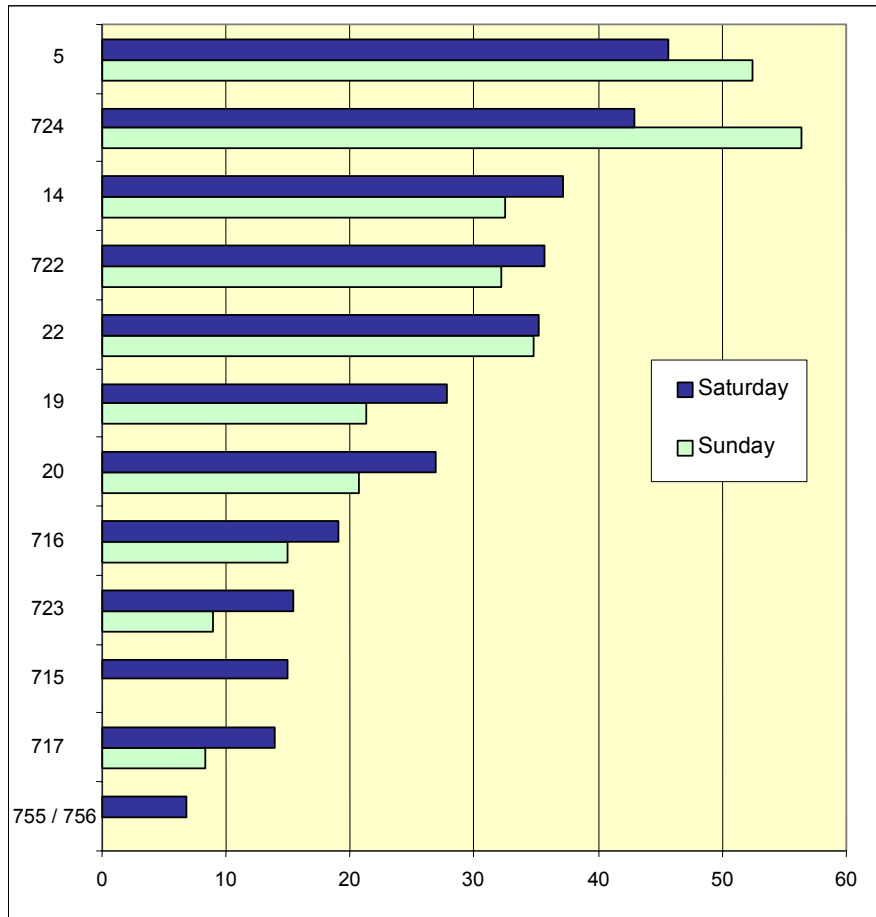


Exhibit 4.1.6 illustrates passenger boardings per revenue hour for the surveyed routes on Saturdays and Sundays. Relatively strong route performance is exhibited by Routes 724, and 5. Routes with lower ridership include 715, 717, 723 and 755/756.

Exhibit 4.1.6: Boardings per Revenue Hour by Route (Weekends)



4.2 BOARDINGS BY ROUTE AND DAY OF WEEK

Exhibits 4.2.1 - .3 present the all-day boardings per stop on each of the routes for an average weekday, Saturday and Sunday during the survey period. These are superimposed on the land use density map to show the correlation between boardings and population and employment densities.

The exhibits indicate some very high volume transit routes in the north-south direction through North Minneapolis and Robbinsdale to Brooklyn Center, generally focusing on the major transit centers. As expected, the boardings are much higher on the weekdays than on Saturdays, which are higher again than on Sundays. The limited Saturday and Sunday service is also evident by the limited routings and boardings.

4.3 RIDERSHIP BY ROUTE

Appendix A to this report presents the boardings on each route by direction superimposed on the land use map within the corridor. The figures also present the route description, areas served, demographic statistics, service route frequencies and span of service, as well as service performance.

Service performance is summarized for each of the routes in Exhibits 4.3.1 - 4.3.3, for the urban and suburban local services and the express services, respectively, for weekdays, Saturdays and Sundays. The routes are sorted by high performance to low performance in terms of passengers per revenue hour.

The values in these tables reflect the service levels and ridership during the fall of 2001. The revenue hours for routes that travel through downtown Minneapolis are for services north of Nicollet Mall. For Route 32, only the portion of the route west of Washington Avenue is included in the study. Passengers per revenue hour are from Metro Transit's farebox analysis for October 2001 where available.

Exhibit 4.3.1: Weekday Route Performance

Type	Route	Revenue Hours	Passengers per Revenue Hour
Urban	M-5	135.8	64.2
	M-14	64.1	49.9
	M-22	71.2	43.6
	M-19	55.1	41.8
	P-52K	3.3	40.0
	M-20	19.9	33.5
	M-32	17.6	21.1
Suburban	M-724	36.7	57.7
	M-721	15.9	39.2
	M-722	13.0	33.2
	M-715	15.4	21.2
	P-755/756	39.3	20.0
	M-716	12.7	18.5
	M-723	13.0	16.4
	M-717	11.9	12.3
Express	M-758	3.6	57.0
	M-94E	1.8	53.7
	M-760	23.4	43.9
	M-763	9.7	41.7
	M-764	4.9	39.4
	M-766	43.3	39.1
	M-765	6.3	37.9
	M-94GK	10.3	36.7

Exhibit 4.3.2: Saturday Route Performance

Type	Route	Revenue Hours	Passengers per Revenue Hour
Urban	M-5	97.5	55.4
	M-22	46.1	38.1
	M-14	46.5	36.8
	M-19	28.0	34.6
	M-20	14.4	23.3
Suburban	M-724	20.5	55.2
	M-722	8.4	35.8
	M-723	10.0	15.6
	M-716	11.0	14.1
	M-715	10.7	12.9
	M-717	8.8	11.5
	P-755	7.8	6.8

Exhibit 4.3.3: Sunday Route Performance

Type	Route	Revenue Hours	Passengers per Revenue Hour
Urban	M-5	57.4	61.9
	M-22	31.7	37.7
	M-14	27.6	35.1
	M-19	25.5	33.2
	M-20	7.9	20.0
Suburban	M-724	12.0	58.8
	M-722	6.6	32.1
	M-723	7.7	10.6
	M-717	5.5	8.1
	M-716	7.8	7.5