



1. Report No. <b>SWUTC/99/167211-1</b>		2. Government Accession No.		3. Rec <b>L019233</b>	
4. Title and Subtitle <b>Characterizing Bus Transit Passenger Wait Times</b>				5. Report Date <b>June 1999</b>	
				6. Performing Organization Code	
7. Author(s) <b>Mir-Davood Salek and Randy B. Machemehl</b>				8. Performing Organization Report No. <b>Research Report 167211-1</b>	
9. Performing Organization Name and Address <b>Center for Transportation Research University of Texas at Austin 3208 Red River, Suite 200 Austin, Texas 78705-2650</b>				10. Work Unit No. (TRAIS)	
				11. Contract or Grant No. <b>10727</b>	
12. Sponsoring Agency Name and Address <b>Southwest Region University Transportation Center Texas Transportation Institute The Texas A&amp;M University System College Station, Texas 77843-3135</b>				13. Type of Report and Period Covered	
				14. Sponsoring Agency Code	
15. Supplementary Notes <b>Supported by general revenues from the State of Texas.</b>					
16. Abstract  <p>Mathematical models are developed to predict bus passenger waiting time components. A statistically significant quantity of waiting time data, including related passenger attributes, transits system characteristics and bus frequency, were collected by direct observation and video taping. The experimental data were collected in a six-month period at several bus transfer centers and bus stations in the city of Austin, Texas. Measured wait time was decomposed into two components: "wait time before scheduled departure time" and "wait time after scheduled departure time." The effects of bus frequency and reliability, as well as other potential predictors on wait time components, were examined by performing Analysis of Variance and Regression. Traditional and conceptual waiting time models were evaluated using this data set and compared to the new developed models.</p>					
17. Key Words <b>Bus-Transit Passengers, Wait Time Non-Transfer Passengers, Bus Line Headway, Bus Stations, Bus Schedule Reliability</b>			18. Distribution Statement <b>No Restrictions. This document is available to the public through NTIS: National Technical Information Service 5285 Port Royal Road Springfield, Virginia 22161</b>		
19. Security Classif.(of this report) <b>Unclassified</b>		20. Security Classif.(of this page) <b>Unclassified</b>		21. No. of Pages <b>229</b>	22. Price

# **Characterizing Bus Transit Passenger Wait Times**

by

**Mir-Davood Salek  
and  
Randy B. Machemehl**

**SWUTC/99/167211-1**

Combined final report for the following SWUTC projects:

**Characterizing Bus Transit Passenger Wait Times:  
167211 and 167503 (continuation)**

Conducted for the

**Southwest Region University Transportation Center  
Texas Transportation Institute  
Texas A&M University System  
College Station, Texas 77843-3135**

Prepared by the

**Center for Transportation Research  
University of Texas at Austin  
3208 Red River, Suite 200  
Austin, Texas 78705-2625**

**June 1999**

## **ACKNOWLEDGEMENTS**

This publication was developed as part of the University Transportation Centers program which is funded 50% with general revenue funds from the state of Texas. The authors acknowledge Judy K. Shafer for her never-ending help and care throughout the project. Appreciation is also expressed to Terri Norton, Russ Goslin and Hassan Mehdi Hai for their help in collecting data for this research project.

## **DISCLAIMER**

The contents of this report reflect the views of the authors, who are responsible for the facts and the accuracy of the information presented herein. This document is disseminated under the sponsorship of the Department of Transportation, University Transportation Centers Program, in the interest of information exchange. Mention of trade names or commercial products does not constitute endorsement or recommendation for use.

## EXECUTIVE SUMMARY

Travel time, including waiting time at bus stations, is one of the most important quality and effectiveness measures of public transportation as an alternative to the automobile. Estimating and optimizing bus-transit passenger travel times have several applications in demand estimation, planning, scheduling and operating public mass-transit systems. Selecting proper routes, locating efficient numbers of bus terminals and choosing convenient time intervals between subsequent buses, or headways, are among the measures which may help reduce bus passenger wait time and optimize total transit travel time.

The main objective of this project was to develop a new mathematical model to predict wait time as a function of bus passenger attributes and transit system characteristics. According to traditional models for headways under 30 minutes, wait time is equal to half the headway, and for headways of 30 minutes or more, wait time is equal to the square root of the headway in minutes. Non-transfer passengers were the scope of this project and the models have been developed to predict wait time of non-transfer passengers.

To develop this model, a statistically significant number of waiting time observations, including related passenger characteristics, transit system characteristics and bus frequency data, were collected by direct observation and video taping. Two different techniques were applied in data collection process: direct observation and video tape recording and 2491 waiting time observations were collected in Austin, Texas during a six month period from June through December 1998. Data were collected at six different bus stations during morning and afternoon hours. The collected data were evaluated and analyzed using Analysis of Variance and Regression to investigate the relationship between different recorded characteristics and measured variables.

Gender, ethnicity, and access mode were some of the passenger characteristics studied. Bus line headway (BLH) and bus schedule reliability were among the transit system operation characteristics investigated. Schedule Reliability Index (SRI) was defined to measure how each bus service was running according to the published schedules. Waiting time was decomposed into two components: "Wait time before scheduled departure time" (WAITB) and "wait time after scheduled departure time" (WAITA). To compare waiting time of bus lines with different headways, another variable (WTHR) was introduced which standardized the Total Waiting Time (WAIT) by the headway value for each observation.

Analysis of the collected data showed that compared to other variables, bus line headway (BLH) was a good predictor of WAITB and Total Waiting Time (WAIT), while for WAITA bus schedule reliability index was a better predictor. However percentages of explained variations in all cases were less than 25 percent and for the developed models even lower, which suggests little relationship between waiting time and service frequency. Considering BLH as the independent variable and applying ANOVA showed that about 26 percent of the variation in WAITB was explained by bus line headway. In the case of WAITA, about 7 percent of the variation was explained by headway. For WAIT, the percentage variation explained by headway was close to 25 percent.

Bus Line Headway (BLH) and bus Schedule Reliability Index (SRI) were selected as acceptable predictors for bus passenger waiting time components (WAITB, WAITA and WAIT). Regression Analysis was applied to develop the mathematical models to estimate these components in terms of BLH and SRI. The objective was to develop equations that best fit the collected data and to get the highest value for adjusted coefficient of determination ( $R^2$ ) or percentage of explained variation.

The values of adjusted  $R^2$  for the Developed models were even less than 20 percent. These facts indicate that service frequency alone does a poor job of predicting waiting times. It is likely that including other variables in the model specification could improve the percentage of explained variation. Frequency of passenger bus riding, trip purpose, user attitudes towards transit, passenger level of education and transit schedule circulation are some of the potential variables that were not studied in this project and may be good wait time predictors.

## **ABSTRACT**

Mathematical models are developed to predict bus passenger waiting time components. A statistically significant quantity of waiting time data, including related passenger attributes, transits system characteristics and bus frequency, were collected by direct observation and video taping. The experimental data were collected in a six-month period at several bus transfer centers and bus stations in the city of Austin, Texas. Measured wait time was decomposed into two components: "wait time before scheduled departure time" and "wait time after scheduled departure time." The effects of bus frequency and reliability, as well as other potential predictors on wait time components were examined by performing Analysis of Variance and Regression. Traditional and conceptual waiting time models were evaluated using this data set and compared to the new developed models.

[This page replaces an intentionally blank page in the original document. --CTR Library digitization project]

## TABLE OF CONTENTS

ACKNOWLEDGEMENTS .....	II
EXECUTIVE SUMMARY .....	III
ABSTRACT .....	IV
LIST OF FIGURES .....	IX
LIST OF TABLES .....	XI
CHAPTER 1: INTRODUCTION .....	1
1.1 Project Problem Statement .....	1
1.2 Traditional Models .....	2
1.3 Need for Developing More Efficient Models .....	3
1.4 Objectives and Tasks .....	3
CHAPTER 2: LITERATURE REVIEW .....	5
CHAPTER 3: EXPERIMENTAL DATA COLLECTION PLAN .....	21
3.1 Research Project Scope .....	21
3.2 Data Collection Locations .....	21
3.3 Data Collection Techniques .....	22
3.4 Data Collection Items .....	23
3.5 Sample Size .....	24
3.6 Data Collection Rules and Definitions .....	24
CHAPTER 4: DESCRIPTION & ANALYSIS OF DATA .....	26
4.1 Collected Data .....	26
4.2 Data Processing .....	35
4.3 Potential Predictive Variables .....	42
4.4 Developing Mathematical Models .....	56
4.5 Chapter Conclusion .....	62
CHAPTER 5: SUMMARY AND CONCLUSION .....	63
5.1 Summary .....	63
5.2 Conclusion .....	66
VARIABLE AND CATEGORY CODES .....	68
APPENDIX I Non-Transfer Passengers Waiting Time Data .....	71
APPENDIX II Bus Schedule Reliability Data .....	156
APPENDIX III Transfer Passengers Waiting Time Data .....	189
REFERENCES .....	217



[This page replaces an intentionally blank page in the original document. --CTR Library digitization project]

## LIST OF FIGURES

FIGURE 4.1	Number of bus passengers for different lines at Capitol Center .....	28
FIGURE 4.2	Number of bus passengers for different lines at South Transfer Center.....	28
FIGURE 4.3	Number of bus passengers for different lines at North Cross Transfer Center....	29
FIGURE 4.4	Number of bus passengers for different lines at Highland Mall Transfer Center..	29
FIGURE 4.5	Number of bus passengers for different lines at Pavilion Park & Ride .....	30
FIGURE 4.6	Number of bus passengers for different lines at the San Jacinto Bus Stop .....	31
FIGURE 4.7	Number of bus passengers with different ethnic category at data collection locations.....	34
FIGURE 4.8	Access Modes used by bus passengers observed at different data collection locations .....	34
FIGURE 4.9	Activity performed by passengers while waiting, observed at different data collection locations .....	35
FIGURE 4.10	Frequency of observed passenger Waiting Time Before Scheduled Departure Time (WAITB) .....	37
FIGURE 4.11	Frequency of observed passenger Waiting Time After Scheduled Departure Time (WAITA) .....	37
FIGURE 4.12	Frequency of observed Total Waiting Time (WAIT) .....	38
FIGURE 4.13	Frequency of observed passengers for each Bus Line Scheduled Headway (BLH) .....	38
FIGURE 4.14	Frequency of bus Schedule Reliability Index (SRI) .....	42
FIGURE 4.15	WAITB-BLH scatter plot .....	51
FIGURE 4.16	WAITA-BLH scatter plot .....	52
FIGURE 4.17	WAIT-BLH scatter plot .....	53
FIGURE 4.18	Curve equations fitting observed data for WAITB .....	57
FIGURE 4.19	Line fit plot of observed data for WAITA .....	59
FIGURE 4.20	Line fit plot of observed data for WAIT .....	60
FIGURE 4.21	WAIT Cumulative Frequency Percentage for different range of Headways .....	61

[This page replaces an intentionally blank page in the original document. --CTR Library digitization project]

## LIST OF TABLES

TABLE 4.1	Number of collected data, data collection sessions and duration for Different locations .....	26
TABLE 4.2	Daytime * Location Crosstabulation .....	27
TABLE 4.3	Frequency and percentage of observations for each bus line number .....	32
TABLE 4.4	Location * Sex Crosstabulation .....	33
TABLE 4.5	Location * Ethnic Category Crosstabulation .....	33
TABLE 4.6	Descriptive statistics and percentiles for Bus Line Headway, Passenger Wait Time components and Wait Time Headway Ratio .....	39
TABLE 4.7	Descriptive statistics for BLH, Wait Time components and WTHR at Different locations .....	40
TABLE 4.8	Frequency, Valid Percent and Cumulative Percent of the observed Schedule Reliability Index (SRI) for passengers at six different locations.....	43
TABLE 4.9	Descriptive statistics for WAIT and WTHR at Different locations .....	44
TABLE 4.10	WAIT and WTHR Analysis of Variance for Location Categorization .....	45
TABLE 4.11	Descriptive statistics for WAIT and WTHR and two location categories .....	45
TABLE 4.12	WAIT and WTHR Analysis of Variance for two Location Categories .....	46
TABLE 4.13	Descriptive statistics for WAIT and WTHR at different Traffic Periods .....	46
TABLE 4.14	WAIT and WTHR Analysis of Variance for Day-Time Categorization .....	47
TABLE 4.15	Descriptive statistics for WAIT and WTHR for Male and Female passengers .....	47
TABLE 4.16	WAIT and WTHR Analysis of Variance for gender Categorization .....	48
TABLE 4.17	Descriptive statistics for WAIT and WTHR for different Ethnic Categories .....	48
TABLE 4.18	WAIT and WTHR Analysis of Variance for Ethnic Categorization .....	49
TABLE 4.19	Descriptive statistics for WAIT and WTHR for different Access Mode Categories .....	49
TABLE 4.20	WAIT and WTHR Analysis of Variance for Access Mode Categorization .....	50
TABLE 4.21	WAITB, WAITA and WAIT Analysis of Variance for Bus Line Headways .....	50
TABLE 4.22	WAITB, WAITA and WAIT ANOVA for Short headways (BLH $\leq$ 15 min.) .....	54
TABLE 4.23	WAITB, WAITA and WAIT ANOVA for moderate headways(15<BLH $\leq$ 30 min.) .....	54
TABLE 4.24	WAITB, WAITA and WAIT ANOVA for long headways (BLH>30 min.) .....	55
TABLE 4.25	WAITB, WAITA and WAIT ANOVA for Bus Schedule Reliability Index (SRI) .....	55
TABLE 5.1	Descriptive statistics and percentiles for Bus Line Headway, Passenger Wait Time components and Wait Time Headway Ratio .....	64

## CHAPTER 1 INTRODUCTION

Travel time, including waiting time at bus stations, is one of the most important quality and effectiveness measures of public transportation as an alternative to the automobile. Estimating and optimizing bus-transit passenger travel times have several applications in demand estimation, planning, scheduling and operating public mass-transit systems. Selecting proper routes, locating efficient numbers of bus terminals and choosing convenient time intervals between subsequent buses, or headways, are among the measures which may help reduce bus passenger wait time and optimize total transit travel time. This research project was planned to identify variables that affect bus passenger wait time and develop a new model to predict this parameter.

### 1.1 PROJECT PROBLEM STATEMENT

Total transit trip times are often described as including both in-vehicle and access time components. Access time itself includes waiting times at bus stops ( $PT_w$ ) and travel times to and from transit stations or stops ( $PT_v$ ). Access by walking is often considered in calculating access time; in most studies, equal access and egress times are assumed. Therefore total access time is:

$$PT_a = 2(PT_v) + PT_w$$

Waiting time -  $PT_w$  - is the most undesirable part of transit passenger travel time, because it increases total trip times, and transit users generally regard it as lost time. "The value of wait time is typically much higher than value of in-vehicle time. This is most likely due to the unproductive nature of wait time ... in most urban travel situations." [Ref. 1]. Therefore estimating wait time is an important step in calculating total passenger travel time.

The purpose of this project was to develop a new mathematical model to predict wait time as a function of bus passenger and transit system characteristics. Gender, ethnicity, and access mode are some of the passenger characteristics studied, and bus line headway and bus schedule reliability were among the transit system operation characteristics investigated. To develop this model, a statistically significant number of waiting time observations, including related passenger characteristics, transit system characteristics and bus frequency data, were collected by direct

observation and video taping. The experimental data were collected in a six-month period at several bus transfer centers and bus stations in the city of Austin, Texas.

In this research, wait time was considered as a part of the cost that passengers are paying to use public transportation services. Measured wait time was decomposed into two components: "Wait time before scheduled departure time" and "wait time after scheduled departure time." Transit passengers generally consider wait time before scheduled departure time as the fair cost they are paying to use public transportation, while passengers may feel upset when they are overcharged, waiting after scheduled departure time. Indeed, wait time before scheduled departure time is mainly a function of bus arrival headways and passenger travel behavior, while wait time after scheduled departure time is generally related to schedule reliability.

The collected data were evaluated and analyzed by performing Analysis of Variance and Regression to investigate the correlation between different recorded characteristics and measured variables. New models were developed using this data set and evaluated by comparing to traditional and conceptual models that estimate bus passenger waiting times.

Scheduled bus arrival headways and schedule reliability data were two main transit system characteristics, which were observed, measured and analyzed to develop the new model. Gender, ethnic categories and access mode were among the passenger characteristics that were observed and tested as predictor variables.

## **1.2 TRADITIONAL MODELS**

Most traditional and conceptual waiting time estimation models predict waiting times as a function of transit service frequency, or headways. Some analysts however have suggested variables such as "trip purpose," "service type" and "user attitude toward transit" be considered in addition to bus headways. According to traditional models for headways under 30 minutes, wait time is equal to half the headway, and for headways of 30 minutes or more wait time is equal to the square root of the headway in minutes.

For headways less than 30 minutes, the traditional models which assert that the average wait is half the headway require that passengers arrive at the bus stop randomly and that headways are perfectly regular. Analysis of the collected data, however, showed that average wait time in the case of headways less than 30 minutes is smaller than half the headway. This means that passenger arrivals at bus stations are not completely random but actually is part of the passengers plan for the bus trip. In addition, traditional models disregard whether the bus is running according to the published schedule. Bus schedule reliability can impact wait time, and

regression analysis of collected data showed a significant correlation between the “wait time after scheduled departure time” component and bus schedule reliability.

### **1.3 NEED FOR DEVELOPING MORE EFFICIENT MODELS**

Several years ago Dr. Randy Machemehl at the Transportation Department of the University of Texas at Austin and Rebecca W. Jones a graduate student at the department developed a methodology for optimizing transit station or stop spacing [Ref. 2]. The optimization concept attempted to minimize total transit passenger trip time recognizing that as spacings become smaller, access times decrease but on-vehicle times increase. An optimal spacing would be one that minimized the sum of passenger access and on-vehicle travel time. Traditional passenger waiting time models were examined and eventually used to provide the waiting time access model component.

As a part of that study limited waiting time data were collected in Austin, Texas. The collected data indicated that traditional waiting time models were questionable. However, since time and resources were minimal, primary data collection was very limited and was finally considered insufficient for general model development.

To reevaluate the results of the previous study, this research project was designed to collect statistically significant quantities of experimental data and develop new bus passenger waiting time models.

### **1.4 OBJECTIVES AND TASKS**

The objectives of the study were:

1. Review traditional bus passenger waiting time models found in the literature;
2. Collect primary data describing bus passenger waiting times, and;
3. Develop predictive waiting time models.

These objectives have been accomplished through the following work tasks:

1. Review literature regarding bus passenger waiting times;

A literature review conducted for the previous research project has been updated and extended. Previous studies regarding bus passengers travel time and waiting time, as well as, traditional modeling procedures have been examined and summarized.

2. Data collection plan

A data collection plan based upon research team experience and the updated literature review was developed. In order to maximize available effort, the plan has concentrated on identifying sites minimizing research team travel. The plan has described which transit user attributes, transit system and operational characteristics, as well as, waiting time information was

collected. Finally a definition of data collection techniques and required sample size has been presented.

### 3. Waiting time data collection

A statistically significant quantity of waiting time data, including related passenger attributes, transit system characteristics and bus frequency data, were collected by direct observation and video taping. The experimental data were collected in a six-month period at several bus transfer centers and bus stations in the city of Austin, Texas.

### 4. Waiting time data analysis

The collected data were evaluated and analyzed by performing Analysis of Variance and Regression Analysis to investigate the relationships between different recorded characteristics and measured variables. New models were developed using this data set and evaluated by comparing to traditional and conceptual models that estimate bus passenger waiting times.

In the next chapter, a comprehensive literature review of transit passenger travel time, as well as, waiting time will be presented. In Chapter 3, a data collection plan will be discussed. Chapter 4, includes description and analysis of the collected data and specification of the developed models. Finally, Chapter 5 will provide a summary of the findings and conclusions.



## CHAPTER 2

### LITERATURE REVIEW

Several researchers have studied waiting times experienced by bus transit passengers. They have investigated factors affecting passenger waiting times, developed predictive mathematical models and suggested strategies to reduce waiting time.

A study in 1957 by **Welding [Ref. 3]**, has been referenced by many later researchers who have investigated transit passenger waiting time. Welding examined characteristics of bus and under-ground railway services in central London. His investigation started with a comprehensive survey on the central section of a typical route in London and examined factors, which impacted individual bus journey times. He compared road services to the railway and wrote:

The operation of road services differs from railway services, since from the moment of leaving the terminus, each bus encounters a different set of circumstances, whilst the kind of automatic control imposed on the railway by the signaling system is absent...It was concluded from the investigation that the most important source of variation in journey time of buses was traffic delays.

Then he discussed the effect of variation in journey time on bus regularity and examined how “passengers’ average waiting time is a minimum when the service is regular and increases with increasing irregularity”. Discussing the passengers wait time for close-interval services with 2-10 minute headways, he emphasized that: “It is possible to prove mathematically that the average time waited by passengers arriving at a boarding point at random is a minimum when all the time intervals are equal or when in other words the service is perfectly regular.” He suggested the following model to estimate the average waiting time, which was a theoretical average, assuming random arrival of passengers.

$$A_v = \frac{\sum h^2}{2\sum h}$$

In his article Welding focused on bus services with headways shorter than 10 minutes and did not discuss longer intervals between subsequent buses. He assumed that for short headways, passenger arrivals at bus stop would be random and for a regular bus service, average passenger waiting time will be equal to half the headway.

In 1964, **Holroyd and Scraggs [Ref. 4]**, studied the Journey Times by Car and Bus in central London. They compared car and bus in terms of accessibility, and wrote:

One of the most important elements in the cost of a journey is the time taken, and this may be used as the basis of a more limited definition of accessibility...The accessibility function of an area (by a particular means of transport) is the average time taken to travel between two random points on the road system, expressed as a function of the direct distance between them.

In making a comparison of the times required for a given journey by these two modes, they measured journey times by car and by bus for 25 different and random routes in central London.

Each of the 25 journeys was made once by car and once by a combination of walking and bus travel. The journeys were made in the off-peak period, i.e. between 9:30 a.m. and 4:30 p.m., on March 18, 25, and 28, 1963, corresponding car and bus journeys being made on the same day. Four people were occupied in the investigation; two observers traveled separately by bus, and a driver and an observer traveled together by car.

Describing the bus service operation in central London, the authors pointed out that: "In general the buses on routes in central London run at frequent intervals and do not keep closely to a regular time-table." To identify the relationship between waiting time and direct route distance, the authors plotted waiting time against direct distance and fitted a straight line to the plotted points. The regression line had a positive slope, which meant that waiting time increased with direct distance, but the correlation coefficient was not significant. The authors described the reasons why waiting time may be expected to increase with direct distance and added: "generally the greater the distance of the destination from a particular bus-stop, the fewer will be the buses going there, and the longer will be the average wait." They used the fitted regression line to represent the waiting time model, even though the correlation was not significant and concluded:

$$\text{Waiting time} = 0.48d + 1.8 \text{ minutes,}$$

Where  $d$  was direct distance in terms of miles. In this study, the authors did not consider impacts of any other variables such as headways or irregularity on the waiting time.

In another study in 1966, **Holroyd and Scraggs [Ref. 5]**, investigated waiting times of bus passengers more explicitly and tried to find out how the average waiting time was related to

the average interval between successive buses. According to this paper the concept that the average waiting time is half the 'service interval' is based on the following assumptions:

- (i) Passengers arrive at random;
- (ii) Passengers can get on the first vehicle that comes; and
- (iii) Vehicles arrive regularly.

They showed that the first two of the above assumptions were acceptable approximations, but that the assumption of regular bus arrivals was not justified. The authors wrote:

Let  $\bar{w}$  be the average waiting time of a passenger arriving at the bus-stop at a random time and getting on the first subsequent bus which goes to the particular destination considered. If the buses arrive regularly (i.e. if  $\bar{t}$  - bus intervals - is constant), then clearly:

$$\bar{w} = \frac{1}{2} \bar{t} \quad (1)$$

They referred to Welding, who pointed out that any departure from regularity will produce a greater value of  $\bar{w}$  for the same value of  $\bar{t}$  and concluded:

For example, if the buses arrive in bunches of  $n$  at regular intervals of length  $n \cdot \bar{t}$ , then

$$\bar{w} = \frac{1}{2} n \cdot \bar{t} \quad (2)$$

If the buses arrive at random times, then a knowledge of the times of previous arrivals is of no value in predicting the times of future arrivals, and the average waiting time for a passenger arriving at a random time is, paradoxically, the same as that for a passenger arriving just after a bus has left. In this case, therefore,

$$\bar{w} = \bar{t} \quad (3)$$

According to the authors:

The general formula for the average waiting time is:

$$\bar{w} = E(t^2) / 2 E(t) \quad (4)$$

Where  $E$  denotes the expectation or average value of the variant; this may be expressed in terms of the mean and variance of  $t$  as:

$$\bar{w} = \bar{t} / 2 (1 + \text{var } t / \bar{t}^2) \quad (5)$$

Equation (4) of this study is similar to the model, which was given by Welding. To describe this model, Holroyd and Scraggs added that:

It follows from the fact that the average waiting time of passengers arriving in an interval of length  $t$  is  $\frac{1}{2}t$ , and the average number of passengers arriving in such an interval is proportional to  $t$ . The average waiting time is, therefore, a weighted average of the quantities  $\frac{1}{2}t$  with the quantities  $t$  as weights; this gives

$$\bar{w} = \Sigma(t \cdot 1/2t) / \Sigma t = \Sigma t^2 / 2\Sigma t$$

Apparently in the above equation  $t$  needs to be replaced by  $t_i$ , where  $i$  is the number of intervals. The authors then indicated the values of variance  $t$  for the three particular patterns for the bus arrivals as:

Regular arrivals : var  $t = 0$

Bunched arrivals : var  $t = (n-1) \bar{t}^2$

Random arrivals : var  $t = \bar{t}^2$

and concluded that: "Substitution of these values in equation (5) gives the results (1), (2) and (3) respectively."

The authors investigated the average waiting time for buses in the off-peak period in central London. They made a record of the buses passing 24 central London bus stops. At each bus stop observations were made for one hour during the off-peak period (9:30 a.m. to 4:30 p.m.) on April 23, 24 or 25, 1963. For every bus passing during this period (whether it stopped at the bus stop or not) a record was made of the time, the route number, and the indicated destination. In estimating the passenger waiting times, instead of real time measurement of the waiting time, stochastic methods were used to estimate waiting time of a passenger arriving at random and getting on the first bus that arrives.

The average values of  $\bar{w}$  were plotted against  $\bar{t}$  and an empirical function was fitted to the plotted points. According to the authors:

The simplest function with the right behavior for small and large values of  $\bar{t}$  is:

$$\text{var } t = (A \bar{t}^2) / (A + \bar{t}^2)$$

Where  $A$  is a constant, which when substituted in (5) gives:

$$\bar{w} = [(2A + \bar{t}^2) / (2A + 2\bar{t}^2)] \bar{t}$$

The authors obtained a good fit to the observed data by putting  $A = 35$  ( $w$  and  $t$  measured in minutes). The curve

$$\bar{w} = [(\bar{t}^2 + 70) / (2\bar{t}^2 + 70)] \bar{t}$$

approximated the line  $\bar{w} = \bar{t}$ , corresponding to random arrivals of buses, for very small values of  $\bar{t}$  (less than two minutes), while for large values of  $\bar{t}$  it asymptotically approached the line  $\bar{w} = 1/2 \bar{t}$ , corresponding to regular arrivals.

According to the plotted data, all of the bus intervals were less than 12 minutes and most were below 5 minutes. It is clear from the plotted data that when the headways were very short, say below 4 minutes, the average passenger waiting time was closely related to bus intervals. This means that for very short intervals, there was a very strong tendency for both buses and passengers to arrive randomly at the bus stops.

In 1969, **Goodwin [Ref. 6]** studied journey times by car and bus to and from Central London during peak hours. This study was one of the several based on an experiment carried out by the Greater London Council between May and August 1967. The investigator studied a random sample of journeys made by a team of G.L.C. employees, once by car and once by public transport, recording the origins, destinations and times for each section of the journey. The initial intention was not to compare car and bus, but car and public transport of all forms, and it was found that, under existing conditions, private transport was generally faster than public transport for all journeys except long distance peak period rail commuter services. This experiment included not only central London but also outside the Central Area.

The experiment included peak traffic hours from 7:30 to 9:30 in the morning and 4:45 to 6:45 in the afternoon. As a part of this study the waiting time for bus passengers in London was measured. In his article, the author gives average waiting times in different areas including 3.4 minutes for the Central Area, 4.5 minutes for the Inner London Area and 6.3 minutes for Outer or Suburban Area with an average of 4.6 minutes. He doesn't discuss relationships between wait time and other variables. At the end of the article, the author concludes:

For the particular characteristics of the journey to work in central London, it is not inconceivable that a bus-based system could compete against a mixed bus and car system, not only in terms of travelling speeds, but also in average door-to-door journey times, for quite long journeys.

In a 1970 study at the University of Leeds, **Flaherty and Mangan [Ref. 7]**, examined the relationship between bus service interval and average passenger waiting time under peak and off-peak traffic conditions. Data gathered at central area bus stops in the course of surveys carried out during peak and off-peak periods in Leeds, and during off-peak periods in Harrogate,

were used to illustrate these relationships. Experimental data were obtained by measuring the actual passenger waiting times, from which average values were calculated for the various service intervals. According to the authors:

In any examination of bus passenger waiting times there are three basic factors which must be considered:

- (i) the passenger arrival rate at each bus stop;
- (ii) the availability of seats on the buses; and
- (iii) the regularity of bus operation.

Each of these factors affects the average passenger waiting time, and assumptions based on them are only valid at certain times and under certain traffic conditions.

Reviewing previous studies, the authors referred to the assumption of random bus passenger arrivals to the bus stop made by most investigators and wrote:

While this method of estimating average passenger waiting times is acceptable in off-peak periods, it is important to appreciate that it cannot be used during peak periods as the assumption of random passenger arrivals is probably not valid at these times.

In this study the method of least squares was used to fit a straight line to the experimental data. The equation of this line, with a correlation coefficient of  $r = 0.63$ , was:

$$w = 1.79 + 0.14 t$$

Where  $w$  was average waiting time and  $t$  was equal to service interval both in minutes. The authors concluded:

It is to be noted that the slope of the fitted line (0.14) is considerably less than the slopes of the lines relating random passenger arrivals to random and regular bus arrivals, which are 1.00 and 0.50 respectively. The implication of a slope of 0.14 is that irrespective of whether the bus service interval is high or low during the peak hour, the average passenger waiting time continues to be relatively low. This suggests that bus passengers do not arrive at random at bus stops in central Leeds during weekday evening peak periods. In other words, the bus passengers tend to time their arrivals at the bus stops to the arrival times of the required buses.

The article illustrated the average passenger waiting time versus bus service interval for evening peak periods in central Leeds. The range of bus service intervals were from 2 to 12 minutes and the plotted data showed that for very short intervals, such as less than 4 minutes the average passenger waiting times were more scattered and there was an obvious tendency towards higher slopes. The authors added:

When the service interval is on the high side, passengers tend to time their arrivals so as to keep their waiting times below about one-half the service interval, whereas when the service intervals are low, the average waiting time tends to be greater than the pertinent service interval... In terms of real values, it is evident from the line fitted to the Leeds peak period data... that as the service intervals were varied between 1.2 and 12 minutes, the average passenger waiting times only increased from two to 3.5 minutes. In other words, as the bus frequency decreased from 50 to five buses per hour, i.e. a 10-fold increase in the service interval, the average passenger waiting time only increased by a factor of 1.75.

For off-peak period waiting times, the authors compared data from Leeds and Harrogate to equations developed by Holroyd and Scraggs using London data, but used best fit "A" values of 15 for Leeds and 20 for Harrogate, compared to Holroyd and Scraggs use of  $A = 35$ . The study concluded that:

For bus service intervals below about three minutes, off-peak passengers tend only to wait for an average period which is approximately equal to the service interval. However, the average passenger waiting time tends towards one-half the service interval as the service interval is increased beyond three minutes. This general conclusion is perhaps only valid for as long as the off-peak service interval does not exceed 10 to 12 minutes. Above this boundary, it is not illogical to accept that passengers do not arrive at random at bus stops but tend to time their arrivals to those of the arrival times of the required buses.

In 1974, **Barnett [Ref. 8]**, attempted to develop a strategy to reduce headway variations due to transit line operational randomness. This study considered how best to control such randomness through a strategy based on holding individual vehicles at a chosen control stop to minimize an objective function based on both average waiting time for riders entering the system there and average delay for passengers already aboard the vehicle.

The authors discussed the causes of randomness in bus service operating times such as "the number of passenger stops", "the fraction of traffic lights at which the vehicle must stop", "the extent of traffic congestion (both transient and longer-term)", and "the 'driving characteristics' of the bus driver", and concluded that:

Thus the randomness inevitable in transport service might well, if unchecked, cause a sharp deterioration in passenger service below its ideal level, average passenger wait may substantially exceed its theoretical value of half the original interval, and the fraction of riders who must stand may be greatly increased.

In this study it is assumed that the passenger arrivals at bus stops are Poisson distributed with fixed arrival rate parameter. The author developed his model assuming that "for a

given mean headway, average wait increases linearly with headway variance." According to this study, the average wait at a control stop is:

$$E_c(w) = E(h^2) / 2 E(h) = (a^2 + 2L^2pp_{ca}) / 2a$$

Which is similar to the model suggested by Welding for short headways.

In 1974, in another study related to control strategies for bus headways, **Newell [Ref. 9]**, examined the effects of pairing on bus operation. The objective of the study was to devise a strategy of control that would minimize the average waiting time of the passengers. He assumed that the round trip was so short that passengers arrived at a nearly uniform rate, independently of any possible published schedule. The author emphasized:

We have assumed a constant arrival rate of passengers. If typical headways are longer than a few minutes, a bus company would publish a schedule, and passengers would likely arrive at a nonuniform rate peaked just before each scheduled departure time. If headways are short, however, as for a busy commuter line or an elevator, the assumption of constant arrival rate of passengers is probably justified regardless of whether or not the company publishes a schedule.

In a 1975 study, **Jolleffe and Hutchinson [Ref. 10]**, examined bus passenger waiting times to explore any association between bus and passenger arrivals at a Bus Stop. They observed times of arrivals of passengers and departures of buses at ten bus stops in suburban London, each for a period of one hour repeated over eight days, in the summer of 1974. The different bus stops were observed at different times of the day, but the observations at each were repeated at the same time on each of eight different days. This experiment indicated that passenger waiting times were about 30 percent less than they would have been had the passengers arrived at random times. To explain this, the authors categorized passengers into three groups: a proportion  $q$  whose arrival time was causally coincidental with the bus, a proportion  $p(1 - q)$  who arrived at the optimal time (the time at which the expected waiting time is smallest), and a proportion  $(1 - p)(1 - q)$  who arrived at random. It was found that  $p$  is positively correlated with the expected gain from arriving at the optimal time as opposed to arriving at random. Furthermore,  $p$  was found to be larger at those bus stops observed in the peak than at those observed in the off-peak.

The study emphasized the importance of association between arrival times of the bus and the passengers in reducing the wait time:

It is well known that if passengers arrive at a bus stop at random, the average time they have to wait before a bus comes is given by  $\mu(1 + \sigma^2 / \mu^2) / 2$ , Where  $\mu$



and  $\sigma$  are respectively the mean and standard deviation of the time headways between buses. However, if there is a published timetable for the service, or if buses tend to run at certain fixed times rather than at others and there are some passengers who frequently make the same journey, then it may be expected that the bus and passenger arrival times at the stop will be associated so as to reduce the average waiting time below that given by the above expression.

The authors referred to the data gathered by O'Flaherty and Mangan in central Leeds and by Seddon and Day in Manchester and concluded that:

The equation  $W = 0.5\mu$  represents the minimum possible waiting time for random passenger arrivals. It crosses the empirical regressions at headways of 5 minutes for the Leeds data and at 10 minutes for the Manchester data, so these may be considered as upper bounds for a threshold below which passenger arrivals can be taken to be random.

To explain the criteria they used in selecting bus stops for data collection, the investigators added:

only stops with a single service were chosen, as otherwise confusion could have arisen with some passengers able to catch any bus to reach their destination while others had a restricted choice of service.

The scheduled time headways of the services observed in this experiment were in the range of 6-23 minutes, while the mean headways actually observed ranged from 8 to 31 minutes, being higher because of the cancellation of some buses. The coefficient of variation of the headways, which would be 0 for a perfectly regular service and 1 for a random one, varied from 0.09 to 0.79, the average was 0.46. The authors evaluated the equation given by Holroyd and Scraggs and concluded that:

These studies considered only services with headways less than 12 minutes, and evaluated the suitability of the formula by plotting not  $\sigma$  against  $\mu$  but instead  $w_{rand} = \mu/2 \cdot (2A + \mu^2) / (A + \mu^2)$  against  $\mu$ . By thus multiplying both sides of the equation by  $\mu$  a misleading impression of its success is obtained.

The collected data at each of the observed bus stops indicated that the actual average waiting time was between the minimum waiting time and the waiting time calculated assuming random passenger arrivals. The standard deviation of observed waiting times was strongly related to the mean, being about 15 percent less than the latter. The authors compared the measured waiting time to the expected waiting time assuming random passenger arrivals,  $w_{rand}$ , and continued: "It can be seen that actual waiting times are consistently less than they would be if

passenger arrivals were random.” To account for this reduction in waiting time, they defined the mean expected waiting time for observed arrivals, denoted by  $x$ , by averaging EWT( $t$ ), over the times of all passenger arrivals at the stop and concluded:

If  $x$  is less than  $w_{rand}$  (as we found in most cases) there is an indication that arrivals are being timed so as to reduce expected waiting time. If  $x$  is greater than  $W$ , then some people are having their waiting time reduced because the bus comes sooner than expected; since it is implausible that the presence of passengers at a stop should influence when the bus comes, we interpret this as meaning that the proximity of a bus to the stop causes passengers to arrive at the stop who would not have done so (at that time) if the bus had not appeared.

To explain the reduction of  $x$  below  $w_{rand}$  and  $W$  below  $x$ , the investigators considered that the passengers were made up of three groups of people:

- (i) a proportion  $q$  who arrive coincidentally with the bus, because they see it coming and run, etc., and who have zero waiting time;
- (ii) of the remainder, a proportion  $p$  are familiar with the service and arrive at the optimal time, so they wait on average for  $W_{min}$ ;
- (iii) the third group, a proportion  $(1-q)(1-p)$  of the total, arrive at random and wait for  $w_{rand}$  on average.

The authors continued:

The proportions  $p$  and  $q$  may be calculated from  $W$ ,  $x$ ,  $w_{rand}$ ,  $w_{min}$  and  $y$  [the last being EWT( $t$ ) averaged over the bus departure times...]. Since a proportion  $q$  wait for no time,  $(1-q)p$  wait for  $w_{min}$  and  $(1-q)(1-p)$  wait for  $w_{rand}$  we have  $W = (1-q)[p w_{min} + (1-p) w_{rand}]$ .

The investigators suggested:

In order to predict  $W$  from parameters of the bus service, therefore, the best we can do at present is to take  $q$  to be a constant, 0.16, and to use the formulas:

$$W = 0.84 [w_{rand} - g (1 - e^{-0.131g})]$$

Or

$$W = 0.84 [w_{rand} - g (1 - e^{-0.015g})]$$

Where  $g$  is the potential gain (in reduced waiting time) that may be obtained by a passenger knowing the bus service departure time and arriving at the optimal time, which is  $w_{rand} - w_{min}$ . At the end of the article the authors concluded:

Our most important results concern the relation between the arrival times of buses and of passengers at bus stops. It is clear they are associated to a significant extent, there being a high rate of passenger arrivals at times when the expected wait for a bus is small. We have further shown that a substantial fraction of passenger arrivals are causally dependent on the bus arrivals, as people run to catch the bus when they see it coming. The average waiting time for the remaining passengers is still below that for passengers arriving at random, and this effect is particularly strong in the peak travel period.

In 1978, **Koffman [Ref. 11]**, examined and tested several strategies for real time control of bus headways. He developed a simulation model of a single-direction bus route, including explicit traffic signal simulation. The author tested different headway control strategies and compared the passenger wait time, bus travel time, bus travel speed and bus headway to the base case, at which no control was applied. In this model, passengers arrivals were created using both random and constant rates. According to the author:

The base case is useful for comparison of other strategies and as a check on the validity of the model. The results agree well with the observed behavior of real bus routes. In particular the bus speed works out to be near 13Km/hr (8.7 mph), which is realistic, as is the average passenger wait time at rather more than half the average headway.

In another study in 1978, **Turnquist [Ref. 12]** studied the effects of service frequency and schedule reliability on waiting time experienced by passengers. He proposed a model of bus and passenger arrivals at a bus stop. According to his model passengers arrivals were considered either random, or non-random, having arrival times planned so as to insure a given probability of catching a selected bus. Buses were modeled as having a lognormal arrival time distribution. The impacts on expected wait time of service frequency and reliability for both random and non-randomly arriving passengers were identified. The effects of frequency and reliability on the proportion of the user population that plan their arrival time were also explored through a small empirical study.

The author criticized several previous studies for not treating non-random arrivals of passengers and wrote: "The inclusion of this category of passenger arrivals is one major objective of the model presented here." The second major objective of the study was to incorporate the effect of service reliability on passenger wait time:

By focussing clearly on this issue, a model can be formulated which will allow the transit operator to evaluate the impacts of operating changes designed to improve the reliability of service.

According to the paper if buses tend to adhere to a fixed schedule and there are passengers who make the same trip frequently, they may be expected to plan their arrival at the bus stop. In this case, average wait time might be expected to be less than the commonly used model, which asserts that average wait time is one-half the headway. In fact this study provided a modification of the Jolliffe and Hutchinson model which was different in three significant ways. First arriving passengers were simply considered to be either random or non-random. Second, a theoretical model was used for the probability distribution of bus arrival times. In this study observed bus arrival data were used to estimate the distribution, and arrival times of non-random arrivals were derived from the estimated distribution. The third major difference was the assumption that non-random arrivals will minimize expected wait time subject to a constraint that results in a fixed probability of missing the selected bus.

The author mentioned that the potential reduction in waiting time for non-random arrivals resulting from planning one's arrival time at the bus stop arises from the ability to predict the time of arrival of a given bus on different days rather than the regularity of headways on a single day. He assumed a lognormal distribution for bus arrival times and developed mathematical models to predict the expected waiting time –  $E(w_r)$  – and the proportion –  $a$  – of non-random arrivals in terms of bus service characteristics.

In order to explore effects of changes in service characteristics on 'a', a small empirical study of several services in Chicago with varying headways and reliability was undertaken. Data were collected on bus arrival and passenger wait times at four different services in spring and summer of 1977. The expected wait for random arrivals was found by estimating the mean and variance of the headway distribution between successive buses. Since passenger wait times were observed simultaneously with the bus arrivals, the proportion of non-random arrivals, 'a' was given as:

$$a = [E(w_r) - E(w)] / [E(w_r) - E(w_n)]$$

Where:

$E(w_r)$  = expected wait time for random arrivals,

$E(w_n)$  = expected wait time for non-random arrivals, and

$E(w)$  = measured wait time.

The value of observed 'a' in this study ranged from 0.49 to 0.74.

To develop a model to predict the value of 'a' as a function of service characteristics, the study discussed that increasing headways would lead to increasing values of 'a', as the potential gain from planning one's arrival time will be larger. The study also argued that as service becomes more reliable, the task of planning one's arrival to correspond to the bus arrival time

becomes easier, which will probably increase 'a'. The paper suggested the coefficient of variation of the bus arrival time distribution as a useful measure of the service reliability and proposed the following simple model to predict 'a':

$$a = b_0 + b_1 E(H) + b_2 CV + e$$

where:

E(H) = expected headway

e = error term

CV = Coefficient of Variation for the bus arrival time distribution  $b_0$ ,  $b_1$ , and

$b_2$  = constants

In 1980, **Turnquist and Blume [Ref. 13]**, evaluated potential effectiveness of headway control strategies for transit systems. Holding strategies for control of headways between transit vehicles are often considered as a means of improving transit service reliability. They described simple tests that can be used to identify situations for which control is potentially attractive. According to this study:

The major incentive for making headways more regular is to reduce waiting time of passengers who board at or beyond the control point. If passengers arrive at a stop without regard to the schedule of service (i.e., randomly), a well-known formula -see Welding [Ref.1]- gives the average wait time as:

$$E(W) = [ E(H) / 2 ] + [ V(H) / 2 E(H) ]$$

Where:

E(W) = average wait time,

E(H) = average headway between vehicles, and

V(H) = variance of headway.

Thus, making headways more regular (i.e., reducing the variance) serves to reduce average wait.

The models developed in this study were based on the assumption that passengers arrive randomly through time at bus stops. The authors emphasized that the use of the results should be limited to cases in which average headways are 10 minutes or less. Since for longer headways passenger arrival patterns may be different.

In a study in 1983, **Tsao and Schonfeld [Ref. 14]**, studied zonal transit service as "an operating strategy which can in many circumstances improve both the productivity and the service quality of public transit systems." They mentioned increasing the passenger wait time as one of the disadvantages of this strategy. In this study passenger wait time is considered equal to half the headway without regard to the headway magnitude.

In 1983, **Abkowitz and Engelstein [Ref. 15]** examined factors affecting running time on transit routes. They developed empirical models of transit mean running time and running time deviation estimated from data collected on transit routes in Cincinnati, Ohio in 1978. It was found that mean running time was strongly influenced by trip distance, people boarding and alighting, and signalized intersections.

According to this study: "As running time deviation increases, expected passenger waiting time at transit stops is also likely to increase, since people cannot plan with knowledge of when the bus will arrive." The study suggests that strategies to control unreliability should be given serious consideration as early as at the route origin, since the benefits from implementing such a strategy would be distributed to all transit users downstream, regardless of where the passenger is boarding.

In 1986, **Abkowitz, Eiger and Engelstein, [Ref. 16]**, studied headway control strategies as methods for correcting transit service irregularities and thereby reducing passenger wait times. The paper addressed a particular strategy which can be implemented on high frequency routes (headways under 10-12 minutes), in which buses are held at a control stop to a threshold headway. They developed an algorithm which yields the optimal control stop location and optimal threshold headway with respect to a system wait function. The specification of the wait function is based on the development of several empirical models, including a headway variation model and an average delay time model at control stops.

The authors used the model suggested by Welding in 1957 for frequent services and assumed that for frequent scheduled services passengers are considered to arrive at stops randomly (i.e. without regard to schedule), and that the average wait time is:

$$E(w) = H/2 + V(H)/2H$$

Where:

$E(w)$  = average wait time

$V(H)$  = headway variation

$H$  = average headway

The model shows that control strategies aimed at reducing headway variation can effectuate reductions in passenger wait times. The study developed a headway variation model that was subsequently used to derive a threshold control decision methodology. This

methodology was later evaluated in terms of its effectiveness in reducing headway variation and passenger wait times. According to the authors:

An empirical headway variation model was developed based on Monte Carlo simulations. Simulation time periods of up to four hours and scheduled headways of three, six and nine minutes were used in order to account for the full range of headways and operational periods where threshold based holding strategies may be applicable... The simulation output consisted of the computed headway variation for each combination of scheduled headway, run time and run time variation...

A consistent result in all the simulation runs was that the headway variation increased rather sharply with the run time variation at low values and then tapered off. A non-linear regression analysis using the data generated by the simulation yielded the model:

$$V(H) = (-12.2 + 6.95 H) \{ 1 - \exp[-(0.045 V(R))] \}$$

n = 554  
residual mean square = 4.08

where:

V(H) = headway variation (squared minutes)

V(R) = run time variation (squared minutes)

H = mean headway (minutes).

The model indicates that the headway variation does not increase linearly along a route, a common assumption made in many previous studies. Rather, headway variation increases sharply with low run time variation values and then tapers off. This result suggests that control is more effective at stops that are closer to the control point and this effect is reduced at stops further downstream.

A simple algorithm was developed to determine the control stop and threshold headway that would yield the greatest reduction in total system wait time. Total wait time was assumed to be both wait time at stops and on-vehicle delay at the control stop. The on-vehicle average delay was modeled separately using simulation and, together with the headway variation model, comprised the necessary elements needed to define the system performance function to be optimized. The threshold-based headway control strategy was evaluated by simulating several scenarios of passenger boarding and alighting profiles, and mean headway. The optimal control resulted in a 3-10 percent reduction in total passenger wait time.

In another study in 1986, **Abkowitz and Tozzi, [Ref. 17]**, examined several transit route characteristics which can potentially yield significant reductions in passenger wait time and identified the most appropriate conditions under which headway-based control should be exercised. They found that headway-based control is most suitable for routes operating with short

The methodology and algorithm were validated using data from the southern California rapid transit district and reviewing the predicted results with the SCRTD Scheduling Department. The study showed that wait-time reduction effectuated by headway-based control is strongly influenced by the location of passenger boardings and alightings, total ridership on the route, scheduled headway, the relative weight assigned to passengers detained at the control stop, initial headway variation, and percentage of on-street parking permitted.

As shown by this literature review, several authors developed models to predict waiting times assuming random passenger arrivals at bus stations. Some of them criticized others for not treating non-random passenger arrivals. Almost all of the studies attempted to explore relationships between bus passenger waiting times and headways, schedule reliability or both. None of them did discuss what percentage of the waiting times variation is explained by headway or schedule reliability.

Given the information covered in this review as background, the objective of this research was to identify the variables that affect bus passenger wait time and to explore the extent each variable predicts variability associated with wait time. The next chapter provides a description of the experimental data collection plan.



## **CHAPTER 3**

### **EXPERIMENTAL DATA COLLECTION PLAN**

Data collection as the main research task, required a work plan to complete this process in a reasonable time. This plan defined project scope, identified data collection locations, chose appropriate data collection techniques, and specified sample size and the items, which were recorded during the data collection process. It also includes an explanation of all the rules and standards that observers had to follow to ensure data accuracy and consistency.

#### **3.1 RESEARCH PROJECT SCOPE**

Almost every study related to bus transit passenger travel time and wait time, considers two groups of passengers separately: transfer passengers and non-transfer passengers. These two groups have different wait time behavior. The first group includes those passengers who transfer from other buses and do not control when they arrive at bus stations. Non-transfer passengers are those who walk, drive or use any means other than transit service to get to the bus station and therefore are able to make decisions about their arrival time. The second passenger group was the subject of this project and the models have been developed to predict non-transfer passenger wait time. However waiting time data of transfer passengers were also collected for future studies and research projects.

#### **3.2 DATA COLLECTION LOCATIONS**

Bus transit stations are locations where hundreds of passengers wait to board buses to their destinations. Therefore, bus stations are good locations to observe transit-passengers and to collect real time data about bus-passenger wait times and transit-system operational characteristics. Since time and resources were limited, it was not possible to collect data in all transit stations in the city. In order to productivity, minimize research team travel and collect passenger wait time data for different socio-economic groups, six bus transit stations in the city of Austin, Texas, were identified as data collection sites. Following are brief site descriptions:

##### **3.2.a Capitol Center**

Capitol Center is located in the central business district ( CBD ) of the city, at 11<sup>th</sup> St. between Colorado and Congress streets. Routes 1, 3, 4, 5, 6, 9, 10, 12, 19, 29, 30, 38 and 63 stop there. Compared to other stations, Capitol Center has the highest number of passengers. Many of the passengers at this location transfer from other routes and many of them walk to the

station. Passengers who use this station belong to different socio-economic classes, but most are Downtown Austin workers.

### **3.2.b South Transfer Center**

The South Transfer Center is located in south Austin, at the intersection of the IH35 and William Cannon Dr. Routes 13, 27, 33, 61, 62 and 111 stop at this transfer center. Most bus passengers walk to the South Transfer Center. Morning passengers are mainly employees who take the bus to work sites in other parts of the city and afternoon passengers are usually shoppers from neighboring shopping centers.

### **3.2.c Northcross Transfer Center**

This transfer center is located at the intersection of Burnet Rd. and Anderson Ln. in the area of Northcross Mall. Routes 3, 5, 8, 19, 25, 39 and 44 stop at this station. Most passengers walk to this station from the residential neighborhood and shopping center, although there are significant numbers of transfers.

### **3.2.d Highland Mall Transfer Center**

Highland Mall transfer center is located along Airport Blvd. in the Highland Mall area. Routes 7, 8, 15, 32, 39 and 120 stop at this station. Most passengers walk from the shopping center, however significant number of transfers are evident.

### **3.2.e Pavilion Park & Ride**

The Pavilion Park & Ride is located in northwest Austin at Highway 183. The LX Express (Southbound and Northbound) and route No. 40 are the only routes that stop in this station. Most passengers at Pavilion Park and Ride are Downtown Austin employees who drive or take rides to this station. Pavilion Park & Ride is a good site to investigate bus passengers waiting time at Park & Ride facilities.

### **3.2.f Saint Jacinto bus station**

This station is located at the intersection of Saint Jacinto and 26<sup>th</sup> streets in the UT campus area. UT Red River (RR) shuttle bus and routes 7 and 74 stop there. Most passengers at the Saint Jacinto bus station are UT students who walk to the station.

## **3.3 DATA COLLECTION TECHNIQUES**

The objective of the data collection process was to record passenger general attributes and wait time data including sex, ethnicity, access mode, activity during waiting time, arrival time and departure time. The collected data were analyzed to study the impact of each variable on passenger waiting time. In addition to these data, transit system operational characteristics such as bus line number, bus arrival time and bus departure time were collected to examine bus

schedule reliability. Two different techniques were applied in data collection process: direct observation and video tape recording.

### **3.3.a Direct Observation**

In this method, observers recorded real time passenger wait time data including passenger arrival time, bus line number and bus departure time, as well as passenger characteristics such as sex and ethnicity by direct observation. For this purpose specific data collection forms with additional information about the bus line numbers were provided for each bus station.

Recording data by direct observation in those transit stations, where the number of passengers was more than 25-30 per hour, was difficult and confusing. To avoid this problem and to reduce the number of the observations, direct observers were instructed to disregard transfer passengers, who were not the main subject of this research. They were also told to note remarkable physical descriptions of the passengers, such as color of clothing and objects they were carrying, to be able to track them at the bus station. By applying direct observation, observers were able to record passenger ethnicity and activities they performed while waiting in the bus station, information that was difficult to identify when observing the video tapes.

### **3.3.b Video Tape Recording**

In busy bus stations it was difficult to record wait time data for all passengers by direct observation. To avoid errors which were likely using direct observation, all data collection sessions were video taped and passenger wait time data were recorded. While the observer was recording non-transfer passenger wait time data by direct observation, two camcorders recorded the scene. The recorded videotapes were later observed in the video lab of the Civil Engineering Department of the University of Texas at Austin. Non-transfer passenger data which were recorded by direct observation were checked using video and waiting time data for transfer passengers were recorded by observing the tapes.

Compared to the direct observation technique, video taping in the bus stations increased the number of observations and included transfer passengers; however, some passenger characteristics, such as ethnicity and activity during waiting time were usually unclear from the tape observing. As in direct observation, observers were told to note physical passenger descriptions in order to be able to track them through video records.

## **3.4 DATA COLLECTION ITEMS**

Passenger attributes, which were collected by direct observation and tape recording were gender, ethnic category, access mode and the activity passengers performed while waiting for the

bus. Moreover observed items included passenger arrival time, the bus line number each passenger was taking and the bus departure time.

After recording the above items, scheduled departure time and bus line headway for each specific bus service were extracted from the valid bus schedule book. Waiting time components were calculated for each observed passenger. Details of calculations are presented in the next chapter.

### **3.5 SAMPLE SIZE**

Developing a general model to estimate non-transfer passenger wait times required statistically sufficient data. Choosing the sample size to estimate any population parameter depends on the variability of the parameter in the population, the degree of required accuracy, population size and available resources for data collection. In this project, as an initial estimation, 2,500 to 3,000 non-transfer passenger wait times was considered reasonable for the general model development. The analysis of the statistically acceptable sample size and determining the variability of the bus-passengers wait-time also showed that 2,500 observations were sufficient for general model development.

### **3.6 DATA COLLECTION RULES AND DEFINITIONS**

Specific definitions and rules were considered for concepts such as “rider arrival time” and “bus departure time” to keep consistency in the data collection process. Some of these rules and definitions were general and applied to all stations, and some of them applied to specific stations.

Before discussing these definitions it is necessary to mention that all the observers’ watches and the camcorders’ time indicators that were recording the same data were synchronized. The time shown by the “World Clock” web page on the internet was used as the exact official time in this project and every watch and time indicator used in this project had to be set to the nearest minute.

#### **3.6.a Passenger Arrival Time**

The definition of the item “passenger arrival time” was different for each bus station due to different configurations. For example at “Capitol Center” the sidewalk pavement material was different in the bus station area and there were a few seats for the waiting passengers. In this station the minute, when the passenger entered this different pavement area, regardless how she or he got to the bus station was considered as the “passenger arrival time”. At Pavilion Park and Ride a few seats, elevated pavement and a small building distinguished the passenger waiting area. The instant passengers walked to this elevated sidewalk was considered as “passenger

arrival time.” In the Highland Mall Transfer Center deciding the “rider arrival time” was more complicated. In this station, by definition, when the passengers entered the sidewalk between the bus stop sign “32, 120” and the sign “first bus must pull to this point” was considered as the “passenger arrival time.” For other data collection locations, observers were instructed about passenger arrival time definitions with specific marks and signs.

### **3.6.b Bus Departure Time**

As a general rule “bus departure time” was defined as the instant when the bus tires began rolling to leave the bus station. In some stations, such as South Transfer Center or Northcross Transfer Center (northbound), which were on the near side of a signalized intersection, “bus departure time” was considered as the instant when the light was green and bus tires began rolling to pass the intersection. In these stations there were cases in which passengers boarded the bus after the bus had left the station and was waiting for the adjacent traffic signal.

### **3.6.c Bus Travel Direction**

In some of data collection locations (Highland Mall and Northcross Transfer centers, and Pavilion Park & Ride ) buses from the same route traveled in different directions ( Northbound, Southbound, etc. ) which were specified on the dynamic sign of the bus. The travel direction for each of these bus services was shown by a specific code in the data collection form column “bus line No.”. Codes for different lines and different directions at each bus station were provided on the data collection forms.

This chapter covered the data collection techniques and the items, which were recorded at the data collection locations. In the next chapter a description of the collected data, the method of processing the raw field data and the analysis of waiting times data will be presented.

## CHAPTER 4

### DESCRIPTION & ANALYSIS OF DATA

Developing mathematical models to predict bus transit passengers waiting time was the ultimate research objective. To accomplish this objective it was necessary to analyze the collected data and identify relationships between potential predictive variables and passenger waiting times. Before starting the relationship analysis, general information about the collected data will be presented.

#### 4.1 COLLECTED DATA

Totally 2491 waiting time observations were collected in Austin, Texas during a six month period from June through December 1998. Data were collected at six different locations (Capitol Center, South Transfer center, North Cross Transfer Center, Highland Mall Transfer Center, Pavilion Park and Ride and the San Jacinto bus stop) during morning and afternoon hours.

The data were collected during 38 sessions totaling 102 hours. The length of each session was in the range of 2-4 hours and the average session length was 2 hours and 41 minutes. Morning data collection sessions were between 6:45 a.m. and 11:00 a.m., with an average session length of 3 hours and 12 minutes. Afternoon sessions were between 1:30 p.m. and 6:00 p.m. with an average of 2 hours and 35 minutes. Numbers of observations, data collection sessions and total data collection hours at each location are shown in Table 4.1.

Data collection hours were categorized into peak and off peak periods to investigate a potential relationship between time of day and waiting time values. Observations with bus departure times between 6:45 – 8:30 a.m. and 4:00 – 6:00 p.m. were considered peak period observations and other observations were included in the off peak period category. Table 4.2 shows the number of observations for each location, in the different traffic periods.

Table 4.1- Number of collected data, data collection sessions and duration for different locations.

Data Collection Location	Morning Hours Data			Afternoon Hours Data		
	Number of Sessions	Number of Hours	Number of Obs.	Number of Sessions	Number of Hours	Number of Obs.
Capitol Center	3	11	259	5	14	390
South T.C.	4	14	202	5	11.5	349
North Cross T.C.	5	17	148	5	10	191
Highland Mall T.C.	-----	-----	-----	5	12.5	452
Pavilion P. & R.	3	6	196	-----	-----	-----
San Jacinto	-----	-----	-----	3	6	304
Total	15	48	805	23	54	1686

As indicated in Table 4.2, data collection locations are coded from 1 to 6 and traffic periods are coded as 11 for morning peak hours, 12 for morning off peak hours, 21 for afternoon peak hours and 22 for afternoon off peak times. In locations 1, 2 and 3, data were collected both in morning and afternoon hours. At the Highland Mall T.C. and San Jacinto locations data were collected during afternoon hours because the numbers of non-transfer passengers during morning hours was very low. At the Pavilion Park & Ride, data were collected only during morning hours, because the number of passengers during afternoon hours was very small.

Table 4.2 - Daytime \* Location Crosstabulation

Location	Day-Time				Total
	11(M.P.)	12(M.O.)	21(A.P.)	22(A.O.)	
1(Capitol Center)	78	181	124	266	649
2(South T.C.)	83	119	114	235	551
3(North Cross T.C.)	52	96	60	131	339
4(Highland MallT.C.)	-----	-----	126	326	452
5(Pavilion Park & Ride)	149	47	-----	-----	196
6(Saint Jacinto)	-----	-----	79	225	304
Total	362	443	503	1183	2491

According to Table 4.2, 649 observations or 26% of the data were collected at Capitol Center. Figure 4.1 shows how observations were distributed among different routes at Capitol Center. Route 1 with close to 200 observations was most frequently observed and Route 3 with more than 100 observations was the second highest. Numbers of observations for Routes 10, 12 and 38 were more than 50 and other lines had less than 50 observations. Different reasons caused low numbers of observation for some Routes. For example Route 29, with more than 30 minutes headways shared the northbound demand with Routes 1, 3 and 5 which had shorter headways. Capitol Center westbound Route 6 was almost at the end of its path and therefore had small numbers of boarding passengers.

Figure 4.2 shows numbers of passengers for different bus routes at the South Transfer Center (location #2). More than 200 observations out of the total 551 collected at this center were passengers boarding Route 27 and close to 200 boarded Route 13, which pairs with Route 1, North Lamar, at congress Ave. The Number of passenger observations for Route 33 was close to 100 and Route 111 had about 50. Route 62, Metric Flyer, which runs five times in the afternoon hours had very few observations.

Figure 4.3 shows how the 339 observations at the North Cross Transfer Center were distributed among seven bus routes. Route 8 with more than 100 observations had the highest number, while Route 25 had close to 100 and Route 5 produced more than 60 observations.

Observations for Route 3 were close to 50 and other routes –19, 39 and 44– had less than 20 passengers.

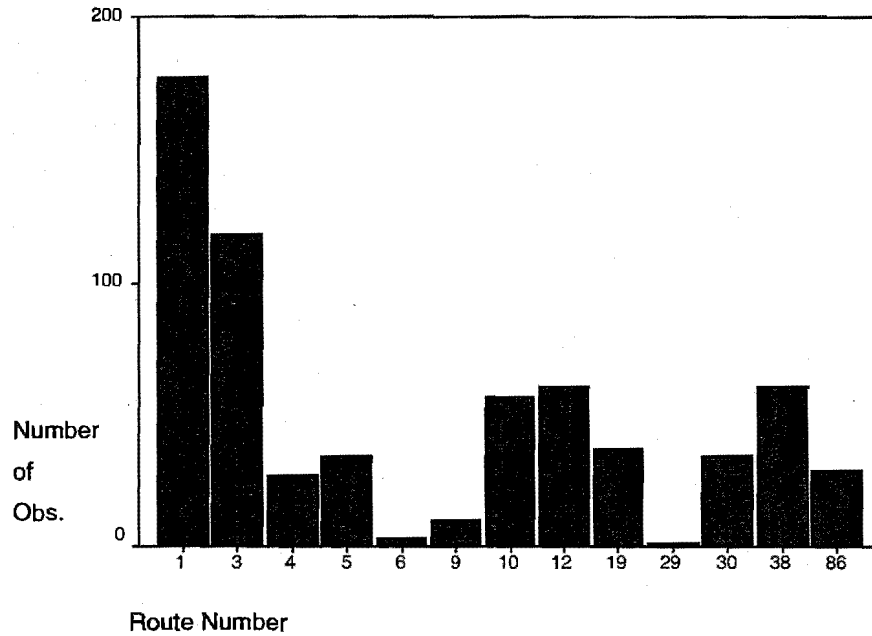


Figure 4.1 – Number of bus passengers for different bus routes at Capitol Center.

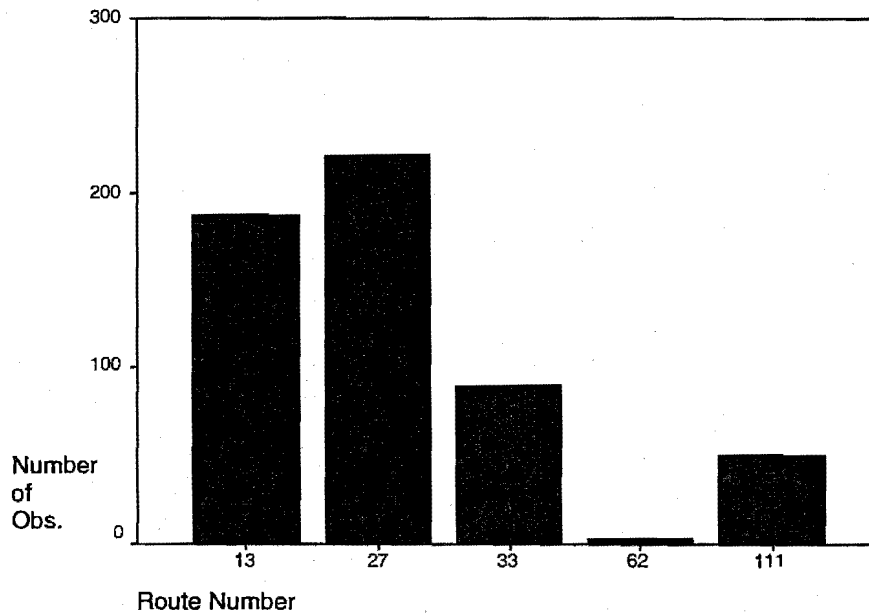


Figure 4.2 – Number of bus passengers for different bus lines at South Transfer Center.



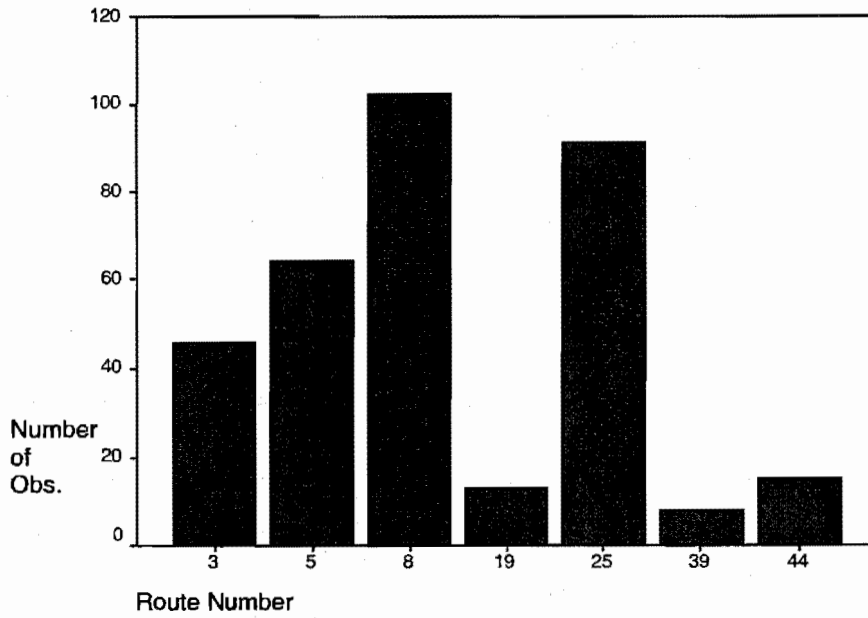


Figure 4.3 – Number of bus passengers for different bus lines at North Cross Transfer Center.

Figure 4.4 illustrates the number of observed passenger waiting times for bus routes at Highland Mall T.C. Number 71 stands for Route 7 northbound and Route 7 southbound is replaced by code 72.

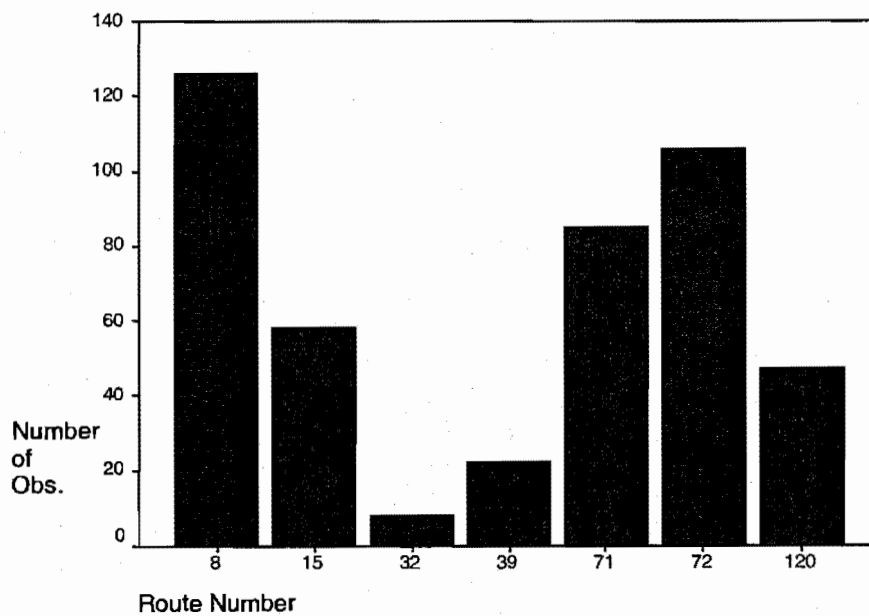


Figure 4.4 – Number of bus passengers for different bus lines at Highland Mall Transfer Center.

Figure 4.5 shows the number of observations for different bus lines at Pavilion Park and Ride. In this figure LX Southbound has been coded as line number 91 and Northbound LX has been coded as number 90. In this facility most bus passengers in morning hours are commuters headed south to the down town area. Therefore few passengers board Northbound LX or Route 42.

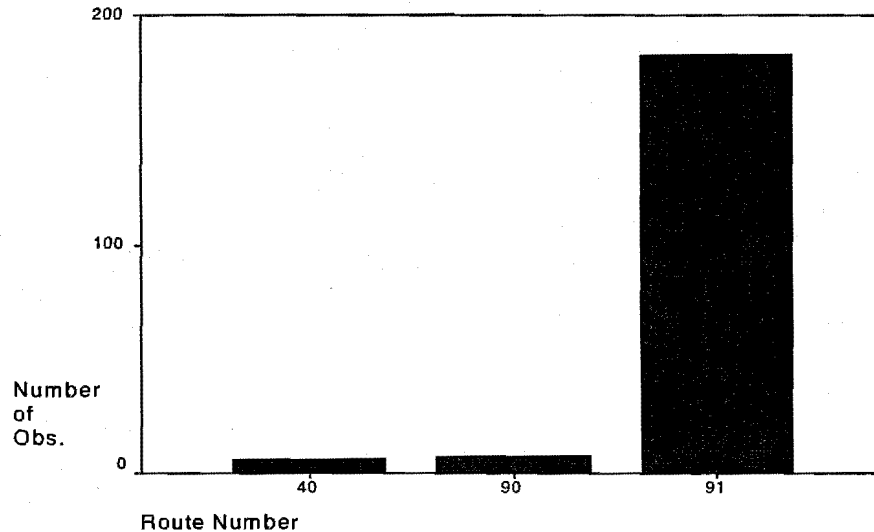


Figure 4.5 – Number of bus passengers for different bus lines at Pavilion Park & Ride.

In Figure 4.6 numbers of passenger observations at the San Jacinto Bus Stop are shown. The U.T. Red River shuttle bus has been coded as Route 100. This bus line with more than 200 passengers had the highest number of observation, while Route 74 had fewest observations.

Table 4.3 shows the number and frequency of observations for each bus Route. According to the table routes with 50 or more observations constitute 90% of the data and routes with 30 or more observations are more than 95% of the data.

Gender was one of the passenger attributes recorded by the data collection team. Table 4.4 shows the number of male and female passengers in each data collection location individually and in the whole sample. According to this table, male passengers outnumbered females with 1353 males, representing 55 percent of total. More male passengers than females were observed at Capitol Center, South T.C, North Cross T.C. and San Jacinto. Interestingly at the Highland Mall T.C. (location #4) where data were collected during afternoon hours when passengers are mostly shoppers, numbers of female passengers were much greater than males (286 females and 166 males).

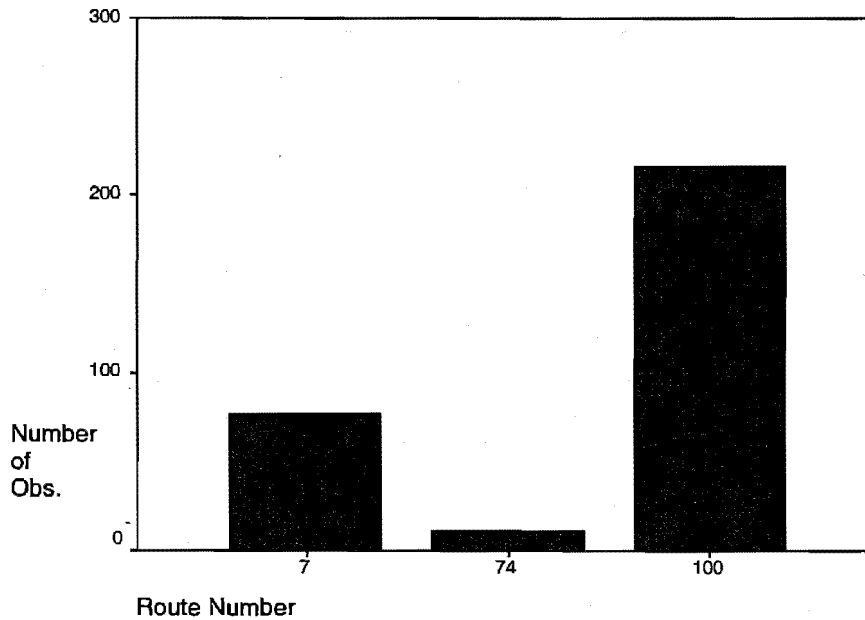


Figure 4.6 – Number of bus passengers for different bus lines at San Jacinto Bus Stop.

At Pavilion Park & Ride (location #5) during morning hours females outnumbered males. In this location during the morning peak (data collection hours) most passengers are commuters who drive to the bus station. There is a possibility that female commuters are using park & ride facilities more than males and males prefer to drive to work.

Ethnic category was another passenger attribute observed in this study. Ethnic categories included white, African American, Hispanic, Asian and others. These categories were coded to 1 for whites, 2 for African Americans, 3 for Hispanics, 4 for Asians and 5 for other unidentified ethnic groups. As is shown in Table 4.5, Hispanic was the most frequently observed ethnic category with 897 out of 2477 (36%). White was the next most frequently observed category representing more than one-fourth of all observations.

Figure 4.7 illustrates the passengers' ethnicity in data collection locations more clearly. Hispanic passengers were the largest number among passengers in the South, North Cross and Highland Mall Transfer Centers. But at Pavilion Park & Ride (location #5), where the passengers were mostly from upper middle class families and at the San Jacinto bus stop (location #6), where most passengers were U.T. students, hispanics were less than white and Asian passengers. The number of African American passengers was large at the Highland Mall T.C. but low at Pavilion and san Jacinto.

Table 4.3 - Frequency and percentage of observations for each bus line number

Route Number	Frequency	Percent	Cumulative Percent
8	228	9.2	9.2
27	222	8.9	18.1
100	216	8.7	26.7
13	187	7.5	34.2
91	183	7.3	41.6
1	177	7.1	48.7
3	164	6.6	55.3
72	106	4.3	59.5
5	98	3.9	63.5
25	91	3.7	67.1
33	89	3.6	70.7
71	85	3.4	74.1
7	77	3.1	77.2
12	61	2.4	79.6
38	61	2.4	82.1
15	58	2.3	84.4
10	57	2.3	86.7
19	50	2.0	88.7
111	50	2.0	90.7
120	47	1.9	92.6
30	34	1.4	94.0
39	30	1.2	95.2
86	29	1.2	96.3
4	27	1.1	97.4
44	15	.6	98.0
74	11	.4	98.5
9	10	.4	98.9
32	8	.3	99.2
90	7	.3	99.5
40	6	.2	99.7
6	3	.1	99.8
62	3	.1	100.0
29	1	.0	100.0
Total	2491	100.0	100.0

Access mode was the other variable, which was directly observed by the data collection staff. Access mode for non-transfer passengers included walking to the bus station (code 0), biking (code 1), riding with others (code 2) and driving to the bus station (code 3). No code was assigned to unobserved access modes. Those passengers who got off other buses in the bus

station and were waiting to take another bus were considered transfer passengers who are not included in this sample.

Table 4.4 - LOCATION \* SEX Crosstabulation

GENDER	Location						Total
	1	2	3	4	5	6	
Male	379	316	216	166	96	180	1353
Female	270	235	123	286	100	124	1138
Total	649	551	339	452	196	304	2491

Figure 4.8 shows the observed access modes at data collection locations. As illustrated, most passengers walked to the bus station and only a very low percentage used other modes. There was an exception for Pavilion Park & Ride, where passengers mostly drove to the facility or rode with a friend or a relative. Surprisingly the number of bike riders was very low compared to those who walked.

Table 4.5 – LOCATION \* Ethnic Category Crosstabulation

Location	Ethnic Category					Total
	1	2	3	4	5	
1	270	150	205	16	7	648
2	103	123	314	2	2	544
3	121	72	131	8	4	336
4	46	177	211	16	-----	450
5	134	7	17	30	8	196
6	157	11	19	89	27	303
Total	831	540	897	161	48	2477

Activities passengers performed while waiting was another observed passenger attribute. This variable included doing nothing (code 0), talking to other passengers (code 1), smoking (code 2), and reading (code 3). As illustrated in Figure 4.9, most of the passengers in all six locations did nothing while waiting for the bus. Numbers of smokers were higher than numbers of readers at all three Transfer Centers but lower at the others. The San Jacinto bus stop had the lowest rate of smokers compared to other data collection locations. It is possible that U.T. students smoke less than other capital Metro passengers. Capitol Center had the highest number and percentage of readers among all six data collection locations.

In this study Activity During Waiting –ADW- was not considered as an independent predictive variable which might affect passengers wait time. In fact this variable was itself affected by waiting time. Passengers who knew their waiting time would be longer -by looking at the posted bus schedule- were more likely to smoke or start reading.

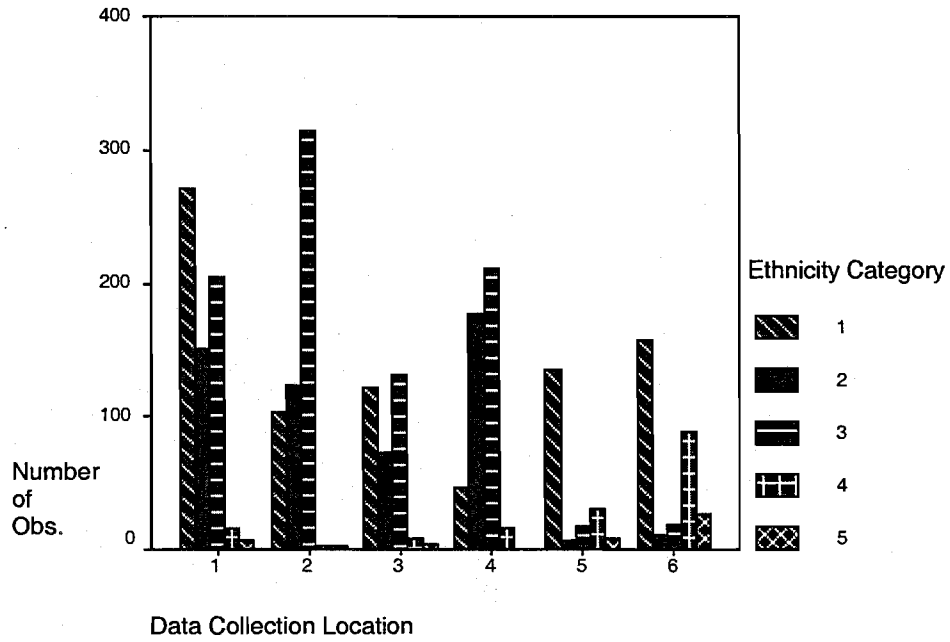


Figure 4.7 – Number of bus passengers with different ethnic category at data collection locations.

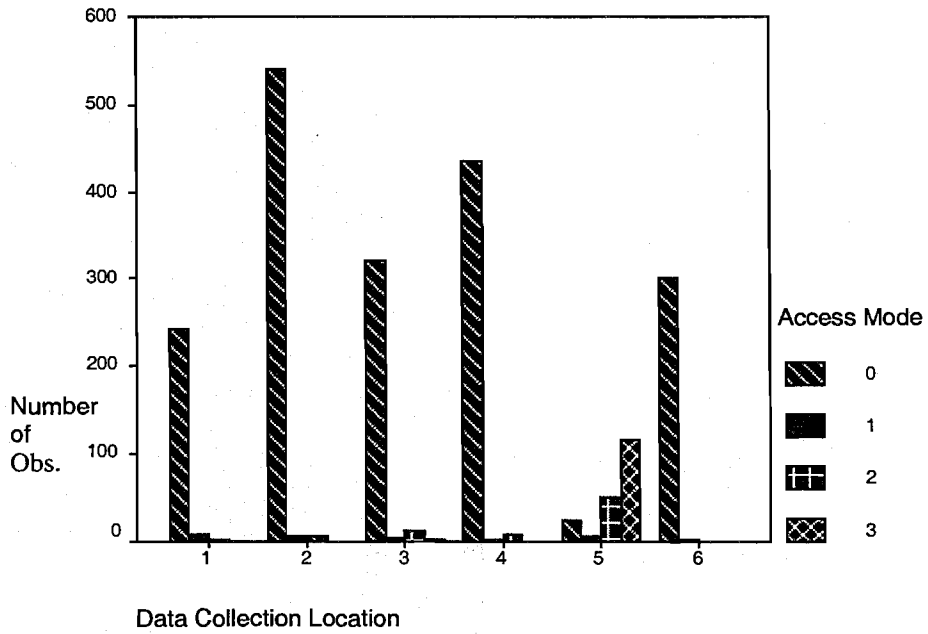


Figure 4.8 – Access Modes used by bus passengers observed at different data collection locations

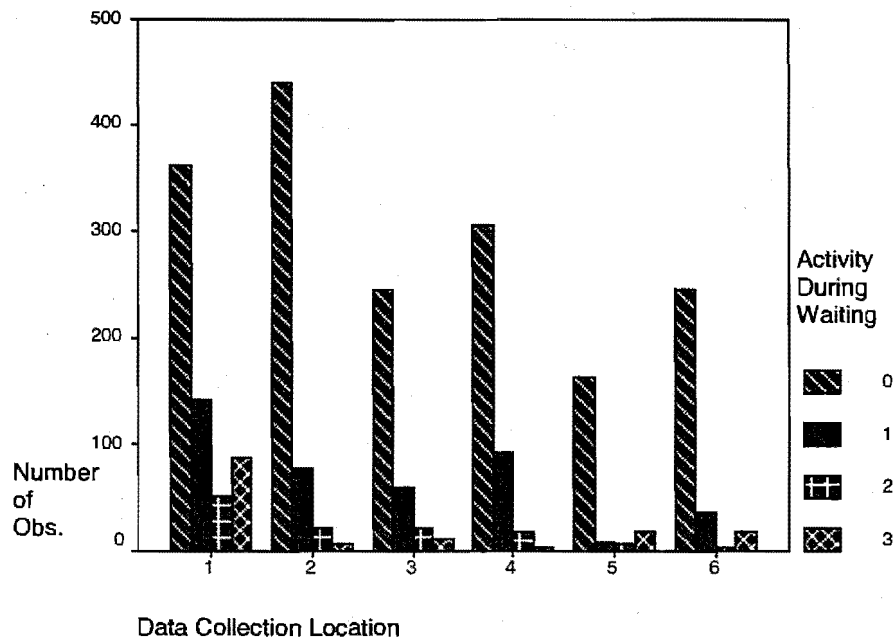


Figure 4.9 – Activity performed by passengers while waiting, observed at different data collection locations

The other data recorded at the data collection locations included date of data collection, passenger arrival time, bus route number and bus departure times. However the raw field data did not directly indicate the bus passenger waiting time or bus schedule reliability. To determine these parameters, processing the collected data and adding several other variables were necessary.

#### 4.2 DATA PROCESSING

Measuring bus passenger waiting times and bus schedule reliability and investigating any relationship between these variables and bus route headway or other potential predictive variables were the main study objectives. In this section the procedures to determine passenger waiting time and bus schedule reliability are explained and a brief description of the additional variables are presented.

To determine the wait times, the values of Rider Arrival Time (RAT) were subtracted from Bus Departure Time (BDT) for each observation. However in this study total waiting time of passengers was decomposed into two parts. Waiting time before scheduled departure time (WAITB) and waiting time after scheduled departure time (WAITA). Total waiting time (WAIT) for each observation is sum of these two components. In fact WAITB is the time passengers wait before the minute they expect the bus to arrive, which is the time tabulated in bus schedule or

posted at the bus stations. This scheduled departure time was named Expected Scheduled Departure Time (ESDT). ESDT is the immediate scheduled departure time after RAT. WAITA is the number of minutes bus passengers must wait for a late bus to arrive after ESDT.

Decomposition of WAIT into two components, WAITB and WAITA, was motivated by two considerations. First passengers have different attitudes towards these two components. While they consider WAITB as the fair portion of the cost they are paying to access public transportation, by waiting after ESDT, which is called WAITA, they may feel that they have been overcharged for the services they are receiving. Secondly, sources of these two components are totally different. WAITB is dependent on the passenger travel behavior and how he or she plans his or her bus trips. WAITA is dependent on bus schedule reliability and how the transit system follows the published timetables. While transit operators can do little to reduce the amount of WAITB, they can reduce WAITA by applying policies such as headway control strategies.

To calculate WAIT, WAITB and WAITA, ESDT was drawn from the valid bus schedule or posted timetables. Depending on the value of BDT compared to ESDT, two different cases were possible. Following is how to calculate these two variables for each case:

$$\text{I- } \text{ESDT} \geq \text{BDT} \Rightarrow \text{WAITB} = \text{BDT} - \text{RAT} \ \& \ \text{WAITA} = 0$$

$$\text{II- } \text{ESDT} < \text{BDT} \Rightarrow \text{WAITB} = \text{ESDT} - \text{RAT} \ \& \ \text{WAITA} = \text{BDT} - \text{ESDT}$$

It is obvious that larger WAITAs mean a less reliable bus system, while higher WAITBs indicate a likelihood that greater numbers of passengers arrive at the stations randomly. WAIT is equal to the summation of these two variables.

Figure 4.10 shows the frequency of observed passenger waiting time before scheduled departure time (WAITB). According to the figure, the minimum value of WAITB was 0 and the maximum value was around 40 minutes. Most passengers experienced short waiting times before scheduled departure time and the mode of WAITB was 1 minute. The frequency reduces rapidly as the WAITB values increase.

Figure 4.11 illustrates frequency of waiting time after scheduled departure time (WAITA). Most of the passengers experienced short WAITAs and in close to 1000 observations WAITA was 0. Figure 4.12 shows the frequency of total waiting time (WAIT) for this study. The WAIT values were in the range of 0 to 45 and the mode was 1 minute.

Scheduled Bus Line Headway (BLH) was another variable added to the variable list. For each observation the scheduled time interval (headway) between buses for the line the passenger boarded was noted as Scheduled Bus Line Headway (BLH). Figure 4.13 illustrates the observed BLH frequency for this study. According to this figure observed bus line headways were



in the range of 8 to 60 minutes. At the studied locations, around 600 of the passengers (about 25% of the data) boarded buses with 15 minutes headway, which is the headway associated with the largest number of passengers. Routes with 10 and 20 minutes headway were the next most frequently boarded.

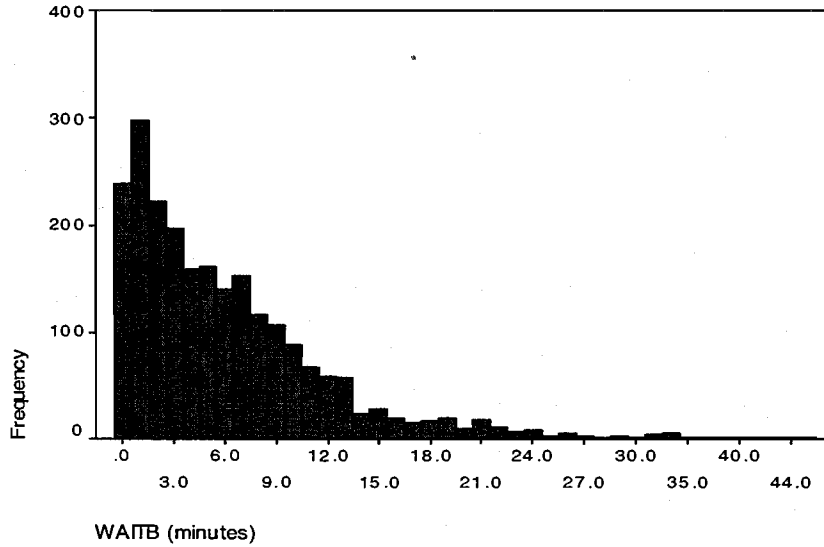


Figure 4.10 – Frequency of observed passenger Waiting Time Before Scheduled Departure Time (WAITB)

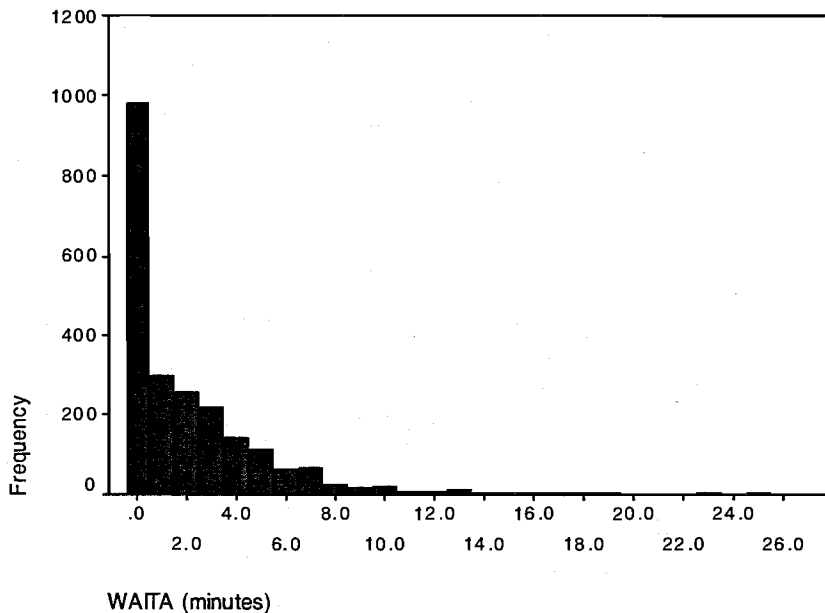


Figure 4.11 – Frequency of observed passenger Waiting Time After Scheduled Departure Time (WAITA)

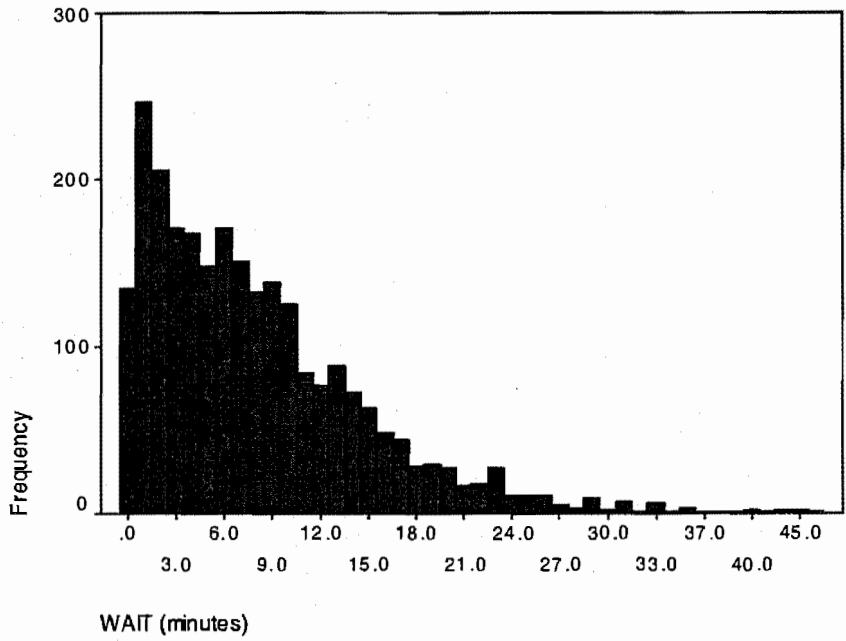


Figure 4.12 – Frequency of observed Total Waiting Time (WAIT)

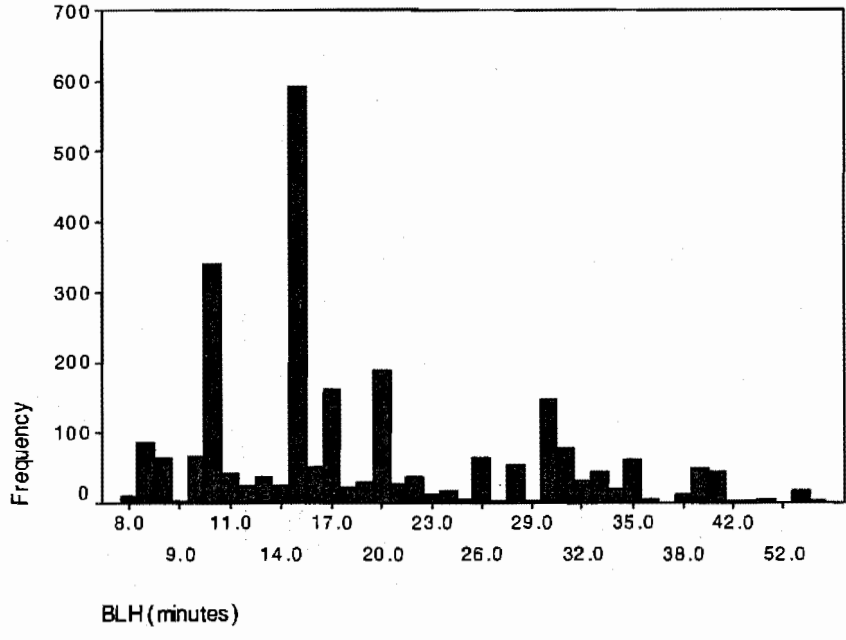


Figure 4.13 – Frequency of observed Passengers for each Bus Line Scheduled Headway (BLH)

To compare passenger waiting times of bus lines with different headways, another variable was introduced which standardized the Total Waiting Time (WAIT) by the headway values. WTHR (Waiting Time Headway Ratio) was chosen as the notation for the variable and it was calculated for each observation by dividing WAIT by BLH.

Table 4.6 shows descriptive statistics and percentiles for BLH, WAITB, WAITA, WAIT and WTHR for the whole sample. According to this table the maximum value of WTHR was 2.2, while 98 % of the observed values for this variable were less than 1.3. In fact in only 2 % of the observations the total waiting time was more than 1.3 times the headway. These were unusual cases such as mechanical bus problems or passenger unwillingness to take the first available bus. Therefore in developing the final model, the observations with WTHR greater than 1.3 were excluded. The average value for WTHR was equal to .4465 which is close to the traditional model that says average bus passenger waiting time is equal to half the bus headway.

Table 4.6 – Descriptive statistics and percentiles for Bus Line Headway, Passenger Wait Time components and Wait Time Headway Ratio.

Variable		BLH	WAITB	WAITA	WAIT	WTHR
N	Valid	2491	2275	2275	2491	2491
	Missing	0	216	216	0	0
Mean	(Minutes)	19.254	6.127	2.273	8.043	.4465
Median	"	15.000	5.000	1.000	7.000	.3939
Mode	"	15.0	1.0	.0	1.0	.00
Std. Deviation	"	9.493	6.048	3.517	6.877	.3457
Variance	"	90.123	36.577	12.368	47.298	.1195
Range	"	52.0	45.0	34.0	47.0	2.20
Minimum	"	8.0	.0	.0	.0	.00
Maximum	"	60.0	45.0	34.0	47.0	2.20
Percentiles	25	12.000	2.000	.000	3.000	.1667
	50	15.000	5.000	1.000	7.000	.3939
	75	26.000	9.000	3.000	11.000	.6667
	85	31.000	11.000	5.000	15.000	.8000
	95	38.000	18.000	8.000	22.000	1.0667
	98	41.000	23.000	13.000	26.000	1.3000

Table 4.7 shows Minimum, Maximum, Mean and Std. Deviation of Bus Line Headway, Passenger Wait Time Components and Wait Time Headway Ratio at different data collection locations. According to the table, at all data collection locations except Pavilion Park & Ride, average WTHR ranged from 0.4 to 0.47, which suggests a significant relationship between Bus Line Headway and passenger Waiting Times. At Pavilion Park & Ride the mean value for WTHR was 0.356, which is smaller than the other locations. It is likely that at Park & Ride facilities, where most passengers drive to the bus station, passengers choose their arrival times minimizing wait times.

Table 4.7 – Descriptive statistics for BLH, Wait Time components and WTHR at different locations

LOCATION	Statistics	BLH (min)	WAITB (min)	WAITA (min)	WAIT (min)	WTHR
Capitol Center	N	649	649	649	649	649
	% of Total N	26.1%	28.5%	28.5%	26.1%	26.1%
	Minimum	10.0	.0	.0	.0	.00
	Maximum	42.0	38.0	25.0	42.0	2.00
	Mean	19.384	5.684	2.940	8.624	.4714
	Std. Deviation	9.023	5.760	3.744	7.236	.3629
South T. C.	N	551	551	551	551	551
	% of Total N	22.1%	24.2%	24.2%	22.1%	22.1%
	Minimum	8.0	.0	.0	.0	.00
	Maximum	60.0	31.0	25.0	35.0	1.70
	Mean	18.619	6.040	2.234	8.274	.4669
	Std. Deviation	8.247	5.796	3.401	6.487	.3356
North Cross T. C.	N	339	339	339	339	339
	% of Total N	13.6%	14.9%	14.9%	13.6%	13.6%
	Minimum	10.0	.0	.0	.0	.00
	Maximum	40.0	26.0	34.0	37.0	1.62
	Mean	22.652	6.516	2.156	8.673	.4008
	Std. Deviation	7.331	5.963	4.434	7.222	.3297
Highland Mall T.C.	N	452	452	452	452	452
	% of Total N	18.1%	19.9%	19.9%	18.1%	18.1%
	Minimum	11.0	.0	.0	.0	.00
	Maximum	55.0	45.0	23.0	45.0	2.20
	Mean	21.117	7.022	1.852	8.856	.4484
	Std. Deviation	10.762	7.214	2.910	7.800	.3426
Pavilion Park & Ride	N	196	196	196	196	196
	% of Total N	7.9%	8.6%	8.6%	7.9%	7.9%
	Minimum	10.0	.0	.0	.0	.00
	Maximum	52.0	44.0	10.0	47.0	1.27
	Mean	22.342	5.628	1.520	7.148	.3563
	Std. Deviation	11.921	5.301	2.166	5.887	.2663
San Jacinto Bus Stop	N	304	88	88	304	304
	% of Total N	12.2%	3.9%	3.9%	12.2%	12.2%
	Minimum	8.6	.0	.0	.0	.00
	Maximum	40.0	17.0	14.0	18.0	1.86
	Mean	11.577	4.966	1.875	5.049	.4627
	Std. Deviation	5.924	4.178	3.035	4.185	.3798
Total	N	2491	2275	2275	2491	2491
	% of Total N	100.0%	100.0%	100.0%	100.0%	100.0%
	Minimum	8.0	.0	.0	.0	.00
	Maximum	60.0	45.0	34.0	47.0	2.20
	Mean	19.254	6.127	2.273	8.043	.4465
	Std. Deviation	9.493	6.048	3.517	6.877	.3457

At all transfer centers, as well as Capitol Center average WAIT (Total Wait Time) was about 8-9 minutes and Average headways were around 20 minutes. At these locations the

standard deviations of WAIT and WTHR were very similar, which means the distribution and dispersion were similar. At the San Jacinto Bus Stop, where average headway was 11.6 minutes, average Waiting Time also was shorter, about 5 minutes. At pavilion Park & Ride the average and standard deviation of WAIT and WTHR were slightly less than the above four locations, while average headway was not lower. It is likely that passengers who drive to the Park & Ride facilities carefully choose their arrival times.

The average value of Waiting Time After Scheduled Departure Time (WAITA) at Pavilion Park & Ride, Highland Mall Transfer Center and the San Jacinto Bus stop were less than 2 minutes. This fact suggests more reliable bus services at these locations compared to the other three locations, where the WAITA average values were more than 2 minutes.

Measuring bus schedule reliability was the other study objective. Bus Schedule Reliability Index (SRI) was the variable added to illustrate directly if buses were running according to published timetables.

To calculate a Schedule Reliability Index (SRI) for each bus service, knowing the real Bus Departure Time (BDT), it was necessary to determine Scheduled Departure Time (SDT) for the correspondent BDT. Thus BDTs for each data collection session and bus line number were compared to the SDTs in the valid schedule book. The SRI in minutes for each bus service was calculated by subtracting SDT from BDT, positive for late services and negative for early services.

Two variables introduced in this chapter, Expected Scheduled Departure Time (ESDT), which is the immediate scheduled departure time after Rider Arrival Time (RAT) and Scheduled Departure Time (SDT) are similar both in concept and value, but they are different. While SDT illustrates operational transit system characteristic, EDST depends on passenger perception. A late bus may seem early for a rider who has arrived at the bus station after scheduled departure time but before the late bus departure.

Figure 4.14 shows the frequency of SRI for observed data. It is necessary to mention that the illustrated frequency is not service frequency. In fact for each observed passenger an SRI value was assigned, which was equal to the SRI of the bus the passenger boarded. Therefore the SRI frequency is the frequency of the observed waiting time data not bus services. According to the Figure 4.14 close to 400 of the observed passengers took exactly on time buses. The figure shows that some passengers took buses, which were as early as 10 minutes or as late as 25 minutes.

Table 4.8 shows how SRI was distributed at different locations. According to this table most passengers who took early buses were observed at Northcross Transfer Center (Location #3). At this location construction work in the adjacent roadways along with moving the Transfer Center to a new location, caused some inaccuracy in matching the Scheduled Departure Times

(SDTs) to the observed BDTs and therefore the values assigned to SRI were problematic. At other locations the passengers who took buses earlier than 2 minutes or later than 10 minutes were very few.

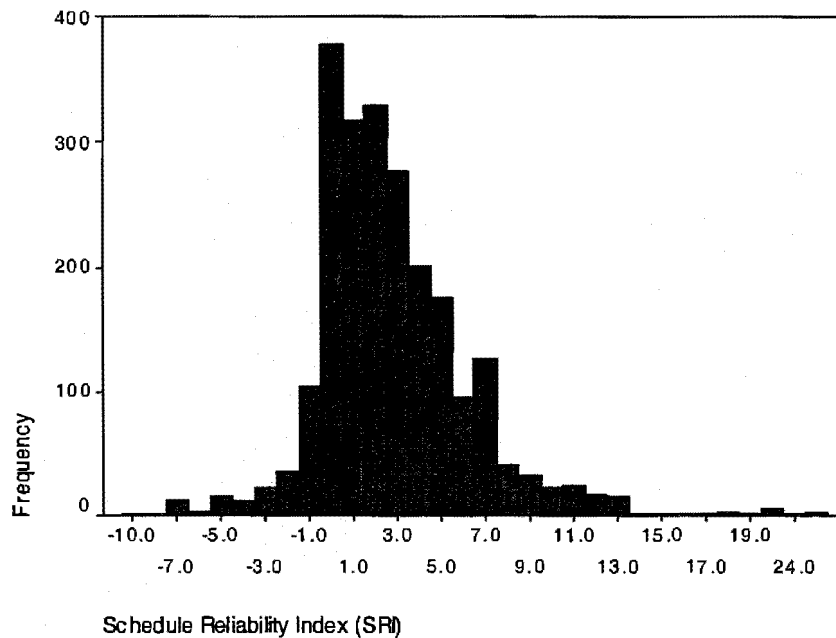


Figure 4.14 – Frequency of bus Schedule Reliability Index (SRI)

According to the table 4.5% of all the observed passengers took buses, which were 2 or more minutes early ( $SRI \leq -2$ ) and 25% of the passengers took buses, which were 5 or more minutes late ( $SRI \geq 5$ ). More than 70% of the passengers took buses, which were as early as 1 minute or as late as 4 minutes.

Comparing to other data collection locations, Pavilion Park & Ride had a better departure time performance. Sixty-nine passengers out of 196 observed passengers (35%) took on time buses and that is more than two times the average 16.6%. South and Highland Mall Transfer Centers also had better than average performances.

### 4.3 POTENTIAL PREDICTIVE VARIABLES

After primary analysis of the collected and processed data, which was presented in the previous section, the next step was to identify potential relationships between potential predictive variables and waiting time and to develop the final mathematical model. The SPSS statistical package was used to perform this task. The Analysis of Variance (ANOVA) method was applied to determine which independent variables effectively predict variation in bus passenger waiting

time. Moreover, if the data categorization seemed to help explain waiting time variation, then the next step was to figure out how strong the relation was and whether the independent variable was a good enough predictor to be included in the final model. Data with Wait Time Headway Ratio greater than 1.3 were excluded from the analysis.

Table 4.8 – Frequency, Valid Percent and Cumulative Percent of the observed Schedule Reliability Index (SRI) for passengers at six different locations.

SRI Value	Location						Total	Valid Percent	Cumulative Percent
	1	2	3	4	5	6			
-10.0			1				1	.0	.0
-8.0			2				2	.1	.1
-7.0	2		10				12	.5	.7
-6.0			3				3	.1	.8
-5.0		1	13	1			15	.7	1.5
-4.0	2		9				11	.5	1.9
-3.0	2		17	4			23	1.0	2.9
-2.0	7	4	5	5		14	35	1.5	4.5
-1.0	19	25	14	20	11	15	104	4.6	9.1
.0	52	111	29	104	69	13	378	16.6	25.7
1.0	57	80	53	83	41	3	317	13.9	39.6
2.0	107	70	41	74	23	13	328	14.4	54.0
3.0	79	93	24	49	24	7	276	12.1	66.2
4.0	77	58	23	30	5	8	201	8.8	75.0
5.0	71	31	20	44		9	175	7.7	82.7
6.0	53	27	9	5		2	96	4.2	86.9
7.0	48	35	8	13	22		126	5.5	92.4
8.0	15	11	3	11			40	1.8	94.2
9.0	21	3	4			4	32	1.4	95.6
10.0	20		2		1		23	1.0	96.6
11.0	4		17	3			24	1.1	97.7
12.0	5		6	6			17	.7	98.4
13.0	3		12				15	.7	99.1
14.0			2				2	.1	99.2
15.0	1						1	.0	99.2
16.0			1				1	.0	99.3
17.0	1						1	.0	99.3
18.0			3				3	.1	99.4
19.0		2					2	.1	99.5
20.0			6				6	.3	99.8
24.0			2				2	.1	99.9
26.0	3						3	.1	100.0
Total	649	551	339	452	196	88	2275	100.0	

Interaction among predictors as a source of waiting time variation was not considered in this research. Theoretically it is possible that predictors without individual statistically significant predictive capabilities to have significant interactive effects on the dependent variable. One could build such effects into the model by introducing dummy variables and testing the model. However, this approach has disregarded such interaction.

#### 4.3.a Location and Waiting Time

To evaluate bus passenger waiting time variation across data collection locations, Location was defined as a nominal scale variable and data were categorized into six categories due to six data collection locations. ANOVA was applied for WAIT and WTHR (Waiting Time Headway Ratio) as dependent continuous variables and descriptive statistics were calculated for each category. Table 4.9 illustrates the descriptive statistics. The statistics are generally similar for three transfer centers and Capitol Center, but different at Pavilion Park & Ride and the San Jacinto Bus Stop.

Table 4.9 – Descriptive Statistics for WAIT and WTHR at different Locations

Variable	Location	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Min	Max
						Lower Bound	Upper Bound		
WAIT	1	632	8.313	7.042	.280	7.763	8.863	.0	42.0
	2	542	8.113	6.390	.274	7.573	8.652	.0	35.0
	3	333	8.411	7.012	.384	7.656	9.167	.0	37.0
	4	446	8.664	7.625	.361	7.954	9.373	.0	45.0
	5	196	7.148	5.887	.421	6.319	7.977	.0	47.0
	6	296	4.818	3.986	.232	4.362	5.274	.0	18.0
	Total	2445	7.829	6.722	.136	7.563	8.096	.0	47.0
WTHR	1	632	.4420	.3182	1.266E-02	.4172	.4669	.00	1.30
	2	542	.4503	.3118	1.339E-02	.4240	.4766	.00	1.30
	3	333	.3801	.2938	1.610E-02	.3484	.4118	.00	1.23
	4	446	.4312	.3084	1.460E-02	.4025	.4599	.00	1.27
	5	196	.3563	.2663	1.902E-02	.3188	.3938	.00	1.27
	6	296	.4344	.3417	1.986E-02	.3953	.4735	.00	1.28
	Total	2445	.4257	.3120	6.310E-03	.4133	.4380	.00	1.30

Table 4.10 shows the results of Analysis of Variance for this case. The F values for both variables verified a significant relationship between WAIT and WTHR with Location Category at the 95 percent level of confidence. To figure out how strong the relationship was, explained variation was calculated by dividing Between Groups Sum of Squares by Total Sum of Squares. The percentage of variation in WAIT explained by this categorization was equal to:



$$E^2 = \text{Between Sum Squares} / \text{Total Sum Squares} = 3390.7 / 110419.9 = 0.03$$

Thus 3 percent of the total wait time variation was explained by location categorization. The percentage variation in WTHR explained by this categorization was:

$$E^2 = 2.17 / 237.9 = 0.01$$

Standardizing the wait time by bus headway reduced wait time variation across locations which means a large part of the variation due to location was caused by different headways at different locations.

Table 4.10 – WAIT and WTHR Analysis of Variance for Location Categorization

Variable	Sum of Squares		df	Mean Square	F	Sig.
WAIT	Between Groups	3390.731	5	678.146	15.454	.000
	Within Groups	107029.149	2439	43.882		
	Total	110419.880	2444			
WTHR	Between Groups	2.169	5	.434	4.487	.000
	Within Groups	235.746	2439	9.666E-02		
	Total	237.915	2444			

Preliminary analysis described in the previous section, as well as descriptive statistics in Table 4.9 suggest the possibility of different passenger waiting time behavior at the Pavilion Park & Ride compared to the transfer centers and Capitol center. To verify this a second alternative ANOVA was applied for a slightly different location categorization. In this alternative, location was described as two categories: Pavilion Park and Ride was considered as category 0 and the other four main bus stations were category 1. The San Jacinto Bus Stop was not included in this analysis, for which Table 4.11 shows the descriptive statistics.

Table 4.11 – Descriptive Statistics for WAIT and WTHR and two Location categories

Variable	Location	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Min	Max
						Lower Bound	Upper Bound		
WAIT	0	196	7.148	5.887	.421	6.319	7.977	.0	47.0
	1	1953	8.354	7.000	.158	8.044	8.665	.0	45.0
	Total	2149	8.244	6.914	.149	7.952	8.537	.0	47.0
WTHR	0	196	.3563	.2663	1.902E-02	.3188	.3938	.00	1.27
	1	1953	.4313	.3108	7.034E-03	.4175	.4451	.00	1.30
	Total	2149	.4244	.3078	6.639E-03	.4114	.4375	.00	1.30

Although the F values in Table 4.12 for both WAIT and WTHR illustrate significant relationships between the dependent variables and location categorization at a 95percent confidence level, the percentages of explained variation were less than the first categorization. The percentages of Explained Variations ( $E^2$ ) for both dependent variables were less than 0.5 percent. Therefore it was concluded that in this study Location was not a good predictor variable for the bus passenger waiting time and was not included in the final model.

Table 4.12 – WAIT and WTHR Analysis of Variance for two Location categories

Variable	Sum of Squares		df	Mean Square	F	Sig.
WAIT	Between Groups	259.228	1	259.228	5.434	.020
	Within Groups	102417.515	2147	47.703		
	Total	102676.743	2148			
WTHR	Between Groups	1.001	1	1.001	10.621	.001
	Within Groups	202.438	2147	9.429E-02		
	Total	203.439	2148			

#### 4.3.b Traffic Period and Waiting Time

The second nominal scale variable to categorize bus passenger waiting time data was traffic period or DAYTIME. To study whether passenger waiting time behavior was different during morning versus afternoon hours or during traffic peak hours versus off-peak hours, DAYTIME was categorized into four categories: 11 for morning peak hours, 12 for morning off peak hours, 21 for afternoon peak hours and 22 for afternoon off peak times. ANOVA was applied for WAIT and WTHR as dependent continuous variables. Table 4.13 shows descriptive statistics for dependent variables at different traffic periods.

Table 4.13 – Descriptive Statistics for WAIT and WTHR at different Traffic Periods

Variable	Daytime	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Min	Max
						Lower Bound	Upper Bound		
WAIT	11	360	7.206	5.821	.307	6.602	7.809	.0	47.0
	12	434	9.465	7.219	.347	8.784	10.146	.0	37.0
	21	485	7.938	6.744	.306	7.336	8.540	.0	45.0
	22	1166	7.368	6.689	.196	6.984	7.752	.0	45.0
	Total	2445	7.829	6.722	.136	7.563	8.096	.0	47.0
WTHR	11	360	.4084	.2935	1.547E-02	.3780	.4388	.00	1.30
	12	434	.4497	.3087	1.482E-02	.4206	.4789	.00	1.30
	21	485	.4420	.3365	1.528E-02	.4119	.4720	.00	1.30
	22	1166	.4152	.3077	9.011E-03	.3976	.4329	.00	1.30
	Total	2445	.4257	.3120	6.310E-03	.4133	.4380	.00	1.30

The F values for WAIT and WTHR show a significant relationship between these variables and Day-Time categorization at a 95 percent confidence level. The Explained Variation for WAIT and WTHR due to this categorization were:

$$E^2_{\text{WAIT}} = 1555.8 / 110419.8 = .014$$

$$E^2_{\text{WTHR}} = .614 / 237.915 = .003$$

The higher Explained Variation for WAIT comparing to WTHR suggests that a large portion of the wait time variation may have been due to different headways in different traffic periods. Therefore DAYTIME alone was not a robust predictor for the bus passenger wait time and was excluded from the final model.

Table 4.14 – WAIT and WTHR Analysis of Variance for Day-Time categorization

Variable	Sum of Squares		df	Mean Square	F	Sig.
WAIT	Between Groups	1555.805	3	518.602	11.628	.000
	Within Groups	108864.075	2441	44.598		
	Total	110419.880	2444			
WTHR	Between Groups	.614	3	.205	2.105	.098
	Within Groups	237.301	2441	9.721E-02		
	Total	237.915	2444			

#### 4.3.c Gender and Waiting Time

To examine the gender effect on waiting time, gender was defined as a nominal scale variable and ANOVA was applied for WAIT and WTHR as dependent continuous variables. Table 4.15 shows the descriptive statistics for these two categories.

Table 4.15 – Descriptive Statistics for WAIT and WTHR for Male and Female passengers

Variable	Gender	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Min	Max
						Lower Bound	Upper Bound		
WAIT	Male	1323	7.673	6.639	.183	7.315	8.032	.0	47.0
	Female	1122	8.013	6.817	.204	7.614	8.413	.0	45.0
	Total	2445	7.829	6.722	.136	7.563	8.096	.0	47.0
WTHR	Male	1323	.4190	.3113	8.560E-03	.4022	.4358	.00	1.30
	Female	1122	.4335	.3127	9.337E-03	.4152	.4518	.00	1.30
	Total	2445	.4257	.3120	6.310E-03	.4133	.4380	.00	1.30

Average waiting time for females was higher than for males, which means there may be an effect by gender. However, According to the F values in Table 4.16, at a 95 percent confidence level there is no statistically significant relationship between gender and WAIT or WTHR and therefore gender was not included in the final model.

Table 4.16 – WAIT and WTHR Analysis of Variance for gender categorization

Variable	Sum of Squares		df	Mean Square	F	Sig.
WAIT	Between Groups	70.142	1	70.142	1.553	.213
	Within Groups	110349.738	2443	45.170		
	Total	110419.880	2444			
WTHR	Between Groups	.127	1	.127	1.305	.253
	Within Groups	237.788	2443	9.733E-02		
	Total	237.915	2444			

#### 4.3.d Ethnicity and Waiting Time

Waiting time and waiting time headway ratio were also examined using ethnic categories. Ethnicity was defined as a nominal scale variable and was coded to 1 for whites, 2 for African Americans, 3 for Hispanics, 4 for Asians and 5 for other unidentified ethnicities. ANOVA was applied for WAIT and WTHR as dependent continuous variables. Table 4.17 shows general descriptive statistics for both dependent variables.

Table 4.17 – Descriptive Statistics for WAIT and WTHR for different Ethnic Categories

Variable	Ethnicity	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Min	Max
						Lower Bound	Upper Bound		
WAIT	1	815	7.654	6.504	.228	7.207	8.101	.0	47.0
	2	529	8.654	7.523	.327	8.012	9.297	.0	45.0
	3	881	8.005	6.717	.226	7.560	8.449	.0	37.0
	4	158	5.551	4.812	.383	4.795	6.307	.0	23.0
	5	48	6.313	4.193	.605	5.095	7.530	.0	15.0
	Total	2431	7.835	6.723	.136	7.568	8.103	.0	47.0
WTHR	1	815	.4207	.3064	1.073E-02	.3997	.4418	.00	1.30
	2	529	.4537	.3110	1.352E-02	.4271	.4802	.00	1.30
	3	881	.4165	.3120	1.051E-02	.3959	.4372	.00	1.30
	4	158	.4042	.3328	2.647E-02	.3519	.4565	.00	1.28
	5	48	.4640	.3333	4.811E-02	.3672	.5608	.00	1.05
	Total	2431	.4262	.3119	6.327E-03	.4138	.4386	.00	1.30

Results of ANOVA analysis are shown in the Table 4.18. The F values in the table show that at a 95 percent confidence level there was a significant relationship between ethnicity and WAIT as a dependent variable, but the relationship with WTHR was not significant. Interestingly

wait time and ethnicity had a significant relationship, however when wait time was standardized, the relationship was not significant anymore. It is possible that this significant relationship was not based on Ethnicity, but some other variables such as headway or location which created an indirect relationship between wait time and Ethnicity.

Table 4.18 – WAIT and WTHR Analysis of Variance for Ethnic categorization

Variable	Sum of Squares		df	Mean Square	F	Sig.
WAIT	Between Groups	1342.676	4	335.669	7.507	.000
	Within Groups	108477.508	2426	44.715		
	Total	109820.183	2430			
WTHR	Between Groups	.651	4	.163	1.675	.153
	Within Groups	235.798	2426	9.720E-02		
	Total	236.450	2430			

The percentage of explained variation shows how strong the relationship between WAIT and Ethnicity was. The value of  $E^2$  shows that only 1.22 percent of the variation in passenger waiting time was accounted for by the ethnicity categorization. Therefore ethnicity was also excluded from the final model specification.

$$E^2 = 1342.7 / 109820.2 = .0122$$

#### 4.3.e Access Mode and Waiting Time

Access Mode was also examined to see whether there is a significant relationship between passenger wait time and the mode used to access the bus station. Table 4.19 shows descriptive statistics for WAIT and WTHR as dependent variables for different access mode categories.

Table 4.19 – Descriptive Statistics for WAIT and WTHR for different Access Mode Categories

Variable	Access Mode	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Min	Max
						Lower Bound	Upper Bound		
WAIT	0	1835	7.865	6.725	.157	7.557	8.173	.0	45.0
	1	22	7.864	6.112	1.303	5.154	10.574	.0	23.0
	2	74	8.189	5.434	.632	6.930	9.448	.0	31.0
	3	116	6.224	4.837	.449	5.335	7.114	.0	23.0
	Total	2047	7.784	6.591	.146	7.498	8.070	.0	45.0
WTHR	0	1835	.4348	.3145	7.342E-03	.4204	.4492	.00	1.30
	1	22	.4376	.3297	7.029E-02	.2915	.5838	.00	1.15
	2	74	.4189	.2612	3.036E-02	.3584	.4794	.00	1.27
	3	116	.3051	.2322	2.156E-02	.2624	.3478	.00	1.27
	Total	2047	.4269	.3101	6.853E-03	.4134	.4403	.00	1.30

Table 4.20 illustrates the ANOVA results for Access Mode categorization. The F value for WAIT indicates that at a 95 percent confidence level there was no significant relationship between access mode as a nominal scale variable and WAIT.

Table 4.20 – WAIT and WTHR Analysis of Variance for Access Mode categorization

Variable	Sum of Squares		df	Mean Square	F	Sig.
WAIT	Between Groups	306.694	3	102.231	2.358	.070
	Within Groups	88571.867	2043	43.354		
	Total	88878.561	2046			
WTHR	Between Groups	1.842	3	.614	6.436	.000
	Within Groups	194.867	2043	9.538E-02		
	Total	196.709	2046			

The F value for WTHR was significant, however, the small value of Between Groups Sum of Squares for WTHR shows that the relationship was not very strong and little variation in WTHR was explained by this categorization. Less than 1.0 percent of the variation in WTHR was explained by the access mode categorization. Therefore access mode was not included in the final predictive model.

$$E^2_{WTHR} = 1.84 / 196.71 = .009$$

#### 4.3.f Bus Line Headway and Waiting Time

Bus line headway has been a predictor of bus passenger average waiting time in traditional models. In this study, Bus Line Headway (BLH) was defined as a continuous independent variable and Analysis of Variance was applied to examine how well BLH could predict bus passenger waiting time components. Table 4.21 shows the results of the analysis.

Table 4.21 – WAITB, WAITA and WAIT Analysis of Variance for Bus Line Headways

Variable	Sum of Squares		df	Mean Square	F	Sig.
WAITB	Between Groups	21831.549	41	532.477	19.234	.000
	Within Groups	60765.583	2195	27.684		
	Total	82597.132	2236			
WAITA	Between Groups	1554.484	41	37.914	4.156	.000
	Within Groups	20023.492	2195	9.122		
	Total	21577.977	2236			
WAIT	Between Groups	26692.445	41	651.035	18.685	.000
	Within Groups	83727.435	2403	34.843		
	Total	110419.880	2444			

The F values in the table verify a significant relationship between bus line headways and all three dependent variables. Explained variation for each variable was calculated by dividing Between Groups Sum of Squares by Total Sums of Squares:

$$E^2_{\text{WAITB}} = 21831.5 / 82597.1 = .264$$

$$E^2_{\text{WAITA}} = 1554.5 / 21578.0 = .072$$

$$E^2_{\text{WAIT}} = 26692.4 / 110419.9 = .242$$

More than 26 percent of the variation in WAITB was explained by bus line headway. There was no surprise that for WAITA, the percentage of explained variation was much less and only about 7 percent of the variation was explained by headway. According to the definition of WAITA (Waiting Time After Scheduled Departure Time) little relationship was expected between WAITA and Bus Line Headway. Obviously bus Schedule Reliability Index (SRI) would be a better predictor for WAITA. In the case of WAIT, which was equal to Total Waiting Time, the percentage of explained variation was close to 25 percent. The scatter plot of the observed WAITBs for different headways is illustrated in the Figure 4.15.

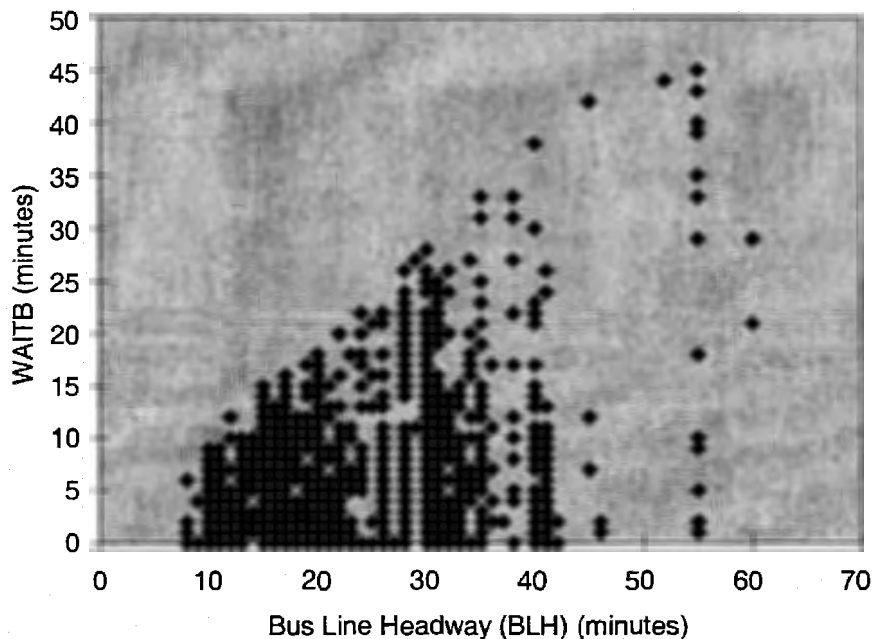


Figure 4.15 – WAITB-BLH Scatter plot

According to the Figure 4.15 longer Waiting Time Before Scheduled Departure Time is more likely when the headway is longer. The maximum values of WAITB for different headways were located on a straight line having a slope of around 1.0. Unusual observations where Waiting Time Headway Ratios (WTHR) were greater than 1.3, have been omitted.

Figure 4.16 illustrates the scatter plot of measured Waiting Time After Scheduled Departure Time (WAITA) for different values of Bus Line Headway. Large values of WAITA for short headway observations were as likely as small values of WAITA for long headways. As was verified by the Analysis of Variance, this figure also shows that a small portion of the variation in WAITA was explained by BLH.

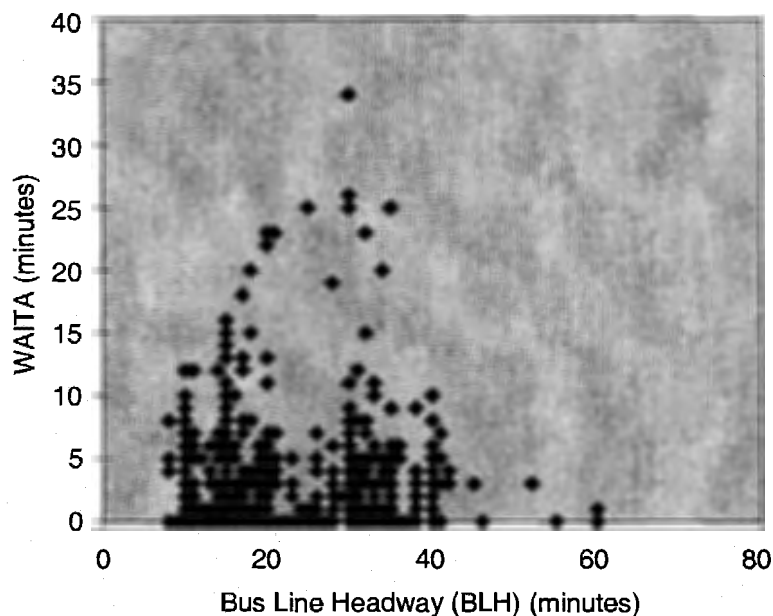


Figure 4.16 – WAITA-BLH Scatter plot

The scatter plot of observed Total Waiting Time (WAIT) is illustrated in Figure 4.17. Similar to WAITB, close to 25 percent of the WAIT variation was explained by Bus Line Headway. Considering the percentage of variation explained by headway for both WAITB and WAIT, it was concluded that Bus Line Headway (BLH) was an acceptable predictor for bus transit passenger waiting time components and was included as a predictor variable in the final model.

To see if grouping the bus headways into short, moderate and long headways would improve the percentage of explained variation, data was split into three sets and ANOVA was



applied to each data set separately. The short headway set included observations with headways equal to or less than 15 minutes, the moderate headway set included observations with headways more than 15 minutes and equal to or less than 30 minutes and finally the long headway observations were those with headways more than 30 minutes.

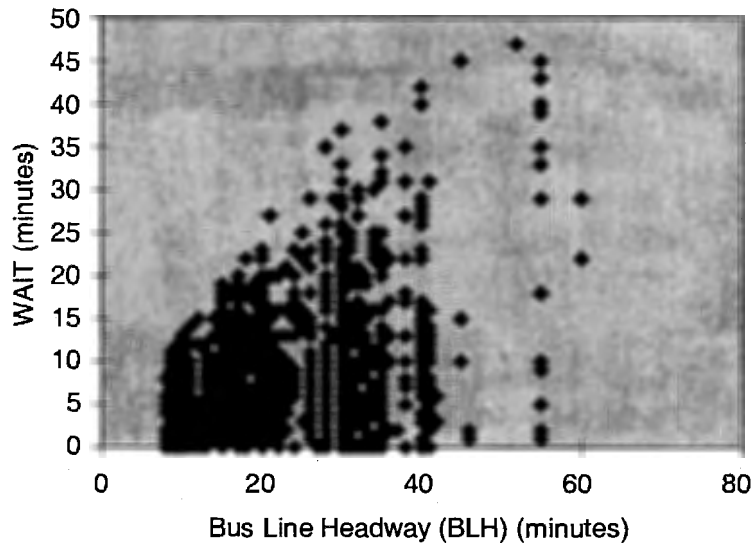


Figure 4.17 – WAIT-BLH Scatter plot

Table 4.22 shows the results of ANOVA for the observations with headways equal to or shorter than 15 minutes. Although the F values indicate a statistically significant relationship between WAIT and WAITB with BLH, the explained variation percentage is much less than the previously calculated percentages for the whole sample. Apparently when headway varies over a smaller range, the variation of Waiting Time components is less explained by headway.

$$E^2_{\text{WAITB}} = 714.2 / 11746.7 = .061$$

$$E^2_{\text{WAIT}} = 1628.4 / 22505.9 = .072$$

The results of ANOVA for moderate headways (headways from 15 to 30 minutes) are tabulated in the Table 4.23. For this data set, the relationship is statistically significant for all waiting time components, however the percentage of explained variation by headway is still less than the percentages in the whole sample.

$$E^2_{\text{WAITB}} = 2891.9 / 28145.2 = .103$$

$$E^2_{\text{WAITA}} = 731.5 / 9898.2 = .074$$

$$E^2_{\text{WAIT}} = 3308.5 / 36449.1 = .091$$

Table 4.22 – WAITB, WAITA and WAIT ANOVA for Short headways (BLH ≤ 15 min.)

Variable	Sum of Squares		df	Mean Square	F	Sig.
WAITB	Between Groups	714.208	10	71.421	6.681	.000
	Within Groups	11032.490	1032	10.690		
	Total	11746.698	1042			
WAITA	Between Groups	83.841	10	8.384	1.217	.275
	Within Groups	7109.346	1032	6.889		
	Total	7193.187	1042			
WAIT	Between Groups	1628.448	10	162.845	9.672	.000
	Within Groups	20877.408	1240	16.837		
	Total	22505.856	1250			

Table 4.24 shows the results of Analysis of Variance for the data with headways more than 30 minutes. The F values indicated a statistically significant relationship between predictor and dependent variables. The percentages of explained variation are higher compared to the previous two data sets, however the percentage of explained variation for WAIT was less than 20 percent compared to 25 percent for the whole sample. Following are calculations of the E squared values for long headways:

$$E^2_{\text{WAITB}} = 8708.9 / 33188.7 = .262$$

$$E^2_{\text{WAITA}} = 608.3 / 4355.8 = .140$$

$$E^2_{\text{WAIT}} = 7400.5 / 37109.9 = .199$$

Table 4.23 – WAITB, WAITA and WAIT ANOVA for moderate headways(15<BLH≤ 30 min.)

Variable	Sum of Squares		df	Mean Square	F	Sig.
WAITB	Between Groups	2891.916	14	206.565	6.560	.000
	Within Groups	25253.303	802	31.488		
	Total	28145.219	816			
WAITA	Between Groups	731.535	14	52.253	4.572	.000
	Within Groups	9166.626	802	11.430		
	Total	9898.162	816			
WAIT	Between Groups	3308.455	14	236.318	5.719	.000
	Within Groups	33140.629	802	41.322		
	Total	36449.084	816			

It was concluded that the whole sample data set would produce a more efficient model for predicting bus passenger waiting time components and separating the sample into subsets was not necessary.

Table 4.24 – WAITB, WAITA and WAIT ANOVA for long headways (BLH>30 min.)

Variable	Sum of Squares		df	Mean Square	F	Sig.
WAITB	Between Groups	8708.867	15	580.591	8.562	.000
	Within Groups	24479.790	361	67.811		
	Total	33188.658	376			
WAITA	Between Groups	608.262	15	40.551	3.906	.000
	Within Groups	3747.520	361	10.381		
	Total	4355.782	376			
WAIT	Between Groups	7400.523	15	493.368	5.995	.000
	Within Groups	29709.398	361	82.298		
	Total	37109.920	376			

#### 4.3.g Schedule Reliability and Waiting Time

The last variable examined as a potential predictor variable was Schedule Reliability Index (SRI). As explained in previous sections, SRI for each observation was defined as the number of late or early minutes for the bus that passenger was taking. Passengers who boarded late buses were assigned positive SRI values and passengers boarding early buses were assigned negative SRIs. ANOVA was applied to identify any statistically significant relationship between SRI and observed waiting time components. Table 4.25 illustrates the results of Analysis of Variance.

Table 4.25 – WAITB, WAITA and WAIT ANOVA for Bus Schedule Reliability Index (SRI)

Variable	Sum of Squares		df	Mean Square	F	Sig.
WAITB	Between Groups	3687.731	30	122.924	3.43	.000
	Within Groups	78909.401	2206	35.770		
	Total	82597.132	2236			
WAITA	Between Groups	4965.700	30	165.523	21.98	.000
	Within Groups	16612.277	2206	7.530		
	Total	21577.977	2236			
WAIT	Between Groups	3989.461	30	132.982	2.90	.000
	Within Groups	101026.433	2206	45.796		
	Total	105015.894	2236			

The F values indicate a statistically significant relationship between SRI and all three passenger waiting time components. Percentages of explained variation for each variable were calculated to figure out how strong the relationships were.

$$E^2_{\text{WAITB}} = 3687.7 / 82597.1 = .045$$

$$E^2_{\text{WAITA}} = 4965.7 / 21578.0 = .230$$

$$E^2_{\text{WAIT}} = 3989.5 / 105015.9 = .038$$

According to the calculated E squared values 23 percent of the WAITA variation was explained by SRI. Obviously if bus services run according to the published schedule, passengers would not wait after the scheduled departure time. In the cases of the other waiting time components (WAITB and WAIT), SRI accounts for about 4 percent of the variation. Schedule Reliability Index (SRI) was included as a predictor variable in developing the final model.

#### **4.4 DEVELOPING MATHEMATICAL MODELS**

Bus Line Headway (BLH) and bus Schedule Reliability Index (SRI) were selected as acceptable predictors for bus passenger waiting time components (WAITB, WAITA and WAIT). Regression Analysis was applied to develop the mathematical models to estimate these components in terms of BLH and SRI. The objective was to develop equations that best fit the collected data and to get the highest value for adjusted coefficient of determination ( $R^2$ ) or percentage of explained variation.

To achieve this, regression analysis with several hypothesized model forms was applied to waiting time components as dependent variables and BLH, SRI or both were included as independent variables.

##### **4.4.a Mathematical Model for WAITB**

For WAITB (Waiting Time Before Scheduled Departure Time) as the dependent variable, linear regression analysis indicated that using Bus Line Headway (BLH) as the only predictor variable, accounted for 17.2 percent of the variation in WAITB (adjusted  $R^2=.172$ ), while including Schedule Reliability Index (SRI) as the second independent variable increased percentage of explained variation into 18.4 percent. There were no symptoms of multicollinearity, however, since including SRI didn't increase remarkably the value of R squared, it was excluded from the final model.

To determine which equation had a better fit to the observed data, different methods of regression analysis including Linear, Logarithmic, Quadratic and Cubic were applied using WAITB as the dependent and BLH as the independent variable. The quadratic model slightly

improved the R squared value compared to the linear model (0.172 linear, 0.175 quadratic). For the cubic model the percentage of explained variation was 19.9 percent. Figure 4.18 shows how the different equations fit the observed data.

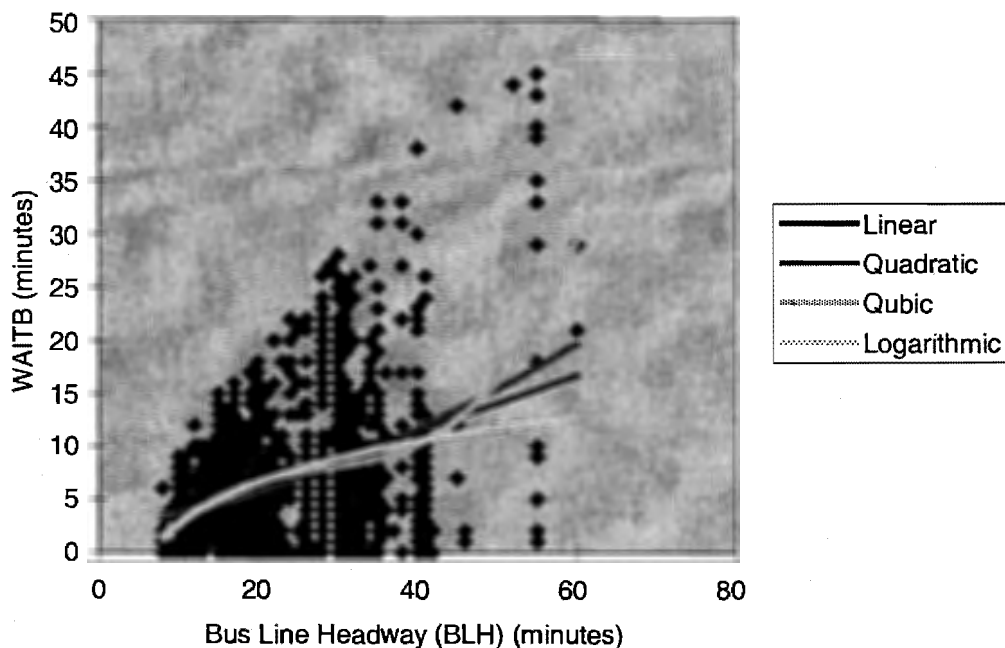


Figure 4.18 – Curve equations fitting observed data for WAITB

Based on the regression analysis, a linear model to estimate bus passenger waiting time before scheduled departure time (WAITB) was developed as:

$$\text{WAITB} = .657 + .268 \text{ BLH}$$

( adjusted  $R^2 = 0.172$  )

And the cubic model with a slightly larger value for adjusted R squared was:

$$\text{WAITB} = -7.345 + 1.396 \text{ BLH} - .046 (\text{BLH})^2 + .0006 (\text{BLH})^3$$

( adjusted  $R^2 = 0.199$  )

As noted in previous sections there was a possibility that calculation of passenger waiting time components (WAITB and WAITA) at Northcross Transfer Center was problematic. Therefore data collected at this location was removed and the regression analysis was rerun. The values of

adjusted R squared increased slightly for the linear model from .172 into .186. and for the cubic model from .199 into .217.

The mathematical models did not change remarkably. Following are the models developed for WAITB after excluding the data collected at the Northcross Transfer Center.

$$\text{WAITB} = .621 + .272 \text{ BLH}$$

( adjusted  $R^2 = 0.186$  )

$$\text{WAITB} = -7.611 + 1.443 \text{ BLH} - .048 (\text{BLH})^2 + .0006 (\text{BLH})^3$$

( adjusted  $R^2 = 0.217$  )

#### 4.4.b Mathematical Model for WAITA

In the case of WAITA (Waiting Time After Scheduled Departure Time), the scatter plots shown in Figures 4.16 and 4.19 indicate that there is no strong relationship between WAITA and the predictor variables Bus Line Headway (BLH) and Schedule Reliability Index (SRI). Linear regression analysis showed that BLH was not a good predictor for WAITA (adjusted  $R^2=0.004$ ), but SRI accounted for 12.9 percent of the variation in WAITA ( adjusted  $R^2=0.129$ ). Although none of the three equations in Figure 4.19 does not really fit the WAITA-SRI scatter plot well, SRI was considered as the only reasonable predictor for WAITA.

Considering inaccurate SRI values at Northcross T.C., the data collected at this location were eliminated in developing the WAITA model. In this case improvements in the R squared values were considerable. The percentage of explained variation for the linear model jumped to 20.6 percent from the previous 12.9 percent. Adjusted R squared values for the quadratic and cubic models were 0.206 and 0.239 respectively. Following are the developed models for predicting WAITA. For linear model and cubic model:

$$\text{WAITA} = .889 + .444 \text{ SRI}$$

( adjusted  $R^2 = 0.206$  )

$$\text{WAITA} = .733 + .436 \text{ SRI} + .024 (\text{SRI})^2 - .0016 (\text{SRI})^3$$

( adjusted  $R^2 = 0.239$  )

Figure 4.19 shows how the different equations fit the observed data. Because of negative SRI values, the Logarithmic method was not applicable for WAITA.

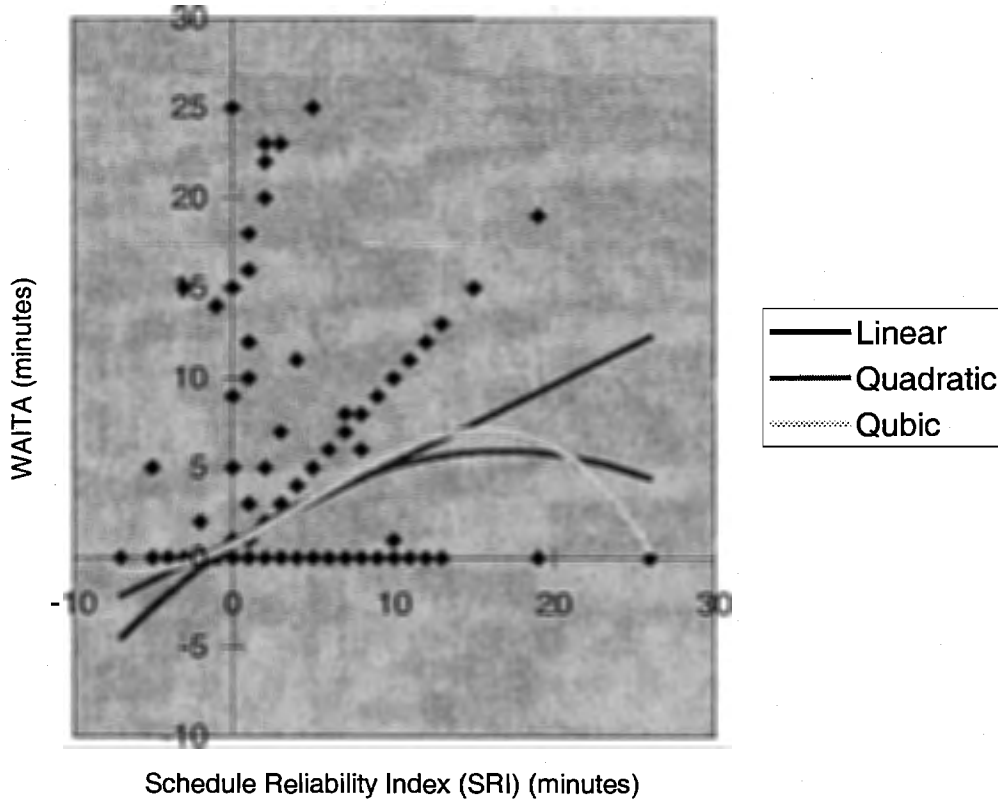


Figure 4.19 – Line fit plot of observed data for WAITA

#### 4.4.c Mathematical Model for WAIT

Developing mathematical models to predict bus transit passenger Total Waiting Time (WAIT) was the ultimate study objective. Linear regression analysis of WAIT as dependent variable and Bus Line Headway (BLH) and Schedule Reliability Index (SRI) as independent variables indicated that including SRI as a predictor variable did not increase the percentage of explained WAIT variation. In fact adjusted R squared for linear regression with BLH as the predictor variable was 0.179, while including SRI reduced adjusted R squared to 0.162. There was no symptom of multicollinearity in the model, however SRI was excluded from the final model.

Similar to the cases of WAITB and WAITA, different model forms were hypothesized including Linear, Logarithmic, Quadratic and Cubic using WAIT as the dependent variable and BLH as the independent variable. The cubic model had the highest value of adjusted R squared equal to .191. Figure 4.20 shows the models and observed data.

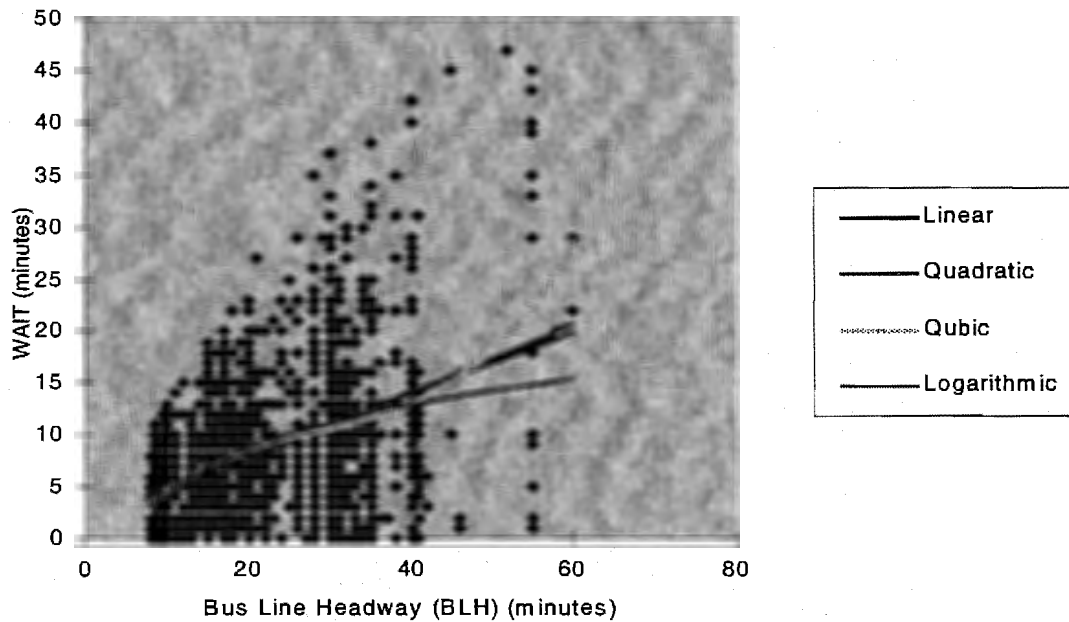


Figure 4.20 – Line fit plot of observed data for WAIT

The linear and cubic models to estimate bus passenger Total Waiting Time (WAIT) were developed as:

$$\text{WAIT} = 2.04 + .299 \text{ BLH}$$

( adjusted  $R^2 = 0.179$  )

$$\text{WAIT} = -3.891 + 1.151 \text{ BLH} - .034 (\text{BLH})^2 + .0004 (\text{BLH})^3$$

( adjusted  $R^2 = 0.191$  )

To examine the effect of data collected at the Northcross Transfer Center, a second run of the regression analysis was applied excluding the data collected at this location. The values for adjusted R squared showed slight improvement compared to the whole sample (0.196 for the linear model and 0.211 for cubic), but the mathematical models stayed almost the same. For the linear and cubic models the equations were:



$$\text{WAIT} = 2.013 + .304 \text{ BLH}$$

( adjusted  $R^2 = 0.196$  )

$$\text{WAIT} = -4.387 + 1.225 \text{ BLH} - .037 (\text{BLH})^2 + .0004 (\text{BLH})^3$$

( adjusted  $R^2 = 0.211$  )

The adjusted R squared values for the developed models do not indicate a strong relationship between waiting time and bus headways, however, the waiting time cumulative frequency percentage for different headway ranges shown in Figure 4.21 verifies that there is a relationship. In this figure Series 1, 2 and 3 represent WAIT cumulative observed frequency percentages for short ( $\text{BLH} \leq 15$  min.), moderate ( $15 < \text{BLH} \leq 30$  min.) and long ( $\text{BLH} > 30$  min.) headways respectively.

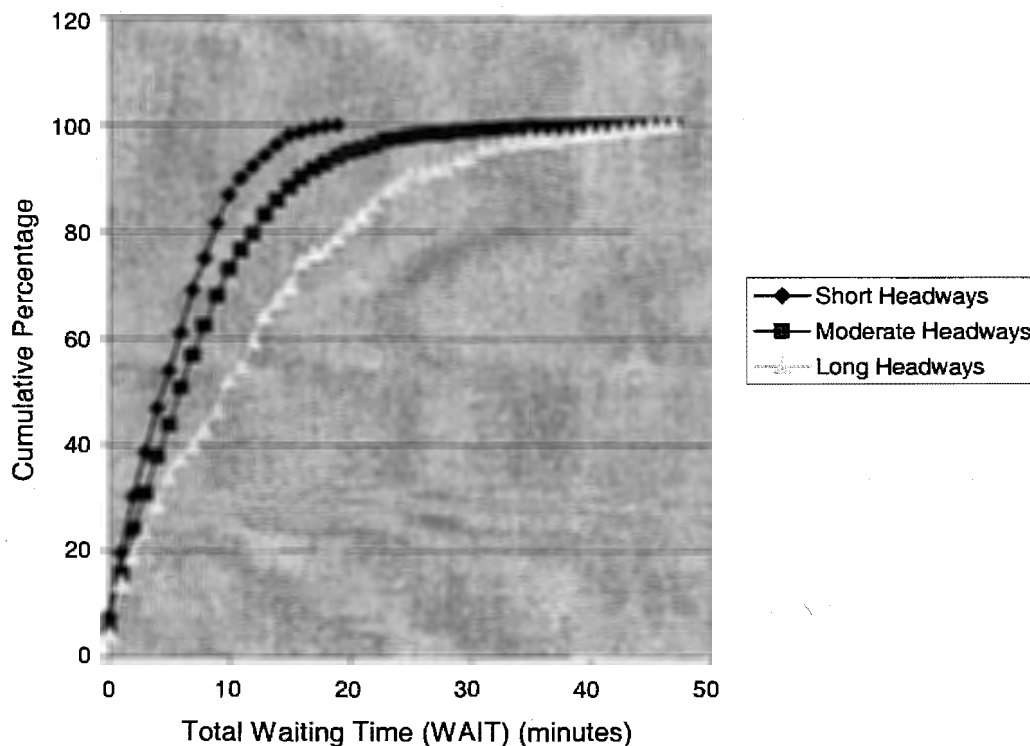


Figure 4.21 – WAIT Cumulative Frequency Percentage for different range of Headways

According to the figure, for example 80 percent of the passengers who boarded short headway buses waited about 9 minutes, while those boarding moderate headway buses waited 13 minutes and long headway bus passengers waited more than 20 minutes to board the bus.

This figure suggests that the means and variances of the three ranges of data are not equal; longer headways are associated with higher average waits (as compared in the regression model) as well as higher values of variance. Non-constant variation in such a model is referred to as heteroscedasticity; more sophisticated least-squared models can accommodate this figure.

#### **4.5 CHAPTER CONCLUSION**

Analysis of the collected data showed that compared to other variables, bus line headway was a good predictor of WAITB and WAIT, while for WAITA bus schedule reliability index was a better predictor. However percentages of explained variations in all cases were less than 25 percent and for the developed models even lower, which suggests little relationship between waiting time and service frequency.

Although the cubic model for all three waiting time components resulted in slightly higher values for adjusted R squared, however for simplicity the linear model is the final choice. Moreover for common bus line headways, in the range of 10 – 45 minutes, the linear, quadratic and cubic models approximately coincide and give the same estimate.

As the final result of this chapter the following model is suggested for predicting bus passenger waiting time before scheduled departure time:

$$\text{WAITB} = 0.6 + 0.27 \text{ BLH}$$

For waiting time after scheduled departure time, Schedule Reliability Index (SRI) was a better predictor. The following linear model shows the relationship:

$$\text{WAITA} = 0.9 + 0.4 \text{ SRI}$$

Finally for bus passenger total waiting time, the following simple linear model was selected:

$$\text{WAIT} = 2.0 + 0.3 \text{ BLH}$$

## CHAPTER 5

### SUMMARY AND CONCLUSION

Estimating and optimizing bus-transit passenger travel times have several applications in demand estimation, planning, scheduling and operating public mass-transit systems. This research project was planned to investigate the variables that affect bus passenger wait time as a component of transit passenger travel time and develop a new mathematical model to predict this component.

#### 5.1 SUMMARY

The purpose of this project was to develop a new mathematical model to predict wait time as a function of bus passenger attributes and transit system characteristics. According to traditional models for headways under 30 minutes, wait time is equal to half the headway, and for headways of 30 minutes or more, wait time is equal to the square root of the headway in minutes. Non-transfer passengers were the scope of this project and the models have been developed to predict wait time of non-transfer passengers.

The objectives of the study were:

- Review traditional bus passenger waiting time models found in the literature;
- Collect primary data describing bus passenger waiting times, and;
- Develop predictive waiting time models.

Gender, ethnicity, and access mode were some of the passenger characteristics studied. Bus line headway (BLH) and bus schedule reliability were among the transit system operation characteristics investigated. Schedule Reliability Index (SRI) was defined to measure how each bus service was running according to the published schedules. Waiting time was decomposed into two components: "Wait time before scheduled departure time" (WAITB) and "wait time after scheduled departure time" (WAITA). To compare waiting time of bus lines with different headways, another variable (WTHR) was introduced which standardized the Total Waiting Time (WAIT) by the headway value for each observation.

Two different techniques were applied in data collection process: direct observation and video tape recording and 2491 waiting time observations were collected in Austin, Texas during a six month period from June through December 1998. Data were collected at six different bus stations during morning and afternoon hours. The collected data were evaluated and analyzed

using Analysis of Variance and Regression to investigate the relationship between different recorded characteristics and measured variables.

Table 5.1 shows the descriptive statistics and percentiles for the observed and measured variables: BLH, WAITB, WAITA, WAIT and WTHR. The average value for WTHR was equal to .4465, which is close to the traditional model that says average bus passenger waiting time is equal to half the bus headway. Unusual data with WTHR greater than 1.3 were excluded from the analysis.

Table 5.1 – Descriptive statistics and percentiles for Bus Line Headway, Passenger Wait Time components and Wait Time Headway Ratio.

Variable		BLH	WAITB	WAITA	WAIT	WTHR
Observations Number	Valid	2491	2275	2275	2491	2491
	Missing	0	216	216	0	0
Mean	(minutes)	19.254	6.127	2.273	8.043	.4465
Median	"	15.000	5.000	1.000	7.000	.3939
Mode	"	15.0	1.0	.0	1.0	.00
Std. Deviation	"	9.493	6.048	3.517	6.877	.3457
Variance	"	90.123	36.577	12.368	47.298	.1195
Range	"	52.0	45.0	34.0	47.0	2.20
Minimum	"	8.0	.0	.0	.0	.00
Maximum	"	60.0	45.0	34.0	47.0	2.20
Percentiles	25	12.000	2.000	.000	3.000	.1667
	50	15.000	5.000	1.000	7.000	.3939
	75	26.000	9.000	3.000	11.000	.6667
	85	31.000	11.000	5.000	15.000	.8000
	95	38.000	18.000	8.000	22.000	1.0667
	98	41.000	23.000	13.000	26.000	1.3000

Analysis of Variance (ANOVA) was applied to figure out which independent variables were effectively predicting variation in bus passenger waiting time and how strong the relationship was. The values of explained variation ( $E^2$ ) showed that Location, Daytime, Gender, Ethnicity and Access Mode as nominal scale variables, were not good predictors of variation in waiting time components. Therefore they were excluded from final model specification.

Considering BLH as the independent variable and applying ANOVA showed that about 26 percent of the variation in WAITB was explained by bus line headway. In the case of WAITA, about 7 percent of the variation was explained by headway. For Total Waiting Time (WAIT), the percentage variation explained by headway was close to 25 percent. Considering the percentage of variation explained by headway for both WAITB and WAIT, it was concluded that Bus Line Headway (BLH) was an acceptable predictor for bus transit passenger waiting time components and was included as a predictor variable in the final model. Categorizing the data to short, moderate and long headway subsets and applying ANOVA produced lower values for  $E^2$ . It was concluded that when headway varies over a smaller range, as in the subsets, waiting time is less explained by headway. Therefore the model was developed for the whole data set and not for headway categorized subsets.

Analysis of Variance showed that when SRI was considered as independent variable 23 percent of the WAITA variation was explained by SRI. For other waiting time components (WAITB and WAIT), SRI accounted for about 4 percent of the variation. Schedule Reliability Index (SRI) was included as a predictor variable in the final specification. Regression Analysis was applied to develop the mathematical models to estimate bus passenger waiting time components in terms of BLH and SRI. The objective was to explore the equations that best fit the collected data and to get the highest value for adjusted R squared or percentage of explained variation in the dependent variables. To achieve this, linear and polynomial models were hypothesized using waiting time components as dependent variables and in each model BLH, SRI or both were included as independent variables.

For WAITB (Waiting Time Before Scheduled Departure Time) as the dependent variable, linear regression analysis indicated that when Bus Line Headway was considered as the only predictor variable, it accounted for 17.2 percent of the variation in WAITB (adjusted  $R^2 = .172$ ), while including SRI as the second independent variable increased the percentage of explained variation to 18.4 percent. Since including SRI did not remarkably increase the R Squared value, it was excluded from the final model.

The cubic model produced a slightly better adjusted R squared value than the linear model. However, for simplicity the linear model was recommended to estimate bus passenger waiting time before scheduled departure time (WAITB) as:

$$\text{WAITB} = .6 + .27 \text{ BLH}$$

( adjusted  $R^2 = 0.186$  )

In the case of WAITA (Waiting Time After Scheduled Departure Time), linear regression analysis showed that bus line headway was not a good predictor for WAITA (adjusted  $R^2=.004$ ). However Schedule Reliability Index (SRI) as a predictor variable accounted for 20.6 percent of the variation in WAITA (adjusted  $R^2=.206$ ). SRI was considered as the only independent variable in the model specification for WAITA.

$$\text{WAITA} = .9 + .4 \text{ SRI}$$

( adjusted  $R^2 = 0.206$  )

Linear regression analysis showed that including SRI in the model specification for total wait time (WAIT) didn't increase the percentage of explained WAIT variation. Therefore BLH was the only independent variable considered in the final wait time model.

Similar to the cases of WAITB and WAITA, different methods of regression analysis including Linear, Logarithmic, Quadratic and Cubic were applied to WAIT as the dependent variable and BLH as the independent variable. Again the cubic curve had a slightly better adjusted R squared value compared to other methods, however for common bus line headways in the range of 10 – 45 minutes, the linear, quadratic and cubic models produced approximately the same estimates. The final linear waiting time model was:

$$\text{WAIT} = 2.0 + .30 \text{ BLH}$$

( adjusted  $R^2 = 0.196$  )

## 5.2 CONCLUSION

Analysis of the collected data showed that bus line headway predicted less than 25 percent of the variation in bus transit passenger waiting time components in Austin, Texas. The values of adjusted  $R^2$  for the Developed models were even less than 20 percent. These facts indicate that service frequency alone does a poor job of predicting waiting times.

It is likely that including other variables in the model specification could improve the percentage of explained variation. Frequency of passenger bus riding, trip purpose, user attitudes towards transit, passenger level of education and transit schedule circulation are some of the potential variables that were not studied in this project and may be good wait time predictors.

Austin, the city where the data were collected has a population close to one million. The transportation system is mainly based on auto vehicle trips and urban sprawl is the main land use pattern. A single bus transit service is the only transit system in Austin and bus headways are usually in the range of 10 to 30 minutes. Bus schedules are well circulated and schedule

timetables are posted at most of the bus stops. The models developed in this study might fit other cities with similar transportation system, land use and demographic characteristics.

The observed wait times before scheduled departure time and the model developed for WAITB suggests that a percentage of the bus passengers plan their bus trips. If all passenger arrivals to the bus stations were random, the average value of WAITB would be about half the headway. However the statistics and the developed models give lower WAITB values. Therefore it is concluded that many arrivals are planned.

Non-transfer passengers were the scope of this study, however transfer passenger waiting time data were collected and are presented in the appendix 3. Investigating the possibility of different waiting behavior for transfer passengers is recommended.

## VARIABLE AND CATEGORY CODES

Different variables and categories are replaced with following codes in the charts presented in the appendices.

**O.N.** for Observation Number

**SEX** for Gender

**M** for Male

**F** for Female

**E.C.** for Ethnicity or Race

**W** for White or Caucasian

**B** for African American

**H** for Hispanic American

**A** for Asian American

**O** for others

**RAT** for Rider Arrival Time

**A.M.** for Access Mode

**W** for walking

**B** for Biking

**R** for Riding with others

**D** for Driving to the bus station

**U** for Unknown Access Mode

**ADW** for Activity During Waiting Time

**DN** for Doing Nothing

**T** for Talking

**S** for Smoking

**R** for Reading

**U** for Unobserved Activity



**BLN** for Bus Line Number

**71** for Route 7 Northbound

**72** for Route 7 Southbound

**90** for Route LX Northbound

**91** for Route LX Southbound

**100** for UT Red River shuttle bus

**BDT** for Bus Departure Time

**EDT** for Expected Scheduled Departure Time

**SDT** for Scheduled Departure Time

**SRI** for Schedule Reliability Index

**BLH** for Bus Line Headway

**W.B.** for Waiting Time Before Scheduled Departure Time in minutes

**W.A.** for Waiting Time After Scheduled Departure Time in minutes

**WAIT** for Total Waiting Time in minutes

**WTHR** for Waiting Time Headway Ratio

**LOC** for Data Collection Location

**1** for Capitol Center

**2** for South Transfer Center

**3** for Northcross Transfer Center

**4** for Highland Mall Transfer Center

**5** for Pavilion Park and Ride

**6** for the San Jacinto bus stop

**DT** for Day Time or Traffic Period

**11** for Morning Peak Hours

**12 for Morning Off Peak Hours**

**21 for Afternoon Peak Hours**

**22 for Afternoon Off Peak Hours**

**APPENDIX I**

**Non-Transfer Passengers Waiting Time Data**

Non-Transfer Passengers Waiting Time Data

O.N	DATE	SEX	E.C.	RAT	A.M.	ADW	BLN	BDT	EDT	SDT	SRI	BLH	W.B.	W.A.	WAIT	WTHR	LOC	D.T.
1	7/22/98	M	B	7:14	W	DN	1	7:17	7:15	7:15	2	10	1	2	3	0.3	1	11
2	7/20/98	M	B	7:20	W	T	1	7:30	7:25	7:25	5	10	5	5	10	1	1	11
3	7/20/98	F	H	7:20	W	DN	1	7:30	7:25	7:25	5	10	5	5	10	1	1	11
4	7/20/98	M	B	7:27	W	DN	1	7:30	7:35	7:25	5	10	3	0	3	0.3	1	11
5	7/27/98	M	W	7:20	W	T	1	7:27	7:25	7:25	2	10	5	2	7	0.7	1	11
6	7/27/98	F	A	7:23	W	DN	1	7:27	7:25	7:25	2	10	2	2	4	0.4	1	11
7	7/27/98	M	W	7:26	W	DN	1	7:27	7:35	7:25	2	10	1	0	1	0.1	1	11
8	7/22/98	M	W	7:29	W	S	1	7:42	7:35	7:35	7	10	6	7	13	1.3	1	11
9	7/22/98	M	B	7:37	W	DN	1	7:42	7:45	7:35	7	10	5	0	5	0.5	1	11
10	7/27/98	M	B	7:28	W	DN	1	7:34	7:35	7:35	-1	10	6	0	6	0.6	1	11
11	7/20/98	F	A	7:42	W	DN	1	7:53	7:45	7:45	8	10	3	8	11	1.1	1	11
12	7/27/98	M	B	7:42	W	R	1	7:47	7:45	7:45	2	10	3	2	5	0.5	1	11
13	7/27/98	M	W	7:43	W	S	1	7:47	7:45	7:45	2	10	2	2	4	0.4	1	11
14	7/20/98	F	H	7:48	W	DN	1	8:00	7:54	7:54	6	10	6	6	12	1.2	1	11
15	7/27/98	M	B	7:57	W	DN	1	8:03	8:04	8:04	-1	10	6	0	6	0.6	1	11
16	7/27/98	M	H	7:57	W	T	1	8:03	8:04	8:04	-1	10	6	0	6	0.6	1	11
17	7/27/98	M	W	8:02	W	T	1	8:03	8:04	8:04	-1	10	1	0	1	0.1	1	11
18	7/20/98	F	H	8:11	W	S	1	8:19	8:14	8:14	5	10	3	5	8	0.8	1	11
19	7/20/98	F	W	8:15	W	T	1	8:19	8:24	8:14	5	10	4	0	4	0.4	1	11
20	7/20/98	F	W	8:15	W	S	1	8:19	8:24	8:14	5	10	4	0	4	0.4	1	11
21	7/22/98	M	W	8:15	W	DN	1	8:16	8:24	8:14	2	10	1	0	1	0.1	1	11
22	7/22/98	M	W	8:20	W	T	1	8:25	8:24	8:24	1	10	4	1	5	0.5	1	11
23	7/22/98	M	W	8:20	W	T	1	8:25	8:24	8:24	1	10	4	1	5	0.5	1	11
24	7/27/98	M	H	8:18	W	T	1	8:27	8:24	8:24	3	10	6	3	9	0.9	1	11
25	7/27/98	M	B	8:25	W	DN	1	8:27	8:34	8:24	3	10	2	0	2	0.2	1	11
26	7/27/98	F	W	8:25	W	T	1	8:27	8:34	8:24	3	10	2	0	2	0.2	1	11
27	7/27/98	F	B	8:25	W	T	1	8:27	8:34	8:24	3	10	2	0	2	0.2	1	11
28	7/27/98	F	B	8:25	W	T	1	8:27	8:34	8:24	3	10	2	0	2	0.2	1	11
29	7/20/98	M	B	8:33	W	S	1	8:36	8:34	8:34	2	10	1	2	3	0.3	1	12
30	7/20/98	F	W	8:35	W	DN	1	8:36	8:44	8:34	2	10	1	0	1	0.1	1	12

Non-Transfer Passengers Waiting Time Data (cont.)

O.N	DATE	SEX	E.C.	RAT	A.M.	ADW	BLN	BDT	EDT	SDT	SRI	BLH	W.B.	W.A.	WAIT	WTHR	LOC	D.T.
31	7/27/98	M	H	8:33	W	DN	1	8:35	8:34	8:34	1	10	1	1	2	0.2	1	12
32	7/27/98	F	B	8:34	W	DN	1	8:35	8:34	8:34	1	10	0	1	1	0.1	1	12
33	7/22/98	M	W	8:35	W	DN	1	8:49	8:44	8:44	5	10	9	5	14	1.4	1	12
34	7/22/98	M	W	8:57	B	DN	1	9:04	9:03	8:54	10	10	6	1	7	0.7	1	12
35	7/20/98	M	H	8:55	W	T	1	9:04	9:03	9:03	1	10	8	1	9	0.9	1	12
36	7/20/98	F	H	8:55	W	T	1	9:04	9:03	9:03	1	10	8	1	9	0.9	1	12
37	7/22/98	F	B	9:05	W	DN	1	9:05	9:13	9:03	2	10	0	0	0	0	1	12
38	7/27/98	M	H	9:03	W	DN	1	9:04	9:03	9:03	1	10	0	1	1	0.1	1	12
39	7/20/98	M	B	9:14	W	DN	1	9:15	9:23	9:13	2	10	1	0	1	0.1	1	12
40	7/22/98	M	W	9:06	W	S	1	9:15	9:13	9:13	2	10	7	2	9	0.9	1	12
41	7/27/98	M	W	9:07	W	S	1	9:17	9:13	9:13	4	10	6	4	10	1	1	12
42	7/27/98	M	B	9:15	B	DN	1	9:17	9:23	9:13	4	10	2	0	2	0.2	1	12
43	7/27/98	M	W	9:16	W	DN	1	9:17	9:23	9:13	4	10	1	0	1	0.1	1	12
44	7/22/98	F	H	9:27	W	T	1	9:28	9:32	9:23	5	10	1	0	1	0.1	1	12
45	7/22/98	F	H	9:27	W	T	1	9:28	9:32	9:23	5	10	1	0	1	0.1	1	12
46	7/27/98	M	H	9:20	W	DN	1	9:33	9:23	9:23	10	10	3	10	13	1.3	1	12
47	7/27/98	F	A	9:21	U	DN	1	9:33	9:23	9:23	10	10	2	10	12	1.2	1	12
48	7/27/98	M	A	9:31	W	DN	1	9:33	9:32	9:23	10	10	1	1	2	0.2	1	12
49	7/22/98	M	W	9:38	W	S	1	9:45	9:43	9:43	2	10	5	2	7	0.7	1	12
50	7/22/98	M	H	9:38	W	DN	1	9:45	9:43	9:43	2	10	5	2	7	0.7	1	12
51	7/22/98	M	H	9:38	W	T	1	9:45	9:43	9:43	2	10	5	2	7	0.7	1	12
52	7/22/98	F	H	9:38	W	T	1	9:45	9:43	9:43	2	10	5	2	7	0.7	1	12
53	7/22/98	F	H	9:38	W	T	1	9:45	9:43	9:43	2	10	5	2	7	0.7	1	12
54	7/20/98	M	B	9:44	W	DN	1	10:00	9:53	9:53	7	10	9	7	16	1.6	1	12
55	7/22/98	M	H	9:51	W	S	1	9:56	9:53	9:53	3	10	2	3	5	0.5	1	12
56	7/27/98	M	B	9:54	W	DN	1	9:55	10:03	9:53	2	10	1	0	1	0.1	1	12
57	7/20/98	M	W	10:00	W	DN	1	10:10	10:03	10:03	7	10	3	7	10	1	1	12
58	7/20/98	M	H	10:00	W	S	1	10:10	10:03	10:03	7	10	3	7	10	1	1	12
59	7/20/98	F	H	10:10	W	DN	1	10:10	10:13	10:03	7	10	0	0	0	0	1	12
60	7/20/98	M	H	10:10	W	DN	1	10:10	10:13	10:03	7	10	0	0	0	0	1	12

Non-Transfer Passengers Waiting Time Data (cont.)

O.N	DATE	SEX	E.C.	RAT	A.M.	ADW	BLN	BDT	EDT	SDT	SRI	BLH	W.B.	W.A.	WAIT	WTHR	LOC	D.T.
61	7/22/98	M	H	9:57	W	T	1	10:06	10:03	10:03	3	10	6	3	9	0.9	1	12
62	7/27/98	M	B	9:59	W	R	1	10:05	10:03	10:03	2	10	4	2	6	0.6	1	12
63	7/27/98	M	H	10:01	W	DN	1	10:05	10:03	10:03	2	10	2	2	4	0.4	1	12
64	7/20/98	M	W	10:11	W	R	1	10:18	10:13	10:13	5	10	2	5	7	0.7	1	12
65	7/20/98	M	W	10:11	W	DN	1	10:18	10:13	10:13	5	10	2	5	7	0.7	1	12
66	7/20/98	M	W	10:17	B	DN	1	10:18	10:21	10:13	5	10	1	0	1	0.1	1	12
67	7/27/98	M	H	10:09	W	DN	1	10:17	10:13	10:13	4	10	4	4	8	0.8	1	12
68	7/27/98	M	B	10:10	W	R	1	10:17	10:13	10:13	4	10	3	4	7	0.7	1	12
69	7/20/98	F	B	10:27	W	T	1	10:34	10:31	10:31	3	10	4	3	7	0.7	1	12
70	7/20/98	M	B	10:27	W	T	1	10:34	10:31	10:31	3	10	4	3	7	0.7	1	12
71	7/20/98	M	W	10:30	W	R	1	10:34	10:31	10:31	3	10	1	3	4	0.4	1	12
72	7/20/98	F	H	10:33	W	DN	1	10:34	10:41	10:31	3	10	1	0	1	0.1	1	12
73	7/20/98	M	H	10:40	W	T	1	10:50	10:41	10:41	9	10	1	9	10	1	1	12
74	7/20/98	M	H	10:40	W	T	1	10:50	10:41	10:41	9	10	1	9	10	1	1	12
75	7/27/98	F	W	10:39	W	DN	1	10:42	10:41	10:41	1	10	2	1	3	0.3	1	12
76	7/27/98	M	W	10:49	W	DN	1	10:51	10:51	10:51	0	10	2	0	2	0.2	1	12
77	7/15/98	M	H	13:39	U	S	1	13:41	13:39	13:39	2	10	0	2	2	0.2	1	22
78	6/23/98	M	B	13:50	U	T	1	13:55	13:58	13:48	7	10	5	0	5	0.5	1	22
79	6/23/98	F	B	13:50	U	T	1	13:55	13:58	13:48	7	10	5	0	5	0.5	1	22
80	6/23/98	M	H	13:52	U	R	1	13:55	13:58	13:48	7	10	3	0	3	0.3	1	22
81	6/23/98	M	W	13:52	U	S	1	13:55	13:58	13:48	7	10	3	0	3	0.3	1	22
82	7/9/98	F	A	13:38	U	DN	1	13:49	13:39	13:48	1	10	1	10	11	1.1	1	22
83	7/9/98	F	W	13:48	U	S	1	13:49	13:48	13:48	1	10	0	1	1	0.1	1	22
84	7/9/98	M	W	13:48	U	S	1	13:49	13:48	13:48	1	10	0	1	1	0.1	1	22
85	7/9/98	M	H	13:48	U	DN	1	13:49	13:48	13:48	1	10	0	1	1	0.1	1	22
86	7/13/98	M	W	13:42	U	S	1	13:49	13:48	13:48	1	10	6	1	7	0.7	1	22
87	7/13/98	F	H	13:47	U	DN	1	13:49	13:48	13:48	1	10	1	1	2	0.2	1	22
88	7/13/98	M	W	13:47	U	DN	1	13:49	13:48	13:48	1	10	1	1	2	0.2	1	22
89	6/23/98	M	W	13:59	U	DN	1	14:02	14:08	13:58	4	10	3	0	3	0.3	1	22
90	6/23/98	M	W	14:00	U	S	1	14:02	14:08	13:58	4	10	2	0	2	0.2	1	22

Non-Transfer Passengers Waiting Time Data (cont.)

O.N	DATE	SEX	E.C.	RAT	A.M.	ADW	BLN	BDT	EDT	SDT	SRI	BLH	W.B.	W.A.	WAIT	WTHR	LOC	D.T.
91	7/9/98	M	B	13:57	U	DN	1	13:59	13:58	13:58	1	10	1	1	2	0.2	1	22
92	7/13/98	M	W	13:59	U	DN	1	13:59	14:08	13:58	1	10	0	0	0	0	1	22
93	6/23/98	M	B	14:05	U	R	1	14:13	14:08	14:08	5	10	3	5	8	0.8	1	22
94	6/23/98	F	H	14:09	U	R	1	14:13	14:18	14:08	5	10	4	0	4	0.4	1	22
95	6/23/98	F	H	14:09	U	T	1	14:13	14:18	14:08	5	10	4	0	4	0.4	1	22
96	7/9/98	F	B	13:59	U	R	1	14:12	14:08	14:08	4	10	9	4	13	1.3	1	22
97	7/9/98	M	H	14:09	U	DN	1	14:12	14:18	14:08	4	10	3	0	3	0.3	1	22
98	7/9/98	M	W	14:11	U	DN	1	14:12	14:18	14:08	4	10	1	0	1	0.1	1	22
99	7/13/98	M	W	14:09	U	DN	1	14:11	14:18	14:08	3	10	2	0	2	0.2	1	22
100	7/13/98	F	W	14:10	U	DN	1	14:11	14:18	14:08	3	10	1	7	8	0.8	1	22
101	7/15/98	F	A	14:12	U	DN	1	14:13	14:18	14:08	5	10	1	0	1	0.1	1	22
102	6/23/98	F	W	14:15	U	T	1	14:25	14:18	14:18	7	10	3	7	10	1	1	22
103	6/23/98	F	H	14:18	U	DN	1	14:25	14:18	14:18	7	10	0	7	7	0.7	1	22
104	6/23/98	F	H	14:19	U	DN	1	14:25	14:26	14:18	7	10	6	0	6	0.6	1	22
105	7/15/98	M	B	14:19	U	T	1	14:20	14:26	14:18	2	10	1	0	1	0.1	1	22
106	7/15/98	M	W	14:19	U	T	1	14:20	14:26	14:18	2	10	1	0	1	0.1	1	22
107	7/15/98	F	W	14:19	U	DN	1	14:20	14:26	14:18	2	10	1	0	1	0.1	1	22
108	6/23/98	M	B	14:27	U	DN	1	14:32	14:37	14:26	6	10	5	0	5	0.5	1	22
109	6/23/98	F	W	14:30	U	DN	1	14:32	14:37	14:26	6	10	2	0	2	0.2	1	22
110	6/23/98	M	B	14:31	U	DN	1	14:32	14:37	14:26	6	10	1	0	1	0.1	1	22
111	7/9/98	M	B	14:26	U	DN	1	14:33	14:26	14:26	7	10	0	7	7	0.7	1	22
112	7/13/98	F	B	14:26	U	DN	1	14:26	14:26	14:26	0	10	0	0	0	0	1	22
113	6/23/98	F	W	14:43	U	DN	1	14:46	14:47	14:37	9	10	3	0	3	0.3	1	22
114	7/9/98	M	W	14:36	U	R	1	14:37	14:37	14:37	0	10	1	0	1	0.1	1	22
115	7/13/98	M	W	14:33	U	R	1	14:41	14:37	14:37	4	10	4	4	8	0.8	1	22
116	7/15/98	M	W	14:30	U	DN	1	14:42	14:37	14:37	5	10	7	5	12	1.2	1	22
117	6/23/98	M	B	14:47	U	DN	1	14:54	14:47	14:47	7	10	0	7	7	0.7	1	22
118	6/23/98	M	B	14:47	U	DN	1	14:54	14:47	14:47	7	10	0	7	7	0.7	1	22
119	6/23/98	M	B	14:47	U	DN	1	14:54	14:47	14:47	7	10	0	7	7	0.7	1	22
120	6/23/98	M	W	14:49	U	DN	1	14:54	14:57	14:47	7	10	5	0	5	0.5	1	22

Non-Transfer Passengers Waiting Time Data (cont.)

O.N	DATE	SEX	E.C.	RAT	A.M.	ADW	BLN	BDT	EDT	SDT	SRI	BLH	W.B.	W.A.	WAIT	WTHR	LOC	D.T.
121	6/23/98	M	B	14:50	U	T	1	14:54	14:57	14:47	7	10	4	0	4	0.4	1	22
122	6/23/98	F	O	14:54	U	U	1	14:54	14:57	14:47	7	10	0	0	0	0	1	22
123	6/23/98	F	O	14:54	U	U	1	14:54	14:57	14:47	7	10	0	0	0	0	1	22
124	6/23/98	F	O	14:54	U	U	1	14:54	14:57	14:47	7	10	0	0	0	0	1	22
125	7/9/98	M	B	14:40	U	T	1	14:57	14:47	14:47	10	10	7	10	17	1.7	1	22
126	7/9/98	M	B	14:42	U	R	1	14:57	14:47	14:47	10	10	5	10	15	1.5	1	22
127	7/9/98	F	W	14:44	U	DN	1	14:57	14:47	14:47	10	10	3	10	13	1.3	1	22
128	7/9/98	F	B	14:46	U	DN	1	14:57	14:47	14:47	10	10	1	10	11	1.1	1	22
129	7/9/98	M	W	14:47	U	R	1	14:57	14:47	14:47	10	10	0	10	10	1	1	22
130	7/9/98	M	W	14:50	U	DN	1	14:57	14:57	14:47	10	10	7	0	7	0.7	1	22
131	7/9/98	F	W	14:53	U	T	1	14:57	14:57	14:47	10	10	4	0	4	0.4	1	22
132	6/23/98	F	H	14:58	U	DN	1	15:02	15:07	14:57	5	10	4	0	4	0.4	1	22
133	7/13/98	M	W	14:57	U	DN	1	15:05	14:57	14:57	8	10	0	8	8	0.8	1	22
134	7/9/98	M	W	15:00	U	T	1	15:10	15:07	15:07	3	10	7	3	10	1	1	22
135	7/9/98	F	B	15:06	U	R	1	15:10	15:07	15:07	3	10	1	3	4	0.4	1	22
136	7/9/98	F	B	15:23	U	T	1	15:23	15:27	15:17	6	10	0	0	0	0	1	22
137	7/13/98	M	H	15:24	U	DN	1	15:25	15:27	15:17	8	10	1	0	1	0.1	1	22
138	7/15/98	F	B	15:14	U	DN	1	15:23	15:17	15:17	6	10	3	6	9	0.9	1	22
139	7/15/98	F	H	15:15	U	DN	1	15:23	15:17	15:17	6	10	2	6	8	0.8	1	22
140	7/15/98	M	B	15:15	U	T	1	15:23	15:17	15:17	6	10	2	6	8	0.8	1	22
141	7/13/98	M	W	15:26	U	DN	1	15:27	15:27	15:27	0	10	1	0	1	0.1	1	22
142	7/15/98	M	H	15:25	U	T	1	15:27	15:27	15:27	0	10	2	0	2	0.2	1	22
143	7/15/98	M	H	15:25	U	T	1	15:27	15:27	15:27	0	10	2	0	2	0.2	1	22
144	7/15/98	M	B	15:25	U	R	1	15:27	15:27	15:27	0	10	2	0	2	0.2	1	22
145	7/15/98	M	B	15:25	U	R	1	15:27	15:27	15:27	0	10	2	0	2	0.2	1	22
146	7/15/98	M	B	15:26	U	DN	1	15:27	15:27	15:27	0	10	1	0	1	0.1	1	22
147	7/15/98	M	B	15:26	U	DN	1	15:27	15:27	15:27	0	10	1	0	1	0.1	1	22
148	7/15/98	M	W	15:26	U	DN	1	15:27	15:27	15:27	0	10	1	0	1	0.1	1	22
149	7/15/98	F	H	15:29	U	T	1	15:36	15:37	15:37	-1	10	7	0	7	0.7	1	22
150	7/7/98	M	B	15:45	U	DN	1	15:46	15:48	15:48	-2	10	1	0	1	0.1	1	22



Non-Transfer Passengers Waiting Time Data (cont.)

O.N	DATE	SEX	E.C.	RAT	A.M.	ADW	BLN	BDT	EDT	SDT	SRI	BLH	W.B.	W.A.	WAIT	WTHR	LOC	D.T.
151	7/13/98	M	H	16:11	U	DN	1	16:22	16:18	16:18	4	10	7	4	11	1.1	1	21
152	7/15/98	F	H	16:13	U	DN	1	16:20	16:18	16:18	2	10	5	2	7	0.7	1	21
153	7/7/98	M	H	16:19	U	DN	1	16:27	16:28	16:28	-1	10	8	0	8	0.8	1	21
154	7/13/98	F	H	16:23	U	T	1	16:37	16:28	16:28	9	10	5	9	14	1.4	1	21
155	7/13/98	F	B	16:29	U	S	1	16:37	16:38	16:28	9	10	8	0	8	0.8	1	21
156	7/13/98	F	W	16:35	U	DN	1	16:37	16:38	16:28	9	10	2	0	2	0.2	1	21
157	7/13/98	F	H	16:36	U	DN	1	16:37	16:38	16:28	9	10	1	0	1	0.1	1	21
158	7/15/98	F	A	16:24	U	DN	1	16:35	16:28	16:28	7	10	4	7	11	1.1	1	21
159	7/15/98	M	W	16:39	U	R	1	16:40	16:48	16:38	2	10	1	0	1	0.1	1	21
160	7/7/98	F	W	16:30	U	T	1	16:49	16:38	16:48	1	10	8	11	19	1.9	1	21
161	7/7/98	M	W	16:40	U	S	1	16:49	16:48	16:48	1	10	8	1	9	0.9	1	21
162	7/7/98	F	A	16:40	U	DN	1	16:49	16:48	16:48	1	10	8	1	9	0.9	1	21
163	7/7/98	M	B	16:41	U	DN	1	16:49	16:48	16:48	1	10	7	1	8	0.8	1	21
164	7/13/98	M	H	16:43	U	DN	1	16:48	16:48	16:48	0	10	5	0	5	0.5	1	21
165	7/13/98	M	B	16:45	U	DN	1	16:48	16:48	16:48	0	10	3	0	3	0.3	1	21
166	7/15/98	M	W	16:45	U	DN	1	16:47	16:48	16:48	-1	10	2	0	2	0.2	1	21
167	7/7/98	F	W	16:54	U	DN	1	16:56	16:58	16:58	-2	10	2	0	2	0.2	1	21
168	7/13/98	F	W	17:01	U	DN	1	17:02	17:08	16:58	4	10	1	0	1	0.1	1	21
169	7/7/98	M	W	17:11	U	S	1	17:24	17:18	17:18	6	10	7	6	13	1.3	1	21
170	7/7/98	M	W	17:15	U	DN	1	17:24	17:18	17:18	6	10	3	6	9	0.9	1	21
171	7/7/98	M	W	17:17	U	T	1	17:24	17:18	17:18	6	10	1	6	7	0.7	1	21
172	7/7/98	F	W	17:18	U	DN	1	17:24	17:18	17:18	6	10	0	6	6	0.6	1	21
173	7/7/98	M	W	17:22	U	DN	1	17:24	17:28	17:18	6	10	2	0	2	0.2	1	21
174	7/13/98	M	B	17:24	U	DN	1	17:25	17:28	17:18	7	10	1	0	1	0.1	1	21
175	7/15/98	M	A	17:09	U	DN	1	17:24	17:18	17:18	6	10	9	6	15	1.5	1	21
176	7/15/98	M	W	17:19	U	DN	1	17:24	17:28	17:18	6	10	5	0	5	0.5	1	21
177	7/7/98	F	H	17:28	U	DN	1	17:29	17:28	17:28	1	10	0	1	1	0.1	1	21
178	7/22/98	M	H	7:12	W	DN	3	7:17	7:15	7:15	2	15	3	2	5	0.3333	1	11
179	7/27/98	M	B	7:13	W	DN	3	7:15	7:15	7:15	0	15	2	0	2	0.1333	1	11
180	7/20/98	F	B	7:22	W	DN	3	7:32	7:30	7:30	2	15	8	2	10	0.6667	1	11

Non-Transfer Passengers Waiting Time Data (cont.)

O.N	DATE	SEX	E.C.	RAT	A.M.	ADW	BLN	BDT	EDT	SDT	SRI	BLH	W.B.	W.A.	WAIT	WTHR	LOC	D.T.
181	7/27/98	F	W	7:18	W	R	3	7:30	7:30	7:30	0	15	12	0	12	0.8	1	11
182	9/14/98	F	W	7:46	W	DN	3	7:51	7:55	7:40	11	15	5	0	5	0.3333	3	11
183	7/22/98	M	H	7:38	W	DN	3	7:45	7:45	7:45	0	15	7	0	7	0.4667	1	11
184	7/27/98	M	H	7:37	W	DN	3	7:45	7:45	7:45	0	15	8	0	8	0.5333	1	11
185	7/20/98	M	B	7:48	B	DN	3	8:02	8:00	8:00	2	15	12	2	14	0.9333	1	11
186	7/20/98	F	H	7:49	W	DN	3	8:02	8:00	8:00	2	15	11	2	13	0.8667	1	11
187	7/20/98	M	H	8:00	W	DN	3	8:02	8:00	8:00	2	15	0	2	2	0.1333	1	11
188	7/27/98	F	B	7:57	W	DN	3	8:02	8:00	8:00	2	15	3	2	5	0.3333	1	11
189	9/14/98	M	B	8:14	W	T	3	8:21	8:25	8:10	11	15	7	0	7	0.4667	3	11
190	9/14/98	F	W	8:17	W	DN	3	8:21	8:25	8:10	11	15	4	0	4	0.2667	3	11
191	7/20/98	M	B	8:11	W	DN	3	8:14	8:13	8:13	1	15	2	1	3	0.2	1	11
192	7/22/98	M	H	8:03	W	R	3	8:19	8:13	8:13	6	15	10	6	16	1.0667	1	11
193	7/22/98	F	B	8:14	W	DN	3	8:19	8:28	8:13	6	15	5	0	5	0.3333	1	11
194	7/22/98	F	W	8:14	W	DN	3	8:19	8:28	8:13	6	15	5	0	5	0.3333	1	11
195	9/14/98	F	W	8:27	W	DN	3	8:31	8:40	8:25	6	15	4	0	4	0.2667	3	12
196	7/20/98	F	H	8:32	W	DN	3	8:33	8:43	8:28	5	15	1	0	1	0.0667	1	12
197	7/27/98	M	W	8:20	W	DN	3	8:27	8:28	8:28	-1	15	7	0	7	0.4667	1	11
198	9/14/98	F	W	8:37	W	DN	3	8:51	8:40	8:40	11	15	3	11	14	0.9333	3	12
199	7/22/98	M	H	8:38	W	S	3	8:44	8:43	8:43	1	15	5	1	6	0.4	1	12
200	7/22/98	M	W	8:41	W	DN	3	8:44	8:43	8:43	1	15	2	1	3	0.2	1	12
201	7/27/98	F	O	8:29	W	DN	3	8:43	8:43	8:43	0	15	14	0	14	0.9333	1	12
202	7/20/98	F	B	8:40	R	DN	3	8:59	8:43	8:58	1	15	3	16	19	1.2667	1	12
203	7/20/98	F	B	8:49	W	DN	3	8:59	8:58	8:58	1	15	9	1	10	0.6667	1	12
204	7/22/98	F	H	9:05	W	DN	3	9:19	9:13	9:13	6	15	8	6	14	0.9333	1	12
205	7/22/98	M	H	9:16	W	DN	3	9:19	9:29	9:13	6	15	3	0	3	0.2	1	12
206	7/22/98	F	B	9:16	W	DN	3	9:19	9:29	9:13	6	15	3	0	3	0.2	1	12
207	7/22/98	M	W	9:17	U	DN	3	9:19	9:29	9:13	6	15	2	0	2	0.1333	1	12
208	7/22/98	M	W	9:31	W	DN	3	9:31	9:45	9:29	2	15	0	0	0	0	1	12
209	7/20/98	F	B	9:45	W	DN	3	9:54	9:45	9:45	9	15	0	9	9	0.6	1	12
210	7/22/98	F	W	9:40	W	DN	3	9:47	9:45	9:45	2	15	5	2	7	0.4667	1	12

Non-Transfer Passengers Waiting Time Data (cont.)

O.N	DATE	SEX	E.C.	RAT	A.M.	ADW	BLN	BDT	EDT	SDT	SRI	BLH	W.B.	W.A.	WAIT	WTHR	LOC	D.T.
211	7/27/98	F	W	9:36	W	DN	3	9:47	9:45	9:45	2	15	9	2	11	0.7333	1	12
212	7/27/98	F	H	9:36	W	T	3	9:47	9:45	9:45	2	15	9	2	11	0.7333	1	12
213	7/27/98	M	H	9:36	W	R	3	9:47	9:45	9:45	2	15	9	2	11	0.7333	1	12
214	7/27/98	M	B	9:44	W	DN	3	9:47	9:45	9:45	2	15	1	2	3	0.2	1	12
215	7/27/98	M	W	9:59	W	T	3	9:59	10:00	10:00	-1	15	0	0	0	0	1	12
216	7/27/98	M	W	9:59	W	T	3	9:59	10:00	10:00	-1	15	0	0	0	0	1	12
217	7/22/98	M	W	10:13	W	DN	3	10:15	10:15	10:15	0	15	2	0	2	0.1333	1	12
218	7/22/98	F	B	10:14	W	DN	3	10:15	10:15	10:15	0	15	1	0	1	0.0667	1	12
219	7/20/98	F	W	10:24	U	DN	3	10:34	10:30	10:30	4	15	6	4	10	0.6667	1	12
220	7/22/98	M	W	10:22	W	R	3	10:33	10:30	10:30	3	15	8	3	11	0.7333	1	12
221	7/27/98	M	W	10:25	W	R	3	10:32	10:30	10:30	2	15	5	2	7	0.4667	1	12
222	7/20/98	M	H	10:40	W	DN	3	10:47	10:45	10:45	2	15	5	2	7	0.4667	1	12
223	7/22/98	F	H	10:49	W	DN	3	10:51	11:00	10:45	6	15	2	0	2	0.1333	1	12
224	7/27/98	F	H	10:48	W	T	3	10:50	11:00	10:45	5	15	2	0	2	0.1333	1	12
225	7/27/98	M	H	10:48	W	T	3	10:50	11:00	10:45	5	15	2	0	2	0.1333	1	12
226	7/15/98	F	H	13:30	U	DN	3	13:31	13:44	13:29	2	15	1	0	1	0.0667	1	22
227	7/15/98	F	H	13:30	U	DN	3	13:31	13:44	13:29	2	15	1	0	1	0.0667	1	22
228	7/15/98	F	H	13:30	U	DN	3	13:31	13:44	13:29	2	15	1	0	1	0.0667	1	22
229	7/15/98	F	H	13:30	U	DN	3	13:31	13:44	13:29	2	15	1	0	1	0.0667	1	22
230	7/13/98	M	H	13:45	U	R	3	13:48	13:59	13:44	4	15	3	0	3	0.2	1	22
231	7/13/98	F	O	13:45	U	R	3	13:48	13:59	13:44	4	15	3	0	3	0.2	1	22
232	7/15/98	F	H	13:39	U	T	3	13:46	13:44	13:44	2	15	5	2	7	0.4667	1	22
233	7/15/98	F	H	13:39	U	T	3	13:46	13:44	13:44	2	15	5	2	7	0.4667	1	22
234	9/17/98	M	A	14:06	W	DN	3	14:06	14:10	13:55	11	15	0	0	0	0	3	22
235	7/9/98	M	W	13:57	U	DN	3	13:58	13:59	13:59	-1	15	1	0	1	0.0667	1	22
236	7/13/98	M	W	13:53	U	S	3	14:01	13:59	13:59	2	15	6	2	8	0.5333	1	22
237	7/15/98	M	W	13:55	U	T	3	14:00	13:59	13:59	1	15	4	1	5	0.3333	1	22
238	7/9/98	M	W	14:02	U	DN	3	14:20	14:14	14:14	6	15	12	6	18	1.2	1	22
239	7/9/98	F	W	14:12	U	DN	3	14:20	14:14	14:14	6	15	2	6	8	0.5333	1	22
240	7/9/98	M	B	14:18	U	R	3	14:20	14:29	14:14	6	15	2	0	2	0.1333	1	22

Non-Transfer Passengers Waiting Time Data (cont.)

O.N	DATE	SEX	E.C.	RAT	A.M.	ADW	BLN	BDT	EDT	SDT	SRI	BLH	W.B.	W.A.	WAIT	WTHR	LOC	D.T.
241	7/13/98	F	B	14:02	U	T	3	14:23	14:14	14:14	9	15	12	9	21	1.4	1	22
242	7/13/98	M	B	14:02	U	T	3	14:23	14:14	14:14	9	15	12	9	21	1.4	1	22
243	7/13/98	M	B	14:12	U	R	3	14:23	14:14	14:14	9	15	2	9	11	0.7333	1	22
244	7/13/98	F	H	14:14	U	DN	3	14:23	14:14	14:14	9	15	0	9	9	0.6	1	22
245	7/13/98	F	W	14:14	U	DN	3	14:23	14:14	14:14	9	15	0	9	9	0.6	1	22
246	7/13/98	M	H	14:22	U	DN	3	14:23	14:29	14:14	9	15	1	0	1	0.0667	1	22
247	7/15/98	F	H	14:05	U	DN	3	14:21	14:14	14:14	7	15	9	7	16	1.0667	1	22
248	7/15/98	F	W	14:18	U	DN	3	14:21	14:29	14:14	7	15	3	0	3	0.2	1	22
249	7/15/98	F	W	14:18	U	DN	3	14:21	14:29	14:14	7	15	3	0	3	0.2	1	22
250	7/15/98	F	H	14:18	U	DN	3	14:21	14:29	14:14	7	15	3	0	3	0.2	1	22
251	7/15/98	M	W	14:18	U	DN	3	14:21	14:29	14:14	7	15	3	0	3	0.2	1	22
252	7/13/98	M	H	14:28	U	DN	3	14:29	14:29	14:29	0	15	1	0	1	0.0667	1	22
253	9/3/98	M	W	14:26	W	DN	3	14:38	14:40	14:40	-2	15	12	0	12	0.8	3	22
254	9/3/98	M	W	14:37	W	DN	3	14:38	14:40	14:40	-2	15	1	0	1	0.0667	3	22
255	7/13/98	M	W	14:30	U	DN	3	14:50	14:44	14:44	6	15	14	6	20	1.3333	1	22
256	7/13/98	F	W	14:32	U	DN	3	14:50	14:44	14:44	6	15	12	6	18	1.2	1	22
257	7/13/98	F	W	14:32	U	T	3	14:50	14:44	14:44	6	15	12	6	18	1.2	1	22
258	7/13/98	M	W	14:32	U	T	3	14:50	14:44	14:44	6	15	12	6	18	1.2	1	22
259	7/13/98	M	H	14:40	U	S	3	14:50	14:44	14:44	6	15	4	6	10	0.6667	1	22
260	9/3/98	F	B	14:53	W	DN	3	15:00	14:55	14:55	5	15	5	2	7	0.4667	3	22
261	9/3/98	M	O	14:56	W	DN	3	15:00	15:10	14:55	5	15	4	0	4	0.2667	3	22
262	9/17/98	M	B	14:53	W	DN	3	14:54	14:55	14:55	-1	15	1	0	1	0.0667	3	22
263	7/9/98	F	B	14:43	U	DN	3	14:59	14:44	14:59	0	15	1	15	16	1.0667	1	22
264	7/9/98	F	B	14:48	U	S	3	14:59	14:59	14:59	0	15	11	0	11	0.7333	1	22
265	7/9/98	F	H	14:55	U	T	3	14:59	14:59	14:59	0	15	4	0	4	0.2667	1	22
266	7/13/98	F	H	14:59	U	DN	3	15:01	14:59	14:59	2	15	0	2	2	0.1333	1	22
267	7/13/98	M	W	15:00	U	T	3	15:01	15:13	14:59	2	15	1	0	1	0.0667	1	22
268	7/13/98	M	W	15:00	U	T	3	15:01	15:13	14:59	2	15	1	0	1	0.0667	1	22
269	9/17/98	M	B	15:10	W	DN	3	15:21	15:10	15:10	11	15	0	11	11	0.7333	3	22
270	9/17/98	M	W	15:21	W	DN	3	15:21	15:25	15:10	11	15	0	0	0	0	3	22

88

Non-Transfer Passengers Waiting Time Data (cont.)

O.N	DATE	SEX	E.C.	RAT	A.M.	ADW	BLN	BDT	EDT	SDT	SRI	BLH	W.B.	W.A.	WAIT	WTHR	LOC	D.T.
271	9/17/98	M	H	15:21	W	DN	3	15:21	15:25	15:10	11	15	0	0	0	0	3	22
272	10/9/98	M	H	15:08	W	DN	3	15:12	15:10	15:10	2	15	2	2	4	0.2667	3	22
273	10/9/98	F	H	15:11	W	DN	3	15:12	15:25	15:10	2	15	1	0	1	0.0667	3	22
274	7/9/98	F	B	15:08	U	DN	3	15:16	15:13	15:13	3	15	5	3	8	0.5333	1	22
275	7/9/98	M	W	15:09	U	DN	3	15:16	15:13	15:13	3	15	4	3	7	0.4667	1	22
276	7/13/98	M	B	15:15	U	DN	3	15:16	15:27	15:13	3	15	1	0	1	0.0667	1	22
277	9/3/98	M	W	15:11	W	DN	3	15:21	15:25	15:25	-4	15	10	0	10	0.6667	3	22
278	9/3/98	M	H	15:13	W	DN	3	15:21	15:25	15:25	-4	15	8	0	8	0.5333	3	22
279	9/25/98	F	W	15:17	W	DN	3	15:29	15:25	15:25	4	15	8	4	12	0.8	3	22
280	9/25/98	M	W	15:25	W	DN	3	15:29	15:25	15:25	4	15	0	4	4	0.2667	3	22
281	10/9/98	M	W	15:15	W	DN	3	15:22	15:25	15:25	-3	15	7	0	7	0.4667	3	22
282	10/9/98	F	W	15:18	W	DN	3	15:22	15:25	15:25	-3	15	4	0	4	0.2667	3	22
283	10/9/98	M	H	15:22	W	DN	3	15:22	15:25	15:25	-3	15	0	0	0	0	3	22
284	10/9/98	M	H	15:22	W	DN	3	15:22	15:25	15:25	-3	15	0	0	0	0	3	22
285	10/9/98	F	H	15:22	W	DN	3	15:22	15:25	15:25	-3	15	0	0	0	0	3	22
286	7/13/98	M	H	15:26	U	DN	3	15:30	15:27	15:27	3	15	1	3	4	0.2667	1	22
287	9/3/98	M	B	15:33	W	DN	3	15:42	15:40	15:40	2	15	7	2	9	0.6	3	22
288	9/25/98	M	H	15:35	W	DN	3	15:37	15:40	15:40	-3	15	2	0	2	0.1333	3	22
289	7/15/98	M	H	15:39	U	DN	3	15:41	15:42	15:42	-1	15	2	0	2	0.1333	1	22
290	7/15/98	M	B	15:39	U	DN	3	15:41	15:42	15:42	-1	15	2	0	2	0.1333	1	22
291	9/3/98	M	W	15:46	W	DN	3	15:57	15:55	15:55	2	15	9	2	11	0.7333	3	22
292	9/17/98	M	B	15:42	W	DN	3	15:57	15:55	15:55	2	15	13	2	15	1	3	22
293	9/17/98	M	W	15:47	W	DN	3	15:57	15:55	15:55	2	15	8	2	10	0.6667	3	22
294	9/17/98	M	W	15:57	W	DN	3	15:57	16:10	15:55	2	15	0	0	0	0	3	22
295	9/17/98	M	H	15:57	W	DN	3	15:57	16:10	15:55	2	15	0	0	0	0	3	22
296	9/25/98	F	W	15:45	W	DN	3	16:02	15:55	15:55	7	15	10	7	17	1.1333	3	21
297	9/25/98	F	W	15:45	W	DN	3	16:02	15:55	15:55	7	15	10	7	17	1.1333	3	21
298	9/25/98	M	H	15:53	W	DN	3	16:02	15:55	15:55	7	15	2	7	9	0.6	3	21
299	9/25/98	M	H	15:59	W	DN	3	16:02	16:10	15:55	7	15	3	0	3	0.2	3	21
300	10/9/98	M	H	15:43	W	S	3	15:50	15:55	15:55	-5	15	7	0	7	0.4667	3	22

Non-Transfer Passengers Waiting Time Data (cont.)

O.N	DATE	SEX	E.C.	RAT	A.M.	ADW	BLN	BDT	EDT	SDT	SRI	BLH	W.B.	W.A.	WAIT	WTHR	LOC	D.T.
301	10/9/98	M	B	15:46	W	T	3	15:50	15:55	15:55	-5	15	4	0	4	0.2667	3	22
302	10/9/98	M	B	15:46	W	T	3	15:50	15:55	15:55	-5	15	4	0	4	0.2667	3	22
303	7/13/98	M	H	15:54	U	DN	3	15:55	15:57	15:57	-2	15	1	0	1	0.0667	1	22
304	10/9/98	M	W	16:05	W	T	3	16:10	16:10	16:10	0	15	5	0	5	0.3333	3	21
305	10/15/98	F	W	16:07	W	DN	3	16:14	16:10	16:10	4	15	3	4	7	0.4667	3	21
306	7/7/98	M	W	16:10	U	R	3	16:12	16:12	16:12	0	15	2	0	2	0.1333	1	21
307	7/7/98	M	W	16:11	U	DN	3	16:12	16:12	16:12	0	15	1	0	1	0.0667	1	21
308	7/13/98	F	H	16:05	U	R	3	16:10	16:12	16:12	-2	15	5	0	5	0.3333	1	21
309	7/13/98	M	B	16:07	U	DN	3	16:10	16:12	16:12	-2	15	3	0	3	0.2	1	21
310	7/15/98	M	W	16:11	U	DN	3	16:15	16:12	16:12	3	15	1	3	4	0.2667	1	21
311	10/9/98	M	W	16:20	W	T	3	16:20	16:25	16:25	-5	15	0	0	0	0	3	21
312	10/9/98	F	W	16:20	W	T	3	16:20	16:25	16:25	-5	15	0	0	0	0	3	21
313	7/7/98	M	W	16:15	U	DN	3	16:25	16:27	16:27	-2	15	10	0	10	0.6667	1	21
314	7/13/98	M	W	16:30	U	DN	3	16:31	16:42	16:27	4	15	1	0	1	0.0667	1	21
315	7/15/98	F	H	16:17	U	DN	3	16:27	16:27	16:27	0	15	10	0	10	0.6667	1	21
316	7/15/98	M	W	16:17	U	DN	3	16:27	16:27	16:27	0	15	10	0	10	0.6667	1	21
317	7/15/98	F	W	16:25	U	R	3	16:27	16:27	16:27	0	15	2	0	2	0.1333	1	21
318	9/25/98	M	H	16:25	W	DN	3	16:49	16:25	16:40	9	15	0	24	24	1.6	3	21
319	9/25/98	M	H	16:25	W	DN	3	16:49	16:25	16:40	9	15	0	24	24	1.6	3	21
320	10/9/98	M	H	16:42	W	DN	3	16:42	16:55	16:40	2	15	0	0	0	0	3	21
321	7/7/98	F	H	16:36	U	T	3	16:45	16:42	16:42	3	15	6	3	9	0.6	1	21
322	7/7/98	F	H	16:36	U	T	3	16:45	16:42	16:42	3	15	6	3	9	0.6	1	21
323	7/7/98	F	H	16:40	U	T	3	16:45	16:42	16:42	3	15	2	3	5	0.3333	1	21
324	7/7/98	M	H	16:40	U	T	3	16:45	16:42	16:42	3	15	2	3	5	0.3333	1	21
325	7/13/98	M	H	16:36	U	DN	3	16:43	16:42	16:42	1	15	6	1	7	0.4667	1	21
326	7/15/98	M	W	16:32	U	R	3	16:46	16:42	16:42	4	15	10	4	14	0.9333	1	21
327	7/15/98	M	B	16:33	U	S	3	16:46	16:42	16:42	4	15	9	4	13	0.8667	1	21
328	7/15/98	M	W	16:37	U	DN	3	16:46	16:42	16:42	4	15	5	4	9	0.6	1	21
329	7/15/98	F	H	16:43	U	DN	3	16:46	16:57	16:42	4	15	3	0	3	0.2	1	21
330	7/7/98	M	W	16:53	U	DN	3	16:55	16:57	16:57	-2	15	2	0	2	0.1333	1	21

RS

Non-Transfer Passengers Waiting Time Data (cont.)

O.N	DATE	SEX	E.C.	RAT	A.M.	ADW	BLN	BDT	EDT	SDT	SRI	BLH	W.B.	W.A.	WAIT	WTHR	LOC	D.T.
331	7/15/98	M	H	16:49	U	T	3	16:57	16:57	16:57	0	15	8	0	8	0.5333	1	21
332	7/15/98	F	H	16:49	U	T	3	16:57	16:57	16:57	0	15	8	0	8	0.5333	1	21
333	7/15/98	M	H	16:51	U	DN	3	16:57	16:57	16:57	0	15	6	0	6	0.4	1	21
334	7/7/98	F	H	16:59	U	DN	3	17:13	17:12	17:12	1	15	13	1	14	0.9333	1	21
335	7/7/98	M	B	17:10	U	DN	3	17:13	17:12	17:12	1	15	2	1	3	0.2	1	21
336	7/13/98	M	W	17:07	U	DN	3	17:21	17:12	17:12	9	15	5	9	14	0.9333	1	21
337	7/13/98	M	B	17:10	U	DN	3	17:21	17:12	17:12	9	15	2	9	11	0.7333	1	21
338	7/13/98	F	H	17:15	U	DN	3	17:21	17:28	17:12	9	15	6	0	6	0.4	1	21
339	7/15/98	M	W	17:05	U	DN	3	17:14	17:12	17:12	2	15	7	2	9	0.6	1	21
340	7/15/98	F	W	17:05	U	DN	3	17:14	17:12	17:12	2	15	7	2	9	0.6	1	21
341	7/15/98	M	H	17:05	U	DN	3	17:14	17:12	17:12	2	15	7	2	9	0.6	1	21
342	7/20/98	M	W	7:25	W	S	4	7:37	7:33	7:33	4	17	8	4	12	0.7059	1	11
343	7/27/98	M	B	8:12	W	S	4	8:19	8:24	8:07	12	17	7	0	7	0.4118	1	11
344	7/27/98	F	W	8:39	W	DN	4	8:43	8:41	8:41	2	17	2	2	4	0.2353	1	12
345	7/20/98	F	H	8:48	W	DN	4	9:15	8:58	8:58	17	17	10	17	27	1.5882	1	12
346	7/27/98	F	B	8:56	W	R	4	9:06	8:58	8:58	8	17	2	8	10	0.5882	1	12
347	7/27/98	F	B	8:56	W	R	4	9:06	8:58	8:58	8	17	2	8	10	0.5882	1	12
348	7/22/98	M	H	9:32	W	DN	4	9:38	9:38	9:38	0	23	6	0	6	0.2609	1	12
349	7/27/98	M	B	9:47	U	DN	4	9:48	10:08	9:38	10	30	1	0	1	0.0333	1	12
350	7/27/98	F	B	10:20	W	DN	4	10:41	10:38	10:38	3	30	18	3	21	0.7	1	12
351	7/13/98	M	H	14:02	U	DN	4	14:11	14:08	14:08	3	30	6	3	9	0.3	1	22
352	7/13/98	M	H	14:02	U	T	4	14:11	14:08	14:08	3	30	6	3	9	0.3	1	22
353	7/13/98	F	H	14:13	U	DN	4	14:31	14:38	14:38	-7	30	18	0	18	0.6	1	22
354	7/13/98	F	B	14:28	U	DN	4	14:31	14:38	14:38	-7	30	3	0	3	0.1	1	22
355	6/23/98	F	H	14:50	U	DN	4	14:58	14:55	14:55	3	17	5	3	8	0.4706	1	22
356	7/15/98	M	H	14:45	U	DN	4	14:59	14:55	14:55	4	17	10	4	14	0.8235	1	22
357	7/15/98	M	W	15:05	U	T	4	15:15	15:10	15:10	5	15	5	5	10	0.6667	1	22
358	7/15/98	F	B	15:05	U	T	4	15:15	15:10	15:10	5	15	5	5	10	0.6667	1	22
359	7/15/98	F	H	15:06	U	R	4	15:15	15:10	15:10	5	15	4	5	9	0.6	1	22
360	7/15/98	F	H	15:07	U	DN	4	15:15	15:10	15:10	5	15	3	5	8	0.5333	1	22

Non-Transfer Passengers Waiting Time Data (cont.)

O.N	DATE	SEX	E.C.	RAT	A.M.	ADW	BLN	BDT	EDT	SDT	SRI	BLH	W.B.	W.A.	WAIT	WTHR	LOC	D.T.
361	7/13/98	M	H	15:24	U	DN	4	15:26	15:26	15:26	0	16	2	0	2	0.125	1	22
362	7/13/98	M	H	15:35	U	DN	4	15:44	15:42	15:42	2	16	7	2	9	0.5625	1	22
363	7/15/98	F	W	15:30	U	DN	4	15:42	15:42	15:42	0	16	12	0	12	0.75	1	22
364	7/7/98	M	W	16:20	U	DN	4	16:24	16:25	16:25	-1	16	4	0	4	0.25	1	21
365	7/7/98	M	H	16:32	U	DN	4	16:40	16:41	16:41	-1	16	8	0	8	0.5	1	21
366	7/7/98	F	H	16:56	U	DN	4	16:58	16:57	16:57	1	16	1	1	2	0.125	1	21
367	7/13/98	M	H	16:45	U	DN	4	16:59	16:57	16:57	2	16	12	2	14	0.875	1	21
368	7/13/98	M	H	16:45	U	DN	4	16:59	16:57	16:57	2	16	12	2	14	0.875	1	21
369	7/27/98	F	W	7:05	W	T	5	7:10	7:23	7:04	6	19	5	0	5	0.2632	1	11
370	7/22/98	M	B	7:20	W	DN	5	7:25	7:23	7:23	2	19	3	2	5	0.2632	1	11
371	7/31/98	M	W	7:14	W	DN	5	7:29	7:28	7:28	1	20	14	1	15	0.75	3	11
372	7/31/98	M	W	7:20	W	DN	5	7:29	7:28	7:28	1	20	8	1	9	0.45	3	11
373	7/31/98	F	B	7:25	W	DN	5	7:29	7:28	7:28	1	20	3	1	4	0.2	3	11
374	7/31/98	F	B	7:25	W	DN	5	7:29	7:28	7:28	1	20	3	1	4	0.2	3	11
375	7/31/98	M	W	7:28	W	T	5	7:29	7:28	7:28	1	20	0	1	1	0.05	3	11
376	7/31/98	M	B	7:50	W	DN	5	7:51	8:08	7:48	3	20	1	0	1	0.05	3	11
377	7/31/98	M	W	7:51	W	DN	5	7:51	8:08	7:48	3	20	0	0	0	0	3	11
378	8/3/98	F	B	7:51	R	DN	5	7:51	8:08	7:48	3	20	0	0	0	0	3	11
379	7/22/98	M	B	7:53	B	DN	5	7:55	7:54	7:54	1	31	1	1	2	0.0645	1	11
380	7/29/98	M	W	8:01	W	DN	5	8:14	8:08	8:08	6	20	7	6	13	0.65	3	11
381	7/31/98	M	W	7:57	W	T,R	5	8:14	8:08	8:08	6	20	11	6	17	0.85	3	11
382	7/31/98	M	H	7:57	W	T	5	8:14	8:08	8:08	6	20	11	6	17	0.85	3	11
383	7/31/98	M	B	8:03	W	T	5	8:14	8:08	8:08	6	20	5	6	11	0.55	3	11
384	9/14/98	M	H	8:01	W	S	5	8:03	8:08	8:08	-5	20	2	0	2	0.1	3	11
385	7/27/98	F	W	8:09	W	T	5	8:30	8:25	8:25	5	31	16	5	21	0.6774	1	11
386	7/27/98	F	W	8:09	W	T	5	8:30	8:25	8:25	5	31	16	5	21	0.6774	1	11
387	7/29/98	F	W	8:38	W	DN	5	8:42	8:39	8:39	3	31	1	3	4	0.129	3	12
388	8/3/98	M	W	8:18	W	R	5	8:43	8:39	8:39	4	31	21	4	25	0.8065	3	12
389	8/3/98	F	W	8:34	W	DN	5	8:43	8:39	8:39	4	31	5	4	9	0.2903	3	12
390	8/3/98	M	W	8:40	R	DN	5	8:43	9:10	8:39	4	31	3	0	3	0.0968	3	12



Non-Transfer Passengers Waiting Time Data (cont.)

O.N	DATE	SEX	E.C.	RAT	A.M.	ADW	BLN	BDT	EDT	SDT	SRI	BLH	W.B.	W.A.	WAIT	WTHR	LOC	D.T.
391	9/14/98	M	W	8:38	W	DN	5	8:38	8:39	8:39	-1	31	0	0	0	0	3	12
392	9/14/98	M	W	8:38	W	DN	5	8:38	8:39	8:39	-1	31	0	0	0	0	3	12
393	7/27/98	M	B	8:46	W	DN	5	8:58	8:56	8:56	2	31	10	2	12	0.3871	1	12
394	7/31/98	F	O	9:11	W	DN	5	9:12	9:41	9:10	2	31	1	0	1	0.0323	3	12
395	7/31/98	F	W	9:11	W	DN	5	9:12	9:41	9:10	2	31	1	0	1	0.0323	3	12
396	9/14/98	F	W	8:41	W	DN	5	9:06	9:10	9:10	-4	31	25	0	25	0.8065	3	12
397	7/20/98	F	H	9:33	W	DN	5	9:35	9:34	9:34	1	18	1	1	2	0.1111	1	12
398	7/29/98	M	W	9:50	W	DN	5	10:14	10:12	10:12	2	31	22	2	24	0.7742	3	12
399	7/29/98	F	W	9:59	W	DN	5	10:14	10:12	10:12	2	31	13	2	15	0.4839	3	12
400	7/31/98	M	W	9:53	W	DN	5	10:12	10:12	10:12	0	31	19	0	19	0.6129	3	12
401	8/3/98	M	W	9:56	W	DN	5	10:15	10:12	10:12	3	31	16	3	19	0.6129	3	12
402	7/20/98	F	W	10:34	W	DN	5	10:35	11:00	10:29	6	31	1	0	1	0.0323	1	12
403	8/3/98	M	H	10:41	W	DN	5	10:46	10:43	10:43	3	31	2	3	5	0.1613	3	12
404	8/3/98	M	H	10:41	W	T	5	10:46	10:43	10:43	3	31	2	3	5	0.1613	3	12
405	8/3/98	M	H	10:41	W	DN	5	10:46	10:43	10:43	3	31	2	3	5	0.1613	3	12
406	8/3/98	M	W	10:44	W	DN	5	10:46	11:14	10:43	3	31	2	0	2	0.0645	3	12
407	7/9/98	F	W	13:39	U	DN	5	13:41	14:06	13:35	6	31	2	0	2	0.0645	1	22
408	7/15/98	F	B	13:32	U	T	5	13:37	13:35	13:35	2	31	3	2	5	0.1613	1	22
409	7/15/98	F	B	13:36	U	DN	5	13:37	14:06	13:35	2	31	1	0	1	0.0323	1	22
410	7/9/98	F	W	13:45	U	T	5	14:10	14:06	14:06	4	31	21	4	25	0.8065	1	22
411	7/9/98	M	B	14:07	U	DN	5	14:10	14:37	14:06	4	31	3	0	3	0.0968	1	22
412	7/9/98	M	H	14:09	U	DN	5	14:10	14:37	14:06	4	31	1	0	1	0.0323	1	22
413	7/13/98	M	H	14:01	U	DN	5	14:09	14:06	14:06	3	31	5	3	8	0.2581	1	22
414	9/3/98	M	H	14:42	W	DN	5	14:44	14:51	14:20	24	31	2	0	2	0.0645	3	22
415	9/3/98	F	H	14:42	W	DN	5	14:44	14:51	14:20	24	31	2	0	2	0.0645	3	22
416	7/9/98	M	H	14:26	U	R	5	14:39	14:37	14:37	2	31	11	2	13	0.4194	1	22
417	7/9/98	M	W	14:38	U	DN	5	14:39	15:08	14:37	2	31	1	0	1	0.0323	1	22
418	7/9/98	F	W	14:38	U	DN	5	14:39	15:08	14:37	2	31	1	0	1	0.0323	1	22
419	7/9/98	F	W	14:38	U	DN	5	14:39	15:08	14:37	2	31	1	0	1	0.0323	1	22
420	7/13/98	F	W	14:29	U	T	5	14:38	14:37	14:37	1	31	8	1	9	0.2903	1	22

Non-Transfer Passengers Waiting Time Data (cont.)

O.N	DATE	SEX	E.C.	RAT	A.M.	ADW	BLN	BDT	EDT	SDT	SRI	BLH	W.B.	W.A.	WAIT	WTHR	LOC	D.T.
421	7/13/98	F	W	14:29	U	T	5	14:38	14:37	14:37	1	31	8	1	9	0.2903	1	22
422	7/13/98	M	H	14:29	U	R	5	14:38	14:37	14:37	1	31	8	1	9	0.2903	1	22
423	9/17/98	M	H	14:41	W	DN	5	14:53	14:51	14:51	2	31	10	2	12	0.3871	3	22
424	9/17/98	F	W	14:46	W	DN	5	14:53	14:51	14:51	2	31	5	2	7	0.2258	3	22
425	10/9/98	F	W	14:49	W	DN	5	14:50	14:51	14:51	-1	31	1	0	1	0.0323	3	22
426	10/9/98	F	B	14:49	W	DN	5	14:50	14:51	14:51	-1	31	1	0	1	0.0323	3	22
427	10/15/98	M	B	14:36	R	DN	5	14:52	14:51	14:51	1	31	15	1	16	0.5161	3	22
428	10/15/98	M	H	14:37	W	DN	5	14:52	14:51	14:51	1	31	14	1	15	0.4839	3	22
429	10/15/98	M	W	14:39	B	DN	5	14:52	14:51	14:51	1	31	12	1	13	0.4194	3	22
430	7/9/98	M	H	14:59	U	S	5	15:11	15:08	15:08	3	31	9	3	12	0.3871	1	22
431	7/15/98	F	H	15:10	U	T	5	15:10	15:32	15:08	2	31	0	0	0	0	1	22
432	7/15/98	M	H	15:10	U	T	5	15:10	15:32	15:08	2	31	0	0	0	0	1	22
433	9/3/98	F	W	15:16	W	S	5	15:20	15:19	15:19	1	28	3	1	4	0.1429	3	22
434	9/17/98	M	B	15:13	W	DN	5	15:22	15:19	15:19	3	28	6	3	9	0.3214	3	22
435	9/25/98	M	W	15:27	W	DN	5	15:28	15:37	15:19	9	28	1	0	1	0.0357	3	22
436	7/13/98	M	W	15:36	U	DN	5	15:37	16:05	15:32	5	33	1	0	1	0.0303	1	22
437	10/9/98	M	W	15:35	W	DN	5	15:35	15:37	15:37	-2	18	0	0	0	0	3	22
438	9/3/98	M	W	15:48	W	DN	5	15:51	15:50	15:50	1	13	2	1	3	0.2308	3	22
439	9/3/98	F	W	15:49	W	DN	5	15:51	15:50	15:50	1	13	1	1	2	0.1538	3	22
440	9/17/98	M	W	15:41	W	S	5	15:50	15:50	15:50	0	13	9	0	9	0.6923	3	22
441	9/17/98	M	B	15:45	W	DN	5	15:50	15:50	15:50	0	13	5	0	5	0.3846	3	22
442	9/25/98	M	W	15:48	W	DN	5	15:56	15:50	15:50	6	13	2	6	8	0.6154	3	22
443	10/9/98	M	H	15:42	W	DN	5	16:03	15:50	15:50	13	13	8	13	21	1.6154	3	21
444	10/9/98	M	H	15:43	W	DN	5	16:03	15:50	15:50	13	13	7	13	20	1.5385	3	21
445	10/9/98	M	B	15:57	W	DN	5	16:03	16:07	15:50	13	13	6	0	6	0.4615	3	21
446	10/15/98	F	H	15:41	W	T	5	15:51	15:50	15:50	1	13	9	1	10	0.7692	3	22
447	10/15/98	F	H	15:41	W	T	5	15:51	15:50	15:50	1	13	9	1	10	0.7692	3	22
448	10/15/98	M	B	15:48	W	T	5	15:51	15:50	15:50	1	13	2	1	3	0.2308	3	22
449	10/15/98	M	B	15:48	W	T	5	15:51	15:50	15:50	1	13	2	1	3	0.2308	3	22
450	7/7/98	F	H	15:51	U	DN	5	16:06	16:05	16:05	1	33	14	1	15	0.4545	1	21

Non-Transfer Passengers Waiting Time Data (cont.)

O.N	DATE	SEX	E.C.	RAT	A.M.	ADW	BLN	BDT	EDT	SDT	SRI	BLH	W.B.	W.A.	WAIT	WTHR	LOC	D.T.
451	7/13/98	M	B	15:58	U	DN	5	16:04	16:05	16:05	-1	33	6	0	6	0.1818	1	21
452	7/13/98	F	H	16:03	U	DN	5	16:04	16:05	16:05	-1	33	1	0	1	0.0303	1	21
453	7/13/98	F	W	16:03	U	DN	5	16:04	16:05	16:05	-1	33	1	0	1	0.0303	1	21
454	9/25/98	M	W	15:59	W	DN	5	16:01	16:07	16:07	-6	17	2	0	2	0.1176	3	21
455	10/9/98	M	H	16:13	W	DN	5	16:14	16:24	16:07	7	17	1	0	1	0.0588	3	21
456	10/9/98	M	H	16:13	W	DN	5	16:14	16:24	16:07	7	17	1	0	1	0.0588	3	21
457	9/25/98	M	W	16:08	W	DN	5	16:16	16:24	16:24	-8	17	8	0	8	0.4706	3	21
458	7/13/98	M	W	16:50	U	DN	5	16:59	17:08	16:50	9	18	9	0	9	0.5	1	21
459	7/13/98	M	W	16:57	U	R	5	16:59	17:08	16:50	9	18	2	0	2	0.1111	1	21
460	9/25/98	M	W	16:44	W	DN	5	16:48	16:55	16:55	-7	31	4	0	4	0.129	3	21
461	9/25/98	M	H	16:47	W	DN	5	16:48	16:55	16:55	-7	31	1	0	1	0.0323	3	21
462	9/25/98	M	H	16:47	W	DN	5	16:48	16:55	16:55	-7	31	1	0	1	0.0323	3	21
463	10/9/98	M	H	16:49	W	DN	5	16:51	16:55	16:55	-4	31	2	0	2	0.0645	3	21
464	10/9/98	F	H	16:50	R	DN	5	16:51	16:55	16:55	-4	31	1	0	1	0.0323	3	21
465	7/13/98	M	W	17:07	U	DN	5	17:09	17:08	17:08	1	18	1	1	2	0.1111	1	21
466	7/7/98	F	W	16:59	U	DN	5	17:25	17:08	17:23	2	15	9	17	26	1.7333	1	21
467	7/27/98	M	B	9:27	W	S	6	9:59	9:50	9:50	0	35	23	9	32	0.9143	1	12
468	7/13/98	M	B	13:57	U	R	6	14:31	14:30	14:30	1	35	33	1	34	0.9714	1	22
469	7/13/98	M	B	14:52	U	DN	6	15:30	15:05	15:25	5	35	13	25	38	1.0857	1	22
470	10/22/98	F	W	14:10	W	R	7	14:18	14:19	14:19	-1	15	8	0	8	0.5333	6	22
471	10/22/98	M	A	14:15	W	DN	7	14:18	14:19	14:19	-1	15	3	0	3	0.2	6	22
472	10/22/98	M	H	14:22	W	DN	7	14:33	14:34	14:34	-1	15	11	0	11	0.7333	6	22
473	10/22/98	M	W	14:25	W	DN	7	14:33	14:34	14:34	-1	15	8	0	8	0.5333	6	22
474	10/22/98	M	W	14:25	W	DN	7	14:33	14:34	14:34	-1	15	8	0	8	0.5333	6	22
475	10/22/98	F	A	14:27	W	R	7	14:33	14:34	14:34	-1	15	6	0	6	0.4	6	22
476	10/22/98	F	W	14:32	W	DN	7	14:33	14:34	14:34	-1	15	6	0	1	0.0667	6	22
477	10/22/98	M	B	14:37	W	DN	7	14:45	14:47	14:47	-2	15	8	0	8	0.5333	6	22
478	10/22/98	F	A	14:42	W	DN	7	14:45	14:47	14:47	-2	15	3	0	3	0.2	6	22
479	10/22/98	F	H	14:44	W	DN	7	14:45	14:47	14:47	-2	15	1	0	1	0.0667	6	22
480	10/22/98	F	A	14:50	W	T	7	15:05	15:02	15:02	3	15	12	3	15	1	6	22

Non-Transfer Passengers Waiting Time Data (cont.)

O.N	DATE	SEX	E.C.	RAT	A.M.	ADW	BLN	BDT	EDT	SDT	SRI	BLH	W.B.	W.A.	WAIT	WTHR	LOC	D.T.
481	10/22/98	F	A	14:50	W	T	7	15:05	15:02	15:02	3	15	12	3	15	1	6	22
482	10/22/98	F	W	15:00	W	DN	7	15:05	15:02	15:02	3	15	2	3	5	0.3333	6	22
483	10/22/98	F	B	15:09	W	R	7	15:17	15:17	15:17	0	15	8	0	8	0.5333	6	22
484	10/22/98	M	W	15:15	W	DN	7	15:17	15:17	15:17	0	15	2	0	2	0.1333	6	22
485	10/22/98	F	W	15:28	W	DN	7	15:37	15:32	15:32	5	15	4	5	9	0.6	6	22
486	10/22/98	M	A	15:31	W	DN	7	15:37	15:32	15:32	5	15	1	5	6	0.4	6	22
487	10/22/98	F	W	15:31	W	DN	7	15:37	15:32	15:32	5	15	1	5	6	0.4	6	22
488	10/22/98	F	W	15:32	W	DN	7	15:37	15:32	15:32	5	15	0	5	5	0.3333	6	22
489	10/22/98	F	H	15:34	W	DN	7	15:37	15:47	15:32	5	15	3	0	3	0.2	6	22
490	10/22/98	M	W	15:35	W	DN	7	15:37	15:47	15:32	5	15	2	0	2	0.1333	6	22
491	10/22/98	M	W	15:37	W	DN	7	15:37	15:47	15:32	5	15	0	0	0	0	6	22
492	10/22/98	F	W	15:44	W	DN	7	15:45	15:47	15:47	-2	15	1	0	1	0.0667	6	22
493	10/22/98	M	W	15:58	W	S	7	16:01	16:02	16:02	-1	15	3	0	3	0.2	6	21
494	10/22/98	F	H	16:02	W	R	7	16:19	16:02	16:17	2	15	15	2	17	1.1333	6	21
495	10/22/98	M	W	16:19	W	DN	7	16:19	16:32	16:17	2	15	0	0	0	0	6	21
496	10/22/98	M	W	16:19	W	DN	7	16:19	16:32	16:17	2	15	0	0	0	0	6	21
497	10/23/98	F	W	14:58	W	DN	7	15:11	15:02	15:02	9	15	4	9	13	0.8667	6	22
498	10/23/98	M	A	15:01	W	T	7	15:11	15:02	15:02	9	15	1	9	10	0.6667	6	22
499	10/23/98	M	W	15:01	W	T	7	15:11	15:02	15:02	9	15	1	9	10	0.6667	6	22
500	10/23/98	F	B	15:22	W	T	7	15:35	15:32	15:32	3	15	10	3	13	0.8667	6	22
501	10/23/98	M	W	15:31	W	DN	7	15:35	15:32	15:32	3	15	1	3	4	0.2667	6	22
502	10/23/98	M	H	15:35	W	DN	7	15:35	15:32	15:32	3	15	0	0	0	0	6	22
503	10/23/98	F	W	15:40	W	R	7	15:51	15:47	15:47	4	15	7	4	11	0.7333	6	22
504	10/23/98	M	A	15:45	W	DN	7	15:51	15:47	15:47	4	15	2	4	6	0.4	6	22
505	10/23/98	M	W	15:50	W	T	7	15:51	16:02	15:47	4	15	1	0	1	0.0667	6	22
506	10/23/98	M	W	15:50	W	T	7	15:51	16:02	15:47	4	15	1	0	1	0.0667	6	22
507	10/23/98	F	W	15:54	U	R	7	16:00	16:02	16:02	-2	15	6	0	6	0.4	6	21
508	10/23/98	F	W	15:58	W	DN	7	16:00	16:02	16:02	-2	15	2	0	2	0.1333	6	21
509	10/23/98	M	W	16:06	W	DN	7	16:15	16:17	16:17	-2	15	9	0	9	0.6	6	21
510	10/23/98	M	W	16:06	W	DN	7	16:15	16:17	16:17	-2	15	9	0	9	0.6	6	21

Non-Transfer Passengers Waiting Time Data (cont.)

O.N	DATE	SEX	E.C.	RAT	A.M.	ADW	BLN	BDT	EDT	SDT	SRI	BLH	W.B.	W.A.	WAIT	WTHR	LOC	D.T.
511	10/23/98	M	W	16:09	W	DN	7	16:15	16:17	16:17	-2	15	6	0	6	0.4	6	21
512	10/23/98	M	A	16:20	W	DN	7	16:30	16:32	16:32	-2	15	10	0	10	0.6667	6	21
513	10/23/98	M	O	16:21	W	DN	7	16:30	16:32	16:32	-2	15	9	0	9	0.6	6	21
514	10/23/98	F	A	16:25	W	DN	7	16:30	16:32	16:32	-2	15	5	0	5	0.3333	6	21
515	10/23/98	M	O	16:26	W	DN	7	16:30	16:32	16:32	-2	15	4	0	4	0.2667	6	21
516	10/23/98	F	W	16:30	W	DN	7	16:30	16:32	16:32	-2	15	0	0	0	0	6	21
517	11/5/98	M	W	14:00	B	DN	7	14:07	14:04	14:04	3	15	4	3	7	0.4667	6	22
518	11/5/98	M	O	14:12	W	DN	7	14:21	14:19	14:19	2	15	7	2	9	0.6	6	22
519	11/5/98	M	A	14:14	W	DN	7	14:21	14:19	14:19	2	15	5	2	7	0.4667	6	22
520	11/5/98	M	W	14:16	W	DN	7	14:21	14:19	14:19	2	15	3	2	5	0.3333	6	22
521	11/5/98	F	A	14:16	W	DN	7	14:21	14:19	14:19	2	15	3	2	5	0.3333	6	22
522	11/5/98	M	W	14:17	W	R	7	14:21	14:19	14:19	2	15	2	2	4	0.2667	6	22
523	11/5/98	F	A	14:18	W	DN	7	14:21	14:19	14:19	2	15	1	2	3	0.2	6	22
524	11/5/98	M	W	14:19	W	DN	7	14:21	14:19	14:19	2	15	0	2	2	0.1333	6	22
525	11/5/98	M	B	14:23	W	DN	7	14:38	14:34	14:34	4	15	11	4	15	1	6	22
526	11/5/98	F	O	14:25	W	T	7	14:38	14:34	14:34	4	15	9	4	13	0.8667	6	22
527	11/5/98	F	O	14:25	W	T	7	14:38	14:34	14:34	4	15	9	4	13	0.8667	6	22
528	11/5/98	F	W	14:35	W	DN	7	14:38	14:47	14:34	4	15	3	0	3	0.2	6	22
529	11/5/98	M	W	14:44	W	R	7	15:01	14:47	15:02	-1	15	3	14	17	1.1333	6	22
530	11/5/98	M	H	14:44	W	DN	7	15:01	14:47	15:02	-1	15	3	14	17	1.1333	6	22
531	11/5/98	M	W	14:48	W	DN	7	15:01	15:02	15:02	-1	15	13	0	13	0.8667	6	22
532	11/5/98	M	W	14:54	W	R	7	15:01	15:02	15:02	-1	15	7	0	7	0.4667	6	22
533	11/5/98	M	B	14:57	W	DN	7	15:01	15:02	15:02	-1	15	4	0	4	0.2667	6	22
534	11/5/98	M	W	15:01	W	DN	7	15:01	15:02	15:02	-1	15	0	0	0	0	6	22
535	11/5/98	F	A	15:06	W	DN	7	15:17	15:17	15:17	0	15	11	0	11	0.7333	6	22
536	11/5/98	M	W	15:07	W	DN	7	15:17	15:17	15:17	0	15	10	0	10	0.6667	6	22
537	11/5/98	M	W	15:12	W	DN	7	15:17	15:17	15:17	0	15	5	0	5	0.3333	6	22
538	11/5/98	M	W	15:13	T	DN	7	15:17	15:17	15:17	0	15	4	0	4	0.2667	6	22
539	11/5/98	F	W	15:17	W	DN	7	15:17	15:17	15:17	0	15	0	0	0	0	6	22
540	11/5/98	F	W	15:17	W	DN	7	15:17	15:17	15:17	0	15	0	0	0	0	6	22

Non-Transfer Passengers Waiting Time Data (cont.)

O.N	DATE	SEX	E.C.	RAT	A.M.	ADW	BLN	BDT	EDT	SDT	SRI	BLH	W.B.	W.A.	WAIT	WTHR	LOC	D.T.
541	11/5/98	M	W	15:28	W	DN	7	15:38	15:32	15:32	6	15	4	6	10	0.6667	6	22
542	11/5/98	F	A	15:32	W	DN	7	15:38	15:32	15:32	6	15	0	6	6	0.4	6	22
543	11/5/98	M	W	15:43	W	DN	7	15:47	15:47	15:47	0	15	4	0	4	0.2667	6	22
544	11/5/98	M	B	15:46	W	DN	7	15:47	15:47	15:47	0	15	1	0	1	0.0667	6	22
545	11/5/98	F	W	15:50	W	DN	7	16:02	16:02	16:02	0	15	12	0	12	0.8	6	21
546	11/5/98	M	W	15:59	W	DN	7	16:02	16:02	16:02	0	15	3	0	3	0.2	6	21
547	7/31/98	M	W	7:27	W	DN	8	7:28	7:27	7:27	1	16	0	1	1	0.0625	3	11
548	8/3/98	M	W	7:14	W	R	8	7:32	7:27	7:27	5	16	13	5	18	1.125	3	11
549	8/3/98	M	H	7:28	W	DN	8	7:32	7:43	7:27	5	16	4	0	4	0.25	3	11
550	7/29/98	M	B	7:50	W	DN	8	7:52	7:59	7:43	9	16	2	0	2	0.125	3	11
551	7/31/98	M	H	7:41	W	S	8	7:49	7:43	7:43	6	16	2	6	8	0.5	3	11
552	7/31/98	M	H	7:44	W	DN	8	7:49	7:59	7:43	6	16	5	0	5	0.3125	3	11
553	8/3/98	M	W	7:37	W	DN	8	7:46	7:43	7:43	3	16	6	3	9	0.5625	3	11
554	9/14/98	M	H	7:39	W	DN	8	7:40	7:43	7:43	-3	16	1	0	1	0.0625	3	11
555	7/29/98	M	W	8:11	W	DN	8	8:17	8:15	8:15	2	16	4	2	6	0.375	3	11
556	7/29/98	M	H	8:16	W	DN	8	8:17	8:31	8:15	2	16	1	0	1	0.0625	3	11
557	8/3/98	M	H	8:04	W	DN	8	8:15	8:15	8:15	0	16	11	0	11	0.6875	3	11
558	8/3/98	M	W	8:06	W	DN	8	8:15	8:15	8:15	0	16	9	0	9	0.5625	3	11
559	8/3/98	M	B	8:06	W	DN	8	8:15	8:15	8:15	0	16	9	0	9	0.5625	3	11
560	8/13/98	M	W	8:16	W	DN	8	8:17	8:31	8:15	2	16	1	0	1	0.0625	3	11
561	7/31/98	M	A	8:22	W	DN	8	8:31	8:31	8:31	0	16	9	0	9	0.5625	3	12
562	7/31/98	M	W	8:23	W	DN	8	8:31	8:31	8:31	0	16	8	0	8	0.5	3	12
563	8/3/98	M	W	8:19	W	DN	8	8:33	8:31	8:31	2	16	12	2	14	0.875	3	12
564	8/3/98	M	A	8:23	W	DN	8	8:33	8:31	8:31	2	16	8	2	10	0.625	3	12
565	7/29/98	F	W	8:36	W	DN	8	8:47	8:47	8:47	0	16	11	0	11	0.6875	3	12
566	8/3/98	M	W	8:40	W	DN	8	8:47	8:47	8:47	0	16	7	0	7	0.4375	3	12
567	8/13/98	F	W	8:40	W	DN	8	8:52	8:47	8:47	5	16	7	5	12	0.75	3	12
568	8/13/98	F	H	8:48	W	DN	8	8:52	9:03	8:47	5	16	4	0	4	0.25	3	12
569	7/29/98	F	W	8:56	W	S	8	9:04	9:03	9:03	1	16	7	1	8	0.5	3	12
570	8/3/98	M	W	8:54	W	DN	8	9:06	9:03	9:03	3	16	9	3	12	0.75	3	12

Non-Transfer Passengers Waiting Time Data (cont.)

O.N	DATE	SEX	E.C.	RAT	A.M.	ADW	BLN	BDT	EDT	SDT	SRI	BLH	W.B.	W.A.	WAIT	WTHR	LOC	D.T.
571	8/3/98	F	W	8:57	W	R	8	9:06	9:03	9:03	3	16	6	3	9	0.5625	3	12
572	8/3/98	F	B	8:58	W	DN	8	9:06	9:03	9:03	3	16	5	3	8	0.5	3	12
573	8/3/98	M	H	8:58	W	S	8	9:06	9:03	9:03	3	16	5	3	8	0.5	3	12
574	9/14/98	M	W	8:59	W	DN	8	9:13	9:03	9:03	10	16	4	10	14	0.875	3	12
575	7/29/98	M	H	9:07	W	DN	8	9:21	9:19	9:19	2	16	12	2	14	0.875	3	12
576	7/31/98	M	H	9:09	W	DN	8	9:21	9:19	9:19	2	16	10	2	12	0.75	3	12
577	7/31/98	F	H	9:18	W	DN	8	9:21	9:19	9:19	2	16	1	2	3	0.1875	3	12
578	8/13/98	F	W	9:17	W	DN	8	9:20	9:19	9:19	1	16	2	1	3	0.1875	3	12
579	7/31/98	M	H	9:26	W	DN	8	9:41	9:35	9:35	6	16	9	6	15	0.9375	3	12
580	8/3/98	M	H	9:39	W	DN	8	9:42	9:51	9:35	7	16	3	0	3	0.1875	3	12
581	8/13/98	F	B	9:39	W	T	8	9:40	9:51	9:35	5	16	1	0	1	0.0625	3	12
582	8/13/98	F	O	9:47	W	T	8	9:56	9:51	9:51	5	16	4	5	9	0.5625	3	12
583	8/13/98	M	O	9:47	W	T	8	9:56	9:51	9:51	5	16	4	5	9	0.5625	3	12
584	8/3/98	M	B	10:02	W	DN	8	10:15	10:11	10:11	4	20	9	4	13	0.65	3	12
585	7/29/98	F	B	10:20	W	DN	8	10:32	10:31	10:31	1	20	11	1	12	0.6	3	12
586	7/29/98	M	W	10:25	W	DN	8	10:32	10:31	10:31	1	20	6	1	7	0.35	3	12
587	8/3/98	M	H	10:24	W	DN	8	10:35	10:31	10:31	4	20	7	4	11	0.55	3	12
588	8/13/98	M	B	10:20	W	DN	8	10:32	10:31	10:31	1	20	11	1	12	0.6	3	12
589	8/13/98	F	W	10:21	W	DN	8	10:32	10:31	10:31	1	20	10	1	11	0.55	3	12
590	7/31/98	M	H	10:42	W	T	8	10:50	10:51	10:51	-1	20	8	0	8	0.4	3	12
591	7/31/98	M	B	10:50	W	DN	8	10:50	10:51	10:51	-1	20	0	0	0	0	3	12
592	8/3/98	M	B	10:51	W	T	8	10:53	10:51	10:51	2	20	0	2	2	0.1	3	12
593	8/3/98	F	B	10:52	W	DN	8	10:53	11:11	10:51	2	20	1	0	1	0.05	3	12
594	8/3/98	F	H	10:52	W	T	8	10:53	11:11	10:51	2	20	1	0	1	0.05	3	12
595	7/31/98	M	B	10:55	W	R	8	11:10	11:11	11:11	-1	20	15	0	15	0.75	3	12
596	7/17/98	F	H	13:46	W	DN	8	13:54	13:51	13:51	3	20	5	3	8	0.4	4	22
597	7/17/98	M	W	13:57	R	DN	8	14:10	14:09	14:09	1	18	12	1	13	0.7222	4	22
598	7/17/98	F	H	14:03	W	DN	8	14:10	14:09	14:09	1	18	6	1	7	0.3889	4	22
599	7/17/98	F	H	14:07	W	DN	8	14:10	14:09	14:09	1	18	2	1	3	0.1667	4	22
600	10/29/98	M	B	14:00	W	S	8	14:12	14:09	14:09	3	18	9	3	12	0.6667	4	22

Non-Transfer Passengers Waiting Time Data (cont.)

O.N	DATE	SEX	E.C.	RAT	A.M.	ADW	BLN	BDT	EDT	SDT	SRI	BLH	W.B.	W.A.	WAIT	WTHR	LOC	D.T.
601	10/29/98	F	H	14:05	W	DN	8	14:12	14:09	14:09	3	18	4	3	7	0.3889	4	22
602	10/29/98	M	B	14:07	W	DN	8	14:12	14:09	14:09	3	18	2	3	5	0.2778	4	22
603	10/29/98	M	H	14:11	W	DN	8	14:12	14:26	14:09	3	18	1	0	1	0.0556	4	22
604	9/17/98	F	H	14:16	W	T	8	14:22	14:23	14:23	-1	17	6	0	6	0.3529	3	22
605	9/17/98	F	H	14:16	W	T	8	14:22	14:23	14:23	-1	17	6	0	6	0.3529	3	22
606	9/17/98	F	H	14:16	W	T	8	14:22	14:23	14:23	-1	17	6	0	6	0.3529	3	22
607	9/17/98	F	H	14:16	W	T	8	14:22	14:23	14:23	-1	17	6	0	6	0.3529	3	22
608	10/15/98	M	H	14:14	W	DN	8	14:27	14:23	14:23	4	17	9	4	13	0.7647	3	22
609	10/29/98	F	H	14:13	W	DN	8	14:26	14:26	14:26	0	17	13	0	13	0.7647	4	22
610	10/29/98	F	H	14:20	W	DN	8	14:26	14:26	14:26	0	17	6	0	6	0.3529	4	22
611	10/29/98	F	H	14:20	W	DN	8	14:26	14:26	14:26	0	17	6	0	6	0.3529	4	22
612	10/29/98	M	H	14:25	W	DN	8	14:26	14:26	14:26	0	17	1	0	1	0.0588	4	22
613	10/29/98	F	H	14:25	W	DN	8	14:26	14:26	14:26	0	17	1	0	1	0.0588	4	22
614	12/4/98	M	H	14:25	W	DN	8	14:27	14:26	14:26	1	17	1	1	2	0.1176	4	22
615	9/3/98	M	W	14:33	W	DN	8	14:45	14:33	14:33	12	10	0	12	12	1.2	3	22
616	12/4/98	F	W	14:37	W	DN	8	14:45	14:43	14:43	2	17	6	2	8	0.4706	4	22
617	12/4/98	F	B	14:37	W	DN	8	14:45	14:43	14:43	2	17	6	2	8	0.4706	4	22
618	12/4/98	F	B	14:45	W	DN	8	14:45	14:54	14:43	2	17	0	0	0	0	4	22
619	12/4/98	F	B	14:45	W	DN	8	14:45	14:54	14:43	2	17	0	0	0	0	4	22
620	12/16/98	M	H	14:32	W	T	8	14:42	14:43	14:43	-1	17	10	0	10	0.5882	4	22
621	12/16/98	F	H	14:32	W	T	8	14:42	14:43	14:43	-1	17	10	0	10	0.5882	4	22
622	12/16/98	F	B	14:37	W	DN	8	14:42	14:43	14:43	-1	17	5	0	5	0.2941	4	22
623	9/3/98	F	H	14:47	W	DN	8	14:58	14:50	14:50	8	17	3	8	11	0.6471	3	22
624	9/3/98	F	B	14:55	W	DN	8	14:58	15:07	14:50	8	17	3	0	3	0.1765	3	22
625	9/3/98	F	B	14:58	W	DN	8	14:58	15:07	14:50	8	17	0	0	0	0	3	22
626	9/17/98	M	H	14:53	W	T	8	15:01	15:07	14:50	11	17	8	0	8	0.4706	3	22
627	9/17/98	F	H	14:58	W	T	8	15:01	15:07	14:50	-3	17	3	0	3	0.1765	3	22
628	10/9/98	F	B	14:52	W	DN	8	14:57	15:07	14:50	7	17	5	0	5	0.2941	3	22
629	10/15/98	M	B	14:43	W	DN	8	14:52	14:50	14:50	2	17	7	2	9	0.5294	3	22
630	10/15/98	M	B	14:48	W	DN	8	14:52	14:50	14:50	2	17	2	2	4	0.2353	3	22



Non-Transfer Passengers Waiting Time Data (cont.)

O.N	DATE	SEX	E.C.	RAT	A.M.	ADW	BLN	BDT	EDT	SDT	SRI	BLH	W.B.	W.A.	WAIT	WTHR	LOC	D.T.
631	7/17/98	F	B	14:42	W	DN	8	14:59	14:43	14:54	5	11	1	16	17	1.5455	4	22
632	7/17/98	F	B	14:42	W	DN	8	14:59	14:43	14:54	5	11	1	16	17	1.5455	4	22
633	7/17/98	M	W	14:45	W	R	8	14:59	14:54	14:54	5	11	9	5	14	1.2727	4	22
634	7/17/98	F	H	14:51	W	DN	8	14:59	14:54	14:54	5	11	3	5	8	0.7273	4	22
635	7/17/98	F	H	14:51	W	DN	8	14:59	14:54	14:54	5	11	3	5	8	0.7273	4	22
636	7/17/98	M	W	14:54	W	T	8	14:59	14:54	14:54	5	11	0	5	5	0.4545	4	22
637	7/17/98	M	W	14:54	W	T	8	14:59	14:54	14:54	5	11	0	5	5	0.4545	4	22
638	7/17/98	F	B	14:55	W	DN	8	14:59	15:11	14:54	5	11	4	0	4	0.3636	4	22
639	7/17/98	F	B	14:55	W	DN	8	14:59	15:11	14:54	5	11	4	0	4	0.3636	4	22
640	11/19/98	M	W	14:48	W	DN	8	14:54	14:54	14:54	0	11	6	0	6	0.5455	4	22
641	11/19/98	F	W	14:48	W	DN	8	14:54	14:54	14:54	0	11	6	0	6	0.5455	4	22
642	12/4/98	M	H	14:47	W	DN	8	15:01	14:54	14:54	7	11	7	7	14	1.2727	4	22
643	12/4/98	F	B	14:51	W	DN	8	15:01	14:54	14:54	7	11	3	7	10	0.9091	4	22
644	12/16/98	F	B	14:46	W	DN	8	14:54	14:54	14:54	0	11	8	0	8	0.7273	4	22
645	12/16/98	F	B	14:46	W	DN	8	14:54	14:54	14:54	0	11	8	0	8	0.7273	4	22
646	12/16/98	F	H	14:47	W		8	14:54	14:54	14:54	0	11	7	0	7	0.6364	4	22
647	12/16/98	F	H	14:53	W		8	14:54	14:54	14:54	0	11	1	0	1	0.0909	4	22
648	12/16/98	F	B	14:53	W		8	14:54	14:54	14:54	0	11	1	0	1	0.0909	4	22
649	9/3/98	M	O	15:04	W	DN	8	15:19	15:07	15:07	12	17	3	12	15	0.8824	3	22
650	9/3/98	F	H	15:19	W	DN	8	15:19	15:24	15:07	12	17	0	0	0	0	3	22
651	9/3/98	F	H	15:19	W	DN	8	15:19	15:24	15:07	12	17	0	0	0	0	3	22
652	9/25/98	F	H	15:15	W	DN	8	15:18	15:24	15:07	11	17	3	0	3	0.1765	3	22
653	10/9/98	M	B	15:11	W	DN	8	15:18	15:24	15:07	11	17	7	0	7	0.4118	3	22
654	10/9/98	M	H	15:12	W	T	8	15:18	15:24	15:07	11	17	6	0	6	0.3529	3	22
655	10/9/98	F	H	15:12	W	T	8	15:18	15:24	15:07	11	17	6	0	6	0.3529	3	22
656	10/9/98	M	H	15:13	W	T	8	15:18	15:24	15:07	11	17	5	0	5	0.2941	3	22
657	10/9/98	F	H	15:13	W	T	8	15:18	15:24	15:07	11	17	5	0	5	0.2941	3	22
658	10/9/98	F	B	15:18	W	DN	8	15:18	15:24	15:07	11	17	0	0	0	0	3	22
659	7/17/98	F	B	15:12	W	DN	8	15:13	15:28	15:11	2	17	1	0	1	0.0588	4	22
660	10/29/98	F	B	14:58	W	DN	8	15:12	15:11	15:11	1	17	13	1	14	0.8235	4	22

Non-Transfer Passengers Waiting Time Data (cont.)

O.N	DATE	SEX	E.C.	RAT	A.M.	ADW	BLN	BDT	EDT	SDT	SRI	BLH	W.B.	W.A.	WAIT	WTHR	LOC	D.T.
661	10/29/98	F	B	14:58	W	DN	8	15:12	15:11	15:11	1	17	13	1	14	0.8235	4	22
662	10/29/98	F	H	14:58	W	DN	8	15:12	15:11	15:11	1	17	13	1	14	0.8235	4	22
663	10/29/98	F	H	14:59	W	DN	8	15:12	15:11	15:11	1	17	12	1	13	0.7647	4	22
664	10/29/98	F	H	15:04	W	DN	8	15:12	15:11	15:11	1	17	7	1	8	0.4706	4	22
665	10/29/98	F	H	15:06	W	DN	8	15:12	15:11	15:11	1	17	5	1	6	0.3529	4	22
666	10/29/98	F	B	15:10	W	DN	8	15:12	15:11	15:11	1	17	1	1	2	0.1176	4	22
667	11/19/98	M	H	15:04	W	DN	8	15:11	15:11	15:11	0	17	7	0	7	0.4118	4	22
668	11/19/98	F	B	15:06	W	DN	8	15:11	15:11	15:11	0	17	7	0	7	0.4118	4	22
669	12/4/98	F	W	15:03	W	T	8	15:11	15:11	15:11	0	17	8	0	8	0.4706	4	22
670	12/4/98	F	B	15:03	W	T	8	15:11	15:11	15:11	0	17	8	0	8	0.4706	4	22
671	12/4/98	F	W	15:09	W	T	8	15:11	15:11	15:11	0	17	2	0	2	0.1176	4	22
672	12/4/98	F	H	15:11	W	DN	8	15:11	15:11	15:11	0	17	0	0	0	0	4	22
673	12/16/98	M	B	14:59	W	DN	8	15:12	15:11	15:11	1	17	12	1	13	0.7647	4	22
674	12/16/98	F	B	14:59	W	DN	8	15:12	15:11	15:11	1	17	12	1	13	0.7647	4	22
675	12/16/98	F	B	15:04	U	DN	8	15:12	15:11	15:11	1	17	7	1	8	0.4706	4	22
676	9/17/98	M	W	15:14	W	DN	8	15:21	15:24	15:24	-3	17	7	0	7	0.4118	3	22
677	9/17/98	M	A	15:15	W	DN	8	15:21	15:24	15:24	-3	17	6	0	6	0.3529	3	22
678	10/9/98	M	B	15:38	W	T	8	15:40	15:48	15:24	16	17	2	0	2	0.1176	3	22
679	11/19/98	F	H	15:13	W	DN	8	15:32	15:28	15:28	4	17	15	4	19	1.1176	4	22
680	11/19/98	M	B	15:18	W	DN	8	15:32	15:28	15:28	4	17	10	4	14	0.8235	4	22
681	11/19/98	M	B	15:25	W	DN	8	15:32	15:28	15:28	4	17	3	4	7	0.4118	4	22
682	11/19/98	M	B	15:28	W	DN	8	15:32	15:28	15:28	4	17	0	4	4	0.2353	4	22
683	11/19/98	F	B	15:28	W	DN	8	15:32	15:28	15:28	4	17	0	4	4	0.2353	4	22
684	11/19/98	F	H	15:28	W	DN	8	15:32	15:28	15:28	4	17	0	4	4	0.2353	4	22
685	11/19/98	F	B	15:30	W	DN	8	15:32	15:45	15:28	4	17	2	0	2	0.1176	4	22
686	12/4/98	M	B	15:22	W	DN	8	15:40	15:28	15:28	12	17	6	12	18	1.0588	4	22
687	12/4/98	M	H	15:24	W	DN	8	15:40	15:28	15:28	12	17	4	12	16	0.9412	4	22
688	12/4/98	F	H	15:34	W	T	8	15:40	15:45	15:28	12	17	6	0	6	0.3529	4	22
689	12/4/98	F	H	15:34	W	T	8	15:40	15:45	15:28	12	17	6	0	6	0.3529	4	22
690	12/4/98	F	H	15:34	W	T	8	15:40	15:45	15:28	12	17	6	0	6	0.3529	4	22

Non-Transfer Passengers Waiting Time Data (cont.)

O.N	DATE	SEX	E.C.	RAT	A.M.	ADW	BLN	BDT	EDT	SDT	SRI	BLH	W.B.	W.A.	WAIT	WTHR	LOC	D.T.
691	12/4/98	F	H	15:34	W	T	8	15:40	15:45	15:28	12	17	6	0	6	0.3529	4	22
692	12/16/98	F	H	15:15	W	DN	8	15:32	15:28	15:28	4	17	13	4	17	1	4	22
693	12/16/98	F	H	15:26	W	DN	8	15:32	15:28	15:28	4	17	2	4	6	0.3529	4	22
694	12/16/98	F	H	15:26	W	DN	8	15:32	15:28	15:28	4	17	2	4	6	0.3529	4	22
695	12/16/98	M	B	15:28	W	DN	8	15:32	15:28	15:28	4	17	0	4	4	0.2353	4	22
696	10/29/98	F	H	15:36	W	T	8	15:49	15:45	15:45	4	17	9	4	13	0.7647	4	22
697	10/29/98	F	H	15:36	W	T	8	15:49	15:45	15:45	4	17	9	4	13	0.7647	4	22
698	11/19/98	F	H	15:40	W	DN	8	15:45	15:45	15:45	0	17	5	0	5	0.2941	4	22
699	12/16/98	F	B	15:33	W	DN	8	15:45	15:45	15:45	0	17	12	0	12	0.7059	4	22
700	12/16/98	F	H	15:33	W	DN	8	15:45	15:45	15:45	0	17	12	0	12	0.7059	4	22
701	12/16/98	M	B	15:38	W	DN	8	15:45	15:45	15:45	0	17	7	0	7	0.4118	4	22
702	12/16/98	F	B	15:38	W	DN	8	15:45	15:45	15:45	0	17	7	0	7	0.4118	4	22
703	12/16/98	F	B	15:39	W	DN	8	15:45	15:45	15:45	0	17	6	0	6	0.3529	4	22
704	12/16/98	F	B	15:39	W	DN	8	15:45	15:45	15:45	0	17	6	0	6	0.3529	4	22
705	9/3/98	F	H	15:28	R	T	8	15:45	15:48	15:48	-3	24	17	0	17	0.7083	3	22
706	9/3/98	F	H	15:28	R	T	8	15:45	15:48	15:48	-3	24	17	0	17	0.7083	3	22
707	9/3/98	M	W	15:36	W	S	8	15:45	15:48	15:48	-3	24	9	0	9	0.375	3	22
708	9/3/98	F	B	15:36	W	DN	8	15:45	15:48	15:48	-3	24	9	0	9	0.375	3	22
709	9/3/98	F	H	15:45	W	DN	8	15:45	15:48	15:48	-3	24	0	0	0	0	3	22
710	9/17/98	M	B	15:26	W	DN	8	15:49	15:48	15:48	1	24	22	1	23	0.9583	3	22
711	9/17/98	M	B	15:43	B	DN	8	15:49	15:48	15:48	1	24	5	1	6	0.25	3	22
712	9/25/98	M	W	15:28	W	DN	8	15:43	15:48	15:48	-5	24	15	0	15	0.625	3	22
713	9/25/98	M	H	15:37	W	S	8	15:43	15:48	15:48	-5	24	6	0	6	0.25	3	22
714	9/25/98	M	B	15:58	W	DN	8	16:06	16:05	16:05	1	17	7	1	8	0.4706	3	21
715	9/25/98	F	B	15:58	W	DN	8	16:06	16:05	16:05	1	17	7	1	8	0.4706	3	21
716	11/19/98	M	B	16:04	W	T	8	16:06	16:06	16:06	0	12	2	0	2	0.1667	4	21
717	11/19/98	F	W	16:04	W	T	8	16:06	16:06	16:06	0	12	2	0	2	0.1667	4	21
718	11/19/98	F	W	16:04	W	DN	8	16:06	16:06	16:06	0	12	2	0	2	0.1667	4	21
719	12/4/98	M	B	16:02	W	T	8	16:07	16:06	16:06	1	12	4	1	5	0.4167	4	21
720	12/4/98	F	B	16:02	W	T	8	16:07	16:06	16:06	1	12	4	1	5	0.4167	4	21

Non-Transfer Passengers Waiting Time Data (cont.)

O.N	DATE	SEX	E.C.	RAT	A.M.	ADW	BLN	BDT	EDT	SDT	SRI	BLH	W.B.	W.A.	WAIT	WTHR	LOC	D.T.
721	12/4/98	F	H	16:05	W	DN	8	16:07	16:06	16:06	1	12	1	1	2	0.1667	4	21
722	12/4/98	F	H	16:05	W	DN	8	16:07	16:06	16:06	1	12	1	1	2	0.1667	4	21
723	12/4/98	F	B	16:05	W	DN	8	16:07	16:06	16:06	1	12	1	1	2	0.1667	4	21
724	12/4/98	F	B	16:05	W	DN	8	16:07	16:06	16:06	1	12	1	1	2	0.1667	4	21
725	12/4/98	F	B	16:05	W	DN	8	16:07	16:06	16:06	1	12	1	1	2	0.1667	4	21
726	12/4/98	F	B	16:05	W	DN	8	16:07	16:06	16:06	1	12	1	1	2	0.1667	4	21
727	12/4/98	F	B	16:07	W	DN	8	16:07	16:09	16:06	1	12	0	0	0	0	4	21
728	12/16/98	F	H	15:54	W	DN	8	16:06	16:06	16:06	0	12	12	0	12	1	4	21
729	12/16/98	F	H	16:01	W	DN	8	16:06	16:06	16:06	0	12	5	0	5	0.4167	4	21
730	12/16/98	F	H	16:01	W	DN	8	16:06	16:06	16:06	0	12	5	0	5	0.4167	4	21
731	12/16/98	M	H	16:03	W	DN	8	16:06	16:06	16:06	0	12	3	0	3	0.25	4	21
732	12/16/98	M	B	16:03	W	DN	8	16:06	16:06	16:06	0	12	3	0	3	0.25	4	21
733	12/16/98	F	B	16:04	W	DN	8	16:06	16:06	16:06	0	12	2	0	2	0.1667	4	21
734	7/17/98	M	H	15:55	W	DN	8	16:11	16:06	16:09	2	12	11	5	16	1.3333	4	21
735	7/17/98	F	H	15:56	W	DN	8	16:11	16:06	16:09	2	12	10	5	15	1.25	4	21
736	7/17/98	M	B	15:59	W	T	8	16:11	16:06	16:09	2	12	7	5	12	1	4	21
737	7/17/98	M	B	15:59	W	T	8	16:11	16:06	16:09	2	12	7	5	12	1	4	21
738	11/19/98	M	H	16:08	W	DN	8	16:09	16:09	16:09	0	12	1	0	1	0.0833	4	21
739	11/19/98	M	H	16:08	W	DN	8	16:09	16:09	16:09	0	12	1	0	1	0.0833	4	21
740	10/9/98	M	H	16:12	W	DN	8	16:15	16:22	16:22	-7	17	3	0	3	0.1765	3	21
741	7/17/98	F	B	16:12	W	T	8	16:30	16:26	16:26	4	17	14	4	18	1.0588	4	21
742	7/17/98	F	B	16:12	W	T	8	16:30	16:26	16:26	4	17	14	4	18	1.0588	4	21
743	7/17/98	F	B	16:24	W	DN	8	16:30	16:26	16:26	4	17	2	4	6	0.3529	4	21
744	11/19/98	F	H	16:17	W	DN	8	16:27	16:26	16:26	1	17	9	1	10	0.5882	4	21
745	11/19/98	F	H	16:17	W	DN	8	16:27	16:26	16:26	1	17	9	1	10	0.5882	4	21
746	11/19/98	M	W	16:22	W	S	8	16:27	16:26	16:26	1	17	4	1	5	0.2941	4	21
747	11/19/98	M	B	16:22	W	S	8	16:27	16:26	16:26	1	17	4	1	5	0.2941	4	21
748	11/19/98	F	H	16:25	W	DN	8	16:27	16:26	16:26	1	17	1	1	2	0.1176	4	21
749	12/16/98	F	B	16:07	W		8	16:27	16:09	16:26	1	17	2	18	20	1.1765	4	21
750	12/16/98	F	A	16:10	W	DN	8	16:27	16:26	16:26	1	17	16	1	17	1	4	21

Non-Transfer Passengers Waiting Time Data (cont.)

O.N	DATE	SEX	E.C.	RAT	A.M.	ADW	BLN	BDT	EDT	SDT	SRI	BLH	W.B.	W.A.	WAIT	WTHR	LOC	D.T.
751	12/16/98	M	W	16:24	W	S	8	16:27	16:26	16:26	1	17	2	1	3	0.1765	4	21
752	9/25/98	F	B	16:26	R	DN	8	16:33	16:39	16:39	-6	17	7	0	7	0.4118	3	21
753	9/25/98	F	B	16:32	W	DN	8	16:33	16:39	16:39	-6	17	1	0	1	0.0588	3	21
754	10/9/98	F	B	16:33	W	DN	8	16:34	16:39	16:39	-5	17	1	0	1	0.0588	3	21
755	7/17/98	M	A	16:30	W	DN	8	16:44	16:43	16:43	1	17	13	1	14	0.8235	4	21
756	7/17/98	F	B	16:40	R	DN	8	16:44	16:43	16:43	1	17	3	1	4	0.2353	4	21
757	9/25/98	F	W	16:44	W	DN	8	17:09	16:56	16:56	13	17	12	13	25	1.4706	3	21
758	9/25/98	F	W	16:44	DU	DN	8	17:09	16:56	16:56	13	17	12	13	25	1.4706	3	21
759	9/25/98	F	B	16:50	W	DN	8	17:09	16:56	16:56	13	17	6	13	19	1.1176	3	21
760	9/25/98	M	H	17:00	W	T	8	17:09	17:13	16:56	13	17	9	0	9	0.5294	3	21
761	9/25/98	M	H	17:00	W	T	8	17:09	17:13	16:56	13	17	9	0	9	0.5294	3	21
762	9/25/98	F	W	17:01	W	DN	8	17:09	17:13	16:56	13	17	8	0	8	0.4706	3	21
763	10/9/98	M	H	16:38	W	S	8	16:57	16:39	16:56	1	17	1	18	19	1.1176	3	21
764	10/9/98	M	H	16:41	W	T	8	16:57	16:56	16:56	1	17	15	1	16	0.9412	3	21
765	10/9/98	F	H	16:45	W	T	8	16:57	16:56	16:56	1	17	11	1	12	0.7059	3	21
766	10/9/98	F	H	16:45	W	T	8	16:57	16:56	16:56	1	17	11	1	12	0.7059	3	21
767	10/9/98	M	B	16:50	W	DN	8	16:57	16:56	16:56	1	17	6	1	7	0.4118	3	21
768	7/17/98	F	B	16:47	W	DN	8	17:00	17:00	17:00	0	17	13	0	13	0.7647	4	21
769	7/17/98	M	H	16:51	W	T	8	17:00	17:00	17:00	0	17	9	0	9	0.5294	4	21
770	7/17/98	F	H	16:51	W	T	8	17:00	17:00	17:00	0	17	9	0	9	0.5294	4	21
771	7/17/98	F	B	16:53	W	DN	8	17:00	17:00	17:00	0	17	7	0	7	0.4118	4	21
772	7/17/98	F	B	16:53	W	DN	8	17:00	17:00	17:00	0	17	7	0	7	0.4118	4	21
773	7/17/98	M	H	16:54	W	DN	8	17:00	17:00	17:00	0	17	6	0	6	0.3529	4	21
774	7/17/98	M	H	17:01	W	T	8	17:19	17:17	17:17	2	17	16	2	18	1.0588	4	21
775	7/27/98	F	A	7:22	W	R	9	7:29	7:26	7:26	3	38	4	3	7	0.1842	1	11
776	7/22/98	M	W	8:00	W	S	9	8:08	8:04	8:04	4	38	4	4	8	0.2105	1	11
777	7/20/98	F	H	8:11	W	R	9	8:42	8:42	8:42	0	38	31	0	31	0.8158	1	12
778	7/20/98	F	H	8:15	W	T	9	8:42	8:42	8:42	0	38	27	0	27	0.7105	1	12
779	7/22/98	F	H	8:09	W	R	9	8:44	8:42	8:42	2	38	33	2	35	0.9211	1	12
780	7/22/98	F	H	8:57	W	R	9	9:28	9:23	9:23	5	41	26	5	31	0.7561	1	12

Non-Transfer Passengers Waiting Time Data (cont.)

O.N	DATE	SEX	E.C.	RAT	A.M.	ADW	BLN	BDT	EDT	SDT	SRI	BLH	W.B.	W.A.	WAIT	WTHR	LOC	D.T.
781	7/20/98	M	H	9:46	W	T	9	9:57	9:56	9:56	1	33	10	1	11	0.3333	1	12
782	7/9/98	F	B	14:47	U	T	9	15:09	15:21	14:43	26	38	22	0	22	0.5789	1	22
783	7/9/98	F	B	14:47	U	T	9	15:09	15:21	14:43	26	38	22	0	22	0.5789	1	22
784	7/13/98	M	W	15:46	U	DN	9	16:03	15:57	15:57	6	36	11	6	17	0.4722	1	21
785	7/22/98	M	H	7:15	W	T	10	7:28	7:26	7:26	2	20	11	2	13	0.65	1	11
786	7/20/98	M	B	7:35	W	R	10	7:51	7:47	7:47	4	21	12	4	16	0.7619	1	11
787	7/22/98	F	B	7:32	W	R	10	7:52	7:47	7:47	5	21	15	5	20	0.9524	1	11
788	7/22/98	M	B	7:56	W	DN	10	8:10	8:06	8:06	4	19	10	4	14	0.7368	1	11
789	7/20/98	F	W	8:34	W	T	10	8:45	8:42	8:42	3	18	8	3	11	0.6111	1	12
790	7/22/98	F	B	8:35	W	DN	10	8:45	8:42	8:42	3	18	7	3	10	0.5556	1	12
791	7/27/98	F	B	8:39	W	DN	10	8:46	8:42	8:42	4	18	3	4	7	0.3889	1	12
792	7/27/98	M	W	8:54	W	DN	10	9:05	9:02	9:02	3	20	8	3	11	0.55	1	12
793	7/27/98	M	W	8:54	W	DN	10	9:05	9:02	9:02	3	20	8	3	11	0.55	1	12
794	7/27/98	M	H	9:00	W	S	10	9:05	9:02	9:02	3	20	2	3	5	0.25	1	12
795	7/27/98	M	H	9:01	W	S	10	9:05	9:02	9:02	3	20	1	3	4	0.2	1	12
796	7/22/98	M	W	9:22	W	DN	10	9:46	9:25	9:43	3	18	3	21	24	1.3333	1	12
797	7/27/98	M	W	9:33	W	DN	10	9:51	9:43	9:43	8	18	10	8	18	1	1	12
798	7/20/98	F	B	10:14	W	DN	10	10:18	10:43	10:13	5	30	4	0	4	0.1333	1	12
799	7/22/98	F	B	10:24	W	DN	10	10:44	10:43	10:43	1	30	19	1	20	0.6667	1	12
800	7/22/98	M	B	10:24	W	R	10	10:44	10:43	10:43	1	30	19	1	20	0.6667	1	12
801	7/27/98	M	H	10:32	W	DN	10	10:47	10:43	10:43	4	30	11	4	15	0.5	1	12
802	7/9/98	M	W	13:41	U	DN	10	13:47	13:43	13:43	4	31	2	4	6	0.1935	1	22
803	7/13/98	F	O	13:42	U	DN	10	13:47	13:43	13:43	4	31	1	4	5	0.1613	1	22
804	7/15/98	M	B	13:30	U	S	10	13:51	13:43	13:43	8	31	13	8	21	0.6774	1	22
805	7/15/98	F	H	13:36	U	DN	10	13:51	13:43	13:43	8	31	7	8	15	0.4839	1	22
806	7/9/98	M	B	13:59	U	S	10	14:22	14:17	14:17	5	34	18	5	23	0.6765	1	22
807	7/9/98	F	H	14:00	U	DN	10	14:22	14:17	14:17	5	34	17	5	22	0.6471	1	22
808	7/9/98	F	W	14:22	U	DN	10	14:22	14:45	14:17	5	34	0	0	0	0	1	22
809	7/9/98	M	H	14:22	U	DN	10	14:22	14:45	14:17	5	34	0	0	0	0	1	22
810	7/13/98	M	H	13:50	U	T	10	14:20	14:17	14:17	3	34	27	3	30	0.8824	1	22

Non-Transfer Passengers Waiting Time Data (cont.)

O.N	DATE	SEX	E.C.	RAT	A.M.	ADW	BLN	BDT	EDT	SDT	SRI	BLH	W.B.	W.A.	WAIT	WTHR	LOC	D.T.
811	7/15/98	F	H	13:57	U	T	10	14:21	14:17	14:17	4	34	20	4	24	0.7059	1	22
812	7/15/98	M	H	13:57	U	T	10	14:21	14:17	14:17	4	34	20	4	24	0.7059	1	22
813	7/13/98	M	B	14:25	U	DN	10	14:48	14:45	14:45	3	28	20	3	23	0.8214	1	22
814	7/13/98	F	H	14:40	U	T	10	14:48	14:45	14:45	3	28	5	3	8	0.2857	1	22
815	7/13/98	F	H	14:40	U	T	10	14:48	14:45	14:45	3	28	5	3	8	0.2857	1	22
816	7/13/98	M	H	14:40	U	T	10	14:48	14:45	14:45	3	28	5	3	8	0.2857	1	22
817	7/13/98	F	B	14:45	U	T	10	14:48	14:45	14:45	3	28	0	3	3	0.1071	1	22
818	7/13/98	F	B	14:45	U	T	10	14:48	14:45	14:45	3	28	0	3	3	0.1071	1	22
819	7/13/98	F	B	14:45	U	T	10	14:48	14:45	14:45	3	28	0	3	3	0.1071	1	22
820	7/15/98	F	H	14:25	U	T	10	14:51	14:45	14:45	6	28	20	6	26	0.9286	1	22
821	7/15/98	M	B	15:05	U	DN	10	15:07	15:05	15:05	2	20	0	2	2	0.1	1	22
822	7/9/98	F	W	14:59	U	T	10	15:16	15:05	15:12	4	20	6	11	17	0.85	1	22
823	7/9/98	M	H	15:04	U	DN	10	15:16	15:05	15:12	4	20	1	11	12	0.6	1	22
824	7/9/98	M	W	15:16	U	DN	10	15:16	15:43	15:12	4	20	0	0	0	0	1	22
825	7/7/98	F	H	15:40	U	DN	10	15:46	15:43	15:43	3	20	3	3	6	0.3	1	22
826	7/13/98	M	H	15:42	U	DN	10	15:48	15:43	15:43	5	20	1	5	6	0.3	1	22
827	7/15/98	M	B	15:25	U	DN	10	15:47	15:43	15:43	4	20	18	4	22	1.1	1	22
828	7/13/98	F	B	16:00	U	DN	10	16:07	16:03	16:03	4	20	3	4	7	0.35	1	21
829	7/13/98	M	B	16:22	U	DN	10	16:26	16:23	16:23	3	20	1	3	4	0.2	1	21
830	7/7/98	F	H	16:28	U	DN	10	16:49	16:46	16:46	3	23	18	3	21	0.913	1	21
831	7/7/98	F	W	16:41	U	DN	10	16:49	16:46	16:46	3	23	5	3	8	0.3478	1	21
832	7/7/98	M	W	16:44	U	R	10	16:49	16:46	16:46	3	23	2	3	5	0.2174	1	21
833	7/13/98	F	A	16:41	U	DN	10	16:49	16:46	16:46	3	23	5	3	8	0.3478	1	21
834	7/13/98	F	O	16:45	U	DN	10	16:49	16:46	16:46	3	23	1	3	4	0.1739	1	21
835	7/15/98	M	B	16:46	U	DN	10	16:48	16:46	16:46	2	23	0	2	2	0.087	1	21
836	7/13/98	M	W	16:52	U	DN	10	17:07	17:03	17:03	4	17	11	4	15	0.8824	1	21
837	7/13/98	F	W	16:52	U	DN	10	17:07	17:03	17:03	4	17	11	4	15	0.8824	1	21
838	7/13/98	F	B	17:04	U	DN	10	17:07	17:23	17:03	4	17	3	0	3	0.1765	1	21
839	7/7/98	F	B	17:05	U	R	10	17:28	17:23	17:23	5	20	18	5	23	1.15	1	21
840	7/7/98	F	H	17:25	U	DN	10	17:28	17:43	17:23	5	20	3	0	3	0.15	1	21

Non-Transfer Passengers Waiting Time Data (cont.)

O.N	DATE	SEX	E.C.	RAT	A.M.	ADW	BLN	BDT	EDT	SDT	SRI	BLH	W.B.	W.A.	WAIT	WTHR	LOC	D.T.
841	7/7/98	M	W	17:26	U	T	10	17:28	17:43	17:23	5	20	2	0	2	0.1	1	21
842	7/27/98	F	W	7:04	W	DN	12	7:15	7:12	7:12	3	17	8	3	11	0.6471	1	11
843	7/22/98	F	B	7:47	R	DN	12	7:51	8:02	7:46	5	16	4	0	4	0.25	1	11
844	7/22/98	M	H	8:25	W	T	12	8:34	8:32	8:32	2	14	7	2	9	0.6429	1	12
845	7/22/98	M	H	8:25	W	T	12	8:34	8:32	8:32	2	14	7	2	9	0.6429	1	12
846	7/20/98	M	B	9:16	W	S	12	9:28	9:22	9:22	6	19	6	6	12	0.6316	1	12
847	7/20/98	F	W	9:24	W	DN	12	9:28	9:39	9:22	6	19	4	0	4	0.2105	1	12
848	7/22/98	M	H	9:25	W	DN	12	9:29	9:39	9:22	7	19	4	0	4	0.2105	1	12
849	7/22/98	M	H	9:25	W	R	12	9:29	9:39	9:22	7	19	4	0	4	0.2105	1	12
850	7/22/98	M	H	9:25	W	R	12	9:29	9:39	9:22	7	19	4	0	4	0.2105	1	12
851	7/22/98	F	W	9:38	W	T	12	9:43	9:39	9:39	4	17	1	4	5	0.2941	1	12
852	7/27/98	F	B	9:33	W	DN	12	9:46	9:39	9:39	7	17	6	7	13	0.7647	1	12
853	7/20/98	M	W	9:47	W	DN	12	10:05	9:59	9:59	6	20	12	6	18	0.9	1	12
854	7/20/98	F	W	10:02	W	R	12	10:05	10:19	9:59	6	20	3	0	3	0.15	1	12
855	7/22/98	M	B	9:57	W	DN	12	10:02	9:59	9:59	3	20	2	3	5	0.25	1	12
856	7/27/98	M	W	9:50	W	DN	12	10:03	9:59	9:59	4	20	9	4	13	0.65	1	12
857	7/20/98	M	B	10:11	W	DN	12	10:24	10:19	10:19	5	20	8	5	13	0.65	1	12
858	7/20/98	M	B	10:15	W	DN	12	10:24	10:19	10:19	5	20	4	5	9	0.45	1	12
859	7/22/98	F	W	10:08	W	DN	12	10:23	10:19	10:19	4	20	11	4	15	0.75	1	12
860	7/27/98	M	H	10:14	W	R	12	10:23	10:19	10:19	4	20	5	4	9	0.45	1	12
861	7/27/98	M	W	10:20	U	DN	12	10:23	10:39	10:19	4	20	3	0	3	0.15	1	12
862	7/27/98	M	W	10:21	W	R	12	10:23	10:39	10:19	4	20	2	0	2	0.1	1	12
863	7/20/98	F	H	10:32	W	DN	12	10:44	10:39	10:39	5	20	7	5	12	0.6	1	12
864	7/9/98	F	W	13:43	U	S	12	13:44	13:58	13:39	5	20	1	0	1	0.05	1	22
865	7/15/98	M	W	13:36	U	DN	12	13:40	13:39	13:39	1	20	3	1	4	0.2	1	22
866	7/9/98	M	W	13:56	U	DN	12	14:03	13:58	13:58	5	19	2	5	7	0.3684	1	22
867	7/13/98	F	W	14:01	U	R	12	14:02	14:18	13:58	4	20	1	0	1	0.05	1	22
868	7/15/98	F	W	13:46	U	T	12	14:01	13:58	13:58	3	19	12	3	15	0.7895	1	22
869	7/15/98	M	W	13:46	U	T	12	14:01	13:58	13:58	3	19	12	3	15	0.7895	1	22
870	7/15/98	M	B	14:00	U	DN	12	14:01	14:18	13:58	3	20	1	0	1	0.05	1	22



Non-Transfer Passengers Waiting Time Data (cont.)

O.N	DATE	SEX	E.C.	RAT	A.M.	ADW	BLN	BDT	EDT	SDT	SRI	BLH	W.B.	W.A.	WAIT	WTHR	LOC	D.T.
871	6/23/98	M	W	14:22	U	U	12	14:26	14:39	14:18	6	20	4	0	4	0.2	1	22
872	7/13/98	F	H	14:18	U	T	12	14:31	14:18	14:18	13	20	0	13	13	0.65	1	22
873	7/13/98	F	B	14:18	U	T	12	14:31	14:18	14:18	13	20	0	13	13	0.65	1	22
874	7/13/98	M	W	14:20	U	DN	12	14:31	14:39	14:18	13	20	11	0	11	0.55	1	22
875	7/15/98	M	W	14:19	U	DN	12	14:21	14:39	14:18	0	20	2	0	2	0.1	1	22
876	7/15/98	M	H	14:36	U	DN	12	14:43	14:39	14:39	4	21	3	4	7	0.3333	1	22
877	7/13/98	M	B	14:52	U	R	12	15:07	15:00	15:00	7	21	8	7	15	0.7143	1	22
878	7/15/98	M	B	14:51	U	DN	12	15:04	15:00	15:00	4	21	9	4	13	0.619	1	22
879	7/15/98	M	B	15:00	U	DN	12	15:04	15:00	15:00	4	21	0	4	4	0.1905	1	22
880	7/9/98	M	W	14:53	U	R	12	15:19	15:00	15:17	2	17	7	19	26	1.5294	1	22
881	7/9/98	M	W	15:04	U	T	12	15:19	15:17	15:17	2	17	13	2	15	0.8824	1	22
882	7/9/98	M	W	15:11	U	S	12	15:19	15:17	15:17	2	17	6	2	8	0.4706	1	22
883	7/9/98	F	H	15:12	U	R	12	15:19	15:17	15:17	2	17	5	2	7	0.4118	1	22
884	7/9/98	M	W	15:18	U	DN	12	15:19	15:40	15:17	2	17	1	0	1	0.0588	1	22
885	7/9/98	F	W	15:18	U	T	12	15:19	15:40	15:17	2	17	1	0	1	0.0588	1	22
886	7/15/98	M	H	15:23	U	DN	12	15:24	15:40	15:17	7	17	1	0	1	0.0588	1	22
887	7/7/98	M	H	15:30	U	DN	12	15:43	15:40	15:40	3	23	10	3	13	0.5652	1	22
888	7/7/98	M	B	15:33	U	R	12	15:43	15:40	15:40	3	23	7	3	10	0.4348	1	22
889	7/7/98	M	W	15:34	U	DN	12	15:43	15:40	15:40	3	23	6	3	9	0.3913	1	22
890	7/15/98	F	B	15:29	U	DN	12	15:45	15:40	15:40	5	23	11	5	16	0.6957	1	22
891	7/15/98	M	H	15:35	U	DN	12	15:45	15:40	15:40	5	23	5	5	10	0.4348	1	22
892	7/15/98	M	H	15:43	U	DN	12	15:45	15:51	15:40	5	23	2	0	2	0.087	1	22
893	7/7/98	M	W	16:08	U	DN	12	16:12	16:08	16:08	4	17	0	4	4	0.2353	1	21
894	7/7/98	F	B	16:09	U	DN	12	16:12	16:27	16:08	4	17	3	0	3	0.1765	1	21
895	7/13/98	F	W	16:02	U	S	12	16:12	16:08	16:08	4	17	6	4	10	0.5882	1	21
896	7/13/98	F	W	16:06	U	S	12	16:12	16:08	16:08	4	17	2	4	6	0.3529	1	21
897	7/7/98	M	W	16:18	U	DN	12	16:29	16:27	16:27	2	19	9	2	11	0.5789	1	21
898	7/7/98	M	W	16:20	U	DN	12	16:29	16:27	16:27	2	19	7	2	9	0.4737	1	21
899	7/15/98	M	W	16:29	U	DN	12	16:30	16:45	16:27	3	19	1	0	1	0.0526	1	21
900	7/13/98	M	W	17:10	U	DN	12	17:24	17:16	17:16	8	17	6	8	14	0.8235	1	21

Non-Transfer Passengers Waiting Time Data (cont.)

O.N	DATE	SEX	E.C.	RAT	A.M.	ADW	BLN	BDT	EDT	SDT	SRI	BLH	W.B.	W.A.	WAIT	WTHR	LOC	D.T.
901	7/13/98	F	H	17:17	U	DN	12	17:24	17:27	17:16	8	17	7	0	7	0.4118	1	21
902	7/15/98	F	B	17:12	U	DN	12	17:20	17:16	17:16	4	17	4	4	8	0.4706	1	21
903	8/10/98	M	W	7:14	W	DN	13	7:15	7:28	7:08	7	20	1	0	1	0.05	2	11
904	7/23/98	M	W	7:20	W	DN	13	7:28	7:28	7:28	0	20	8	0	8	0.4	2	11
905	8/5/98	M	W	7:17	W	DN	13	7:27	7:28	7:28	-1	20	10	0	10	0.5	2	11
906	8/5/98	M	W	7:22	W	DN	13	7:27	7:28	7:28	-1	20	5	0	5	0.25	2	11
907	8/10/98	M	W	7:16	W	R	13	7:28	7:28	7:28	0	20	12	0	12	0.6	2	11
908	12/17/98	M	H	7:11	W	DN	13	7:27	7:28	7:28	-1	20	16	0	16	0.8	2	11
909	12/17/98	M	B	7:15	W	DN	13	7:27	7:28	7:28	-1	20	12	0	12	0.6	2	11
910	12/17/98	F	H	7:16	W	S	13	7:27	7:28	7:28	-1	20	11	0	11	0.55	2	11
911	12/17/98	F	B	7:17	W	DN	13	7:27	7:28	7:28	-1	20	10	0	10	0.5	2	11
912	12/17/98	F	H	7:24	W	DN	13	7:27	7:28	7:28	-1	20	3	0	3	0.15	2	11
913	12/17/98	F	H	7:24	W	DN	13	7:27	7:28	7:28	-1	20	3	0	3	0.15	2	11
914	12/17/98	M	W	7:24	W	DN	13	7:27	7:28	7:28	-1	20	3	0	3	0.15	2	11
915	7/23/98	M	W	7:28	B	DN	13	7:51	7:28	7:48	3	20	0	23	23	1.15	2	11
916	7/23/98	F	B	7:41	W	DN	13	7:51	7:48	7:48	3	20	7	3	10	0.5	2	11
917	8/5/98	F	W	7:33	W	DN	13	7:50	7:48	7:48	2	20	15	2	17	0.85	2	11
918	8/5/98	M	B	7:36	W	DN	13	7:50	7:48	7:48	2	20	12	2	14	0.7	2	11
919	8/5/98	M	H	7:44	W	DN	13	7:50	7:48	7:48	2	20	4	2	6	0.3	2	11
920	8/5/98	M	H	7:44	W	S	13	7:50	7:48	7:48	2	20	4	2	6	0.3	2	11
921	8/5/98	M	W	7:48	W	DN	13	7:50	7:48	7:48	2	20	0	2	2	0.1	2	11
922	8/10/98	M	B	7:42	W	DN	13	7:48	7:48	7:48	0	20	6	0	6	0.3	2	11
923	8/10/98	M	W	7:47	W	S	13	7:48	7:48	7:48	0	20	1	0	1	0.05	2	11
924	12/17/98	F	W	7:35	W	DN	13	7:48	7:48	7:48	0	20	13	0	13	0.65	2	11
925	7/23/98	M	H	8:04	W	S	13	8:09	8:08	8:08	1	20	4	1	5	0.25	2	11
926	8/5/98	M	H	7:59	W	R	13	8:09	8:08	8:08	1	20	9	1	10	0.5	2	11
927	8/5/98	M	B	8:02	W	DN	13	8:09	8:08	8:08	1	20	6	1	7	0.35	2	11
928	8/10/98	F	W	8:04	W	S	13	8:10	8:08	8:08	2	20	4	2	6	0.3	2	11
929	12/17/98	F	O	7:57	W	DN	13	8:10	8:08	8:08	2	20	11	2	13	0.65	2	11
930	12/17/98	M	H	8:00	W	DN	13	8:10	8:08	8:08	2	20	8	2	10	0.5	2	11

Non-Transfer Passengers Waiting Time Data (cont.)

O.N	DATE	SEX	E.C.	RAT	A.M.	ADW	BLN	BDT	EDT	SDT	SRI	BLH	W.B.	W.A.	WAIT	WTHR	LOC	D.T.
931	12/17/98	M	H	8:02	W	DN	13	8:10	8:08	8:08	2	20	6	2	8	0.4	2	11
932	12/17/98	F	W	8:04	W	DN	13	8:10	8:08	8:08	2	20	4	2	6	0.3	2	11
933	12/17/98	M	H	8:04	W	DN	13	8:10	8:08	8:08	2	20	4	2	6	0.3	2	11
934	12/17/98	M	H	8:07	W	DN	13	8:10	8:08	8:08	2	20	1	2	3	0.15	2	11
935	12/17/98	M	H	8:07	W	DN	13	8:10	8:08	8:08	2	20	1	2	3	0.15	2	11
936	12/17/98	M	W	8:09	W	S	13	8:10	8:27	8:08	2	20	1	0	1	0.05	2	11
937	7/23/98	M	H	8:12	W	T	13	8:31	8:27	8:27	4	19	15	4	19	1	2	11
938	7/23/98	M	H	8:12	W	T	13	8:31	8:27	8:27	4	19	15	4	19	1	2	11
939	8/5/98	M	H	8:24	W	DN	13	8:31	8:27	8:27	4	19	3	4	7	0.3684	2	11
940	8/10/98	M	H	8:10	W	DN	13	8:27	8:27	8:27	0	19	17	0	17	0.8947	2	11
941	8/10/98	M	W	8:17	W	DN	13	8:27	8:27	8:27	0	19	10	0	10	0.5263	2	11
942	8/10/98	F	H	8:21	W	DN	13	8:27	8:27	8:27	0	19	6	0	6	0.3158	2	11
943	8/10/98	M	B	8:21	W	DN	13	8:27	8:27	8:27	0	19	6	0	6	0.3158	2	11
944	8/10/98	F	H	8:25	W	T	13	8:27	8:27	8:27	0	19	2	0	2	0.1053	2	11
945	8/10/98	M	H	8:26	W	S	13	8:27	8:27	8:27	0	19	1	0	1	0.0526	2	11
946	12/17/98	M	H	8:13	W	T	13	8:32	8:27	8:27	5	19	14	5	19	1	2	11
947	12/17/98	F	H	8:13	W	T	13	8:32	8:27	8:27	5	19	14	5	19	1	2	11
948	8/5/98	F	H	8:34	W	DN	13	8:38	8:38	8:38	0	10	4	0	4	0.4	2	12
949	8/10/98	F	H	8:35	W	T	13	8:40	8:38	8:38	2	10	3	2	5	0.5	2	12
950	12/17/98	F	H	8:37	W	DN	13	8:41	8:38	8:38	3	10	1	3	4	0.4	2	12
951	7/23/98	M	H	8:39	W	DN	13	8:53	8:48	8:48	5	10	9	5	14	1.4	2	12
952	7/23/98	M	H	8:42	W	DN	13	8:53	8:48	8:48	5	10	6	5	11	1.1	2	12
953	7/23/98	F	B	8:52	W	DN	13	8:53	8:57	8:48	5	10	1	0	1	0.1	2	12
954	8/5/98	M	H	8:46	W	DN	13	8:50	8:48	8:48	2	10	2	2	4	0.4	2	12
955	12/17/98	F	H	8:49	W	DN	13	8:52	8:57	8:48	4	10	3	0	3	0.3	2	12
956	12/17/98	F	W	8:51	W	DN	13	8:52	8:57	8:48	4	10	1	0	1	0.1	2	12
957	7/23/98	F	B	8:58	W	DN	13	9:00	9:07	8:57	3	10	2	0	2	0.2	2	12
958	8/10/98	F	W	8:52	W	DN	13	8:57	8:57	8:57	0	10	5	0	5	0.5	2	12
959	12/17/98	M	H	8:53	W	DN	13	8:58	8:57	8:57	1	10	4	13	17	1.7	2	12
960	8/5/98	M	W	9:01	W	S	13	9:14	9:07	9:07	7	10	6	7	13	1.3	2	12

Non-Transfer Passengers Waiting Time Data (cont.)

O.N	DATE	SEX	E.C.	RAT	A.M.	ADW	BLN	BDT	EDT	SDT	SRI	BLH	W.B.	W.A.	WAIT	WTHR	LOC	D.T.
961	8/5/98	F	H	9:08	W	DN	13	9:14	9:17	9:07	7	10	6	0	6	0.6	2	12
962	12/17/98	M	H	8:59	W	DN	13	9:10	9:07	9:07	3	10	1	13	14	1.4	2	12
963	12/17/98	M	B	9:00	W	DN	13	9:10	9:07	9:07	3	10	7	3	10	1	2	12
964	12/17/98	M	W	9:02	B	S	13	9:10	9:07	9:07	3	10	5	3	8	0.8	2	12
965	7/23/98	M	H	9:16	W	DN	13	9:23	9:17	9:17	6	10	1	6	7	0.7	2	12
966	7/23/98	M	H	9:16	W	DN	13	9:23	9:17	9:17	6	10	1	6	7	0.7	2	12
967	7/23/98	M	H	9:24	W	DN	13	9:30	9:27	9:27	3	10	3	3	6	0.6	2	12
968	8/5/98	M	W	9:22	W	T	13	9:30	9:27	9:27	3	10	5	3	8	0.8	2	12
969	8/5/98	F	W	9:22	W	T	13	9:30	9:27	9:27	3	10	5	3	8	0.8	2	12
970	8/10/98	M	W	9:24	W	DN	13	9:28	9:27	9:27	1	10	3	1	4	0.4	2	12
971	8/10/98	F	H	9:25	W	DN	13	9:28	9:27	9:27	1	10	2	1	3	0.3	2	12
972	8/10/98	M	B	9:26	W	DN	13	9:28	9:27	9:27	1	10	1	1	2	0.2	2	12
973	7/23/98	M	H	9:38	W	DN	13	9:38	9:45	9:37	1	8	0	0	0	0	2	12
974	8/5/98	F	W	9:42	W	DN	13	9:44	9:45	9:37	7	8	2	0	2	0.25	2	12
975	8/5/98	M	B	9:42	W	DN	13	9:44	9:45	9:37	7	8	2	0	2	0.25	2	12
976	7/23/98	M	W	9:58	W	DN	13	10:07	10:05	10:05	2	10	7	2	9	0.9	2	12
977	8/5/98	M	W	10:06	W	DN	13	10:10	10:15	10:05	5	10	4	0	4	0.4	2	12
978	8/10/98	M	B	9:57	W	T	13	10:10	10:05	10:05	5	10	8	5	13	1.3	2	12
979	8/10/98	M	H	10:00	W	DN	13	10:10	10:05	10:05	5	10	5	5	10	1	2	12
980	8/10/98	M	H	10:11	B	DN	13	10:16	10:15	10:15	1	10	4	1	5	0.5	2	12
981	8/10/98	M	W	10:15	W	DN	13	10:16	10:15	10:15	1	10	0	1	1	0.1	2	12
982	7/23/98	M	H	10:30	W	T	13	10:30	10:35	10:25	5	10	0	0	0	0	2	12
983	7/23/98	M	H	10:30	W	T	13	10:30	10:35	10:25	5	10	0	0	0	0	2	12
984	7/23/98	M	H	10:30	W	T	13	10:30	10:35	10:25	5	10	0	0	0	0	2	12
985	8/5/98	F	B	10:20	W	DN	13	10:30	10:25	10:25	5	10	5	5	10	1	2	12
986	8/10/98	F	H	10:24	W	DN	13	10:25	10:25	10:25	0	10	1	0	1	0.1	2	12
987	7/23/98	M	H	10:21	W	DN	13	10:30	10:25	10:35	-5	10	4	5	9	0.9	2	12
988	8/5/98	F	B	10:32	W	DN	13	10:38	10:35	10:35	3	10	3	3	6	0.6	2	12
989	8/5/98	M	H	10:37	W	DN	13	10:38	10:45	10:35	3	10	1	0	1	0.1	2	12
990	8/10/98	M	H	10:30	W	DN	13	10:34	10:35	10:35	-1	10	4	0	4	0.4	2	12

Non-Transfer Passengers Waiting Time Data (cont.)

O.N	DATE	SEX	E.C.	RAT	A.M.	ADW	BLN	BDT	EDT	SDT	SRI	BLH	W.B.	W.A.	WAIT	WTHR	LOC	D.T.
991	8/10/98	M	B	10:37	W	DN	13	10:44	10:45	10:45	-1	10	7	0	7	0.7	2	12
992	8/10/98	M	W	10:45	W	DN	13	11:01	10:45	10:55	6	10	0	16	16	1.6	2	12
993	8/10/98	M	H	10:46	W	DN	13	11:01	10:55	10:55	6	10	9	6	15	1.5	2	12
994	8/10/98	M	H	10:49	W	DN	13	11:01	10:55	10:55	6	10	6	6	12	1.2	2	12
995	8/10/98	M	H	10:55	W	T	13	11:01	10:55	10:55	6	10	0	6	6	0.6	2	12
996	8/10/98	F	H	10:55	W	T	13	11:01	10:55	10:55	6	10	0	6	6	0.6	2	12
997	10/8/98	M	H	13:47	W	DN	13	13:48	13:50	13:42	6	8	1	0	1	0.125	2	22
998	10/1/98	F	H	13:50	W	DN	13	13:54	13:50	13:50	4	8	0	4	4	0.5	2	22
999	10/1/98	F	B	13:53	W	DN	13	13:54	14:01	13:50	4	8	1	0	1	0.125	2	22
1000	10/1/98	M	H	13:54	W	DN	13	13:54	14:01	13:50	4	8	0	0	0	0	2	22
1001	10/1/98	M	H	14:00	W	DN	13	14:02	14:01	14:01	1	11	1	1	2	0.1818	2	22
1002	10/1/98	F	H	14:00	W	DN	13	14:02	14:01	14:01	1	11	1	1	2	0.1818	2	22
1003	10/1/98	F	B	14:02	W	DN	13	14:02	14:11	14:01	1	11	0	0	0	0	2	22
1004	10/8/98	M	B	13:56	W	DN	13	14:02	14:01	14:01	1	11	5	1	6	0.5455	2	22
1005	10/8/98	F	H	13:58	W	DN	13	14:02	14:01	14:01	1	11	3	1	4	0.3636	2	22
1006	9/24/98	M	H	14:09	W	DN	13	14:11	14:11	14:11	0	10	2	0	2	0.2	2	22
1007	9/24/98	M	H	14:11	W	DN	13	14:11	14:11	14:11	0	10	0	0	0	0	2	22
1008	10/1/98	F	H	14:06	W	DN	13	14:13	14:11	14:11	2	10	5	2	7	0.7	2	22
1009	10/1/98	M	W	14:09	W	DN	13	14:13	14:11	14:11	2	10	2	2	4	0.4	2	22
1010	10/1/98	F	H	14:10	W	DN	13	14:13	14:11	14:11	2	10	1	2	3	0.3	2	22
1011	10/8/98	M	W	14:09	W	DN	13	14:11	14:11	14:11	0	10	2	0	2	0.2	2	22
1012	10/8/98	F	H	14:11	W	DN	13	14:11	14:11	14:11	0	10	0	0	0	0	2	22
1013	9/24/98	M	H	14:21	W	DN	13	14:22	14:21	14:21	1	10	0	1	1	0.1	2	22
1014	9/24/98	M	B	14:22	W	DN	13	14:22	14:31	14:21	1	10	0	0	0	0	2	22
1015	10/1/98	M	H	14:16	W	DN	13	14:25	14:21	14:21	4	10	5	4	9	0.9	2	22
1016	10/8/98	F	H	14:23	W	DN	13	14:24	14:31	14:21	3	10	1	0	1	0.1	2	22
1017	9/24/98	M	H	14:29	W	DN	13	14:32	14:31	14:31	1	10	2	1	3	0.3	2	22
1018	10/1/98	M	B	14:27	W	DN	13	14:35	14:31	14:31	4	10	4	4	8	0.8	2	22
1019	10/1/98	M	H	14:32	W	DN	13	14:35	14:41	14:31	4	10	3	0	3	0.3	2	22
1020	10/8/98	M	H	14:30	W	DN	13	14:36	14:31	14:31	5	10	1	5	6	0.6	2	22

Non-Transfer Passengers Waiting Time Data (cont.)

O.N	DATE	SEX	E.C.	RAT	A.M.	ADW	BLN	BDT	EDT	SDT	SRI	BLH	W.B.	W.A.	WAIT	WTHR	LOC	D.T.
1021	10/8/98	M	W	14:34	W	DN	13	14:36	14:41	14:31	5	10	2	0	2	0.2	2	22
1022	10/8/98	F	W	14:34	W	DN	13	14:36	14:41	14:31	5	10	2	0	2	0.2	2	22
1023	10/8/98	M	B	14:35	W	DN	13	14:36	14:41	14:31	5	10	1	0	1	0.1	2	22
1024	9/24/98	F	H	14:35	W	DN	13	14:44	14:41	14:41	3	10	6	3	9	0.9	2	22
1025	9/24/98	F	H	14:38	R	DN	13	14:44	14:41	14:41	3	10	3	3	6	0.6	2	22
1026	9/24/98	M	B	14:38	W	DN	13	14:44	14:41	14:41	3	10	3	3	6	0.6	2	22
1027	9/24/98	M	B	14:38	W	DN	13	14:44	14:41	14:41	3	10	3	3	6	0.6	2	22
1028	9/24/98	M	B	14:38	W	DN	13	14:44	14:41	14:41	3	10	3	3	6	0.6	2	22
1029	9/24/98	M	H	14:42	W	DN	13	14:44	14:51	14:41	3	10	2	0	2	0.2	2	22
1030	9/24/98	M	H	14:42	W	DN	13	14:44	14:51	14:41	3	10	2	0	2	0.2	2	22
1031	10/1/98	M	H	14:40	W	DN	13	14:41	14:41	14:41	0	10	1	0	1	0.1	2	22
1032	10/8/98	M	H	14:39	W	DN	13	14:41	14:41	14:41	0	10	2	0	2	0.2	2	22
1033	10/1/98	M	W	14:45	W	DN	13	14:51	14:51	14:51	0	10	6	0	6	0.6	2	22
1034	10/1/98	F	H	14:51	W	DN	13	14:51	14:51	14:51	0	10	0	0	0	0	2	22
1035	10/1/98	M	H	14:51	W	DN	13	14:51	14:51	14:51	0	10	0	0	0	0	2	22
1036	10/8/98	M	H	14:42	W	T	13	14:54	14:51	14:51	3	10	9	3	12	1.2	2	22
1037	10/8/98	F	H	14:42	W	T	13	14:54	14:51	14:51	3	10	9	3	12	1.2	2	22
1038	9/24/98	F	W	14:59	W	DN	13	15:04	14:59	14:59	5	8	0	5	5	0.625	2	22
1039	9/24/98	F	H	15:07	W	DN	13	15:16	15:10	15:10	6	11	3	6	9	0.8182	2	22
1040	10/1/98	F	H	14:56	W	T	13	15:11	14:59	15:10	1	11	3	12	15	1.3636	2	22
1041	10/1/98	F	H	14:57	W	T	13	15:11	14:59	15:10	1	11	2	12	14	1.2727	2	22
1042	10/1/98	F	H	14:57	W	T	13	15:11	14:59	15:10	1	11	2	12	14	1.2727	2	22
1043	10/1/98	M	H	14:59	W	T	13	15:11	14:59	15:10	1	11	0	12	12	1.0909	2	22
1044	10/1/98	F	B	15:02	W	T	13	15:11	15:10	15:10	1	11	8	1	9	0.8182	2	22
1045	10/1/98	F	B	15:02	W	T	13	15:11	15:10	15:10	1	11	8	1	9	0.8182	2	22
1046	10/1/98	M	H	15:16	W	T	13	15:26	15:20	15:20	6	10	4	6	10	1	2	22
1047	10/1/98	M	H	15:16	W	T	13	15:26	15:20	15:20	6	10	4	6	10	1	2	22
1048	10/1/98	F	B	15:16	W	DN	13	15:26	15:20	15:20	6	10	4	6	10	1	2	22
1049	10/1/98	M	H	15:25	W	DN	13	15:26	15:30	15:20	6	10	1	0	1	0.1	2	22
1050	10/1/98	M	H	15:25	W	DN	13	15:26	15:30	15:20	6	10	1	0	1	0.1	2	22

Non-Transfer Passengers Waiting Time Data (cont.)

O.N	DATE	SEX	E.C.	RAT	A.M.	ADW	BLN	BDT	EDT	SDT	SRI	BLH	W.B.	W.A.	WAIT	WTHR	LOC	D.T.
1051	10/16/98	M	H	15:20	B	DN	13	15:26	15:20	15:20	6	10	0	6	6	0.6	2	22
1052	10/16/98	F	B	15:22	W	DN	13	15:26	15:30	15:20	6	10	4	0	4	0.4	2	22
1053	9/24/98	M	W	15:26	W	DN	13	15:31	15:30	15:30	1	10	4	1	5	0.5	2	22
1054	9/24/98	F	H	15:28	W	DN	13	15:31	15:30	15:30	1	10	2	1	3	0.3	2	22
1055	9/24/98	F	H	15:29	W	DN	13	15:31	15:30	15:30	1	10	1	1	2	0.2	2	22
1056	9/24/98	M	H	15:29	W	DN	13	15:31	15:30	15:30	1	10	1	1	2	0.2	2	22
1057	9/24/98	M	H	15:29	W	DN	13	15:31	15:30	15:30	1	10	1	1	2	0.2	2	22
1058	9/24/98	F	W	15:34	W	DN	13	15:42	15:40	15:40	2	10	6	2	8	0.8	2	22
1059	9/24/98	M	B	15:41	W	DN	13	15:42	15:50	15:40	2	10	1	0	1	0.1	2	22
1060	10/1/98	M	H	15:35	W	DN	13	15:41	15:40	15:40	1	10	5	1	6	0.6	2	22
1061	10/1/98	F	H	15:35	W	DN	13	15:41	15:40	15:40	1	10	5	1	6	0.6	2	22
1062	10/8/98	M	W	15:37	W	DN	13	15:42	15:40	15:40	2	10	3	2	5	0.5	2	22
1063	10/8/98	M	W	15:37	W	DN	13	15:42	15:40	15:40	2	10	3	2	5	0.5	2	22
1064	10/8/98	M	H	15:40	W	DN	13	15:42	15:40	15:40	2	10	0	2	2	0.2	2	22
1065	10/16/98	F	H	15:33	W	DN	13	15:40	15:40	15:40	0	10	7	0	7	0.7	2	22
1066	10/16/98	M	H	15:36	W	T	13	15:40	15:40	15:40	0	10	4	0	4	0.4	2	22
1067	10/16/98	M	H	15:36	W	T	13	15:40	15:40	15:40	0	10	4	0	4	0.4	2	22
1068	10/16/98	F	B	15:38	W	DN	13	15:40	15:40	15:40	0	10	2	0	2	0.2	2	22
1069	9/24/98	M	B	15:42	W	DN	13	15:53	15:50	15:50	3	10	8	3	11	1.1	2	22
1070	9/24/98	F	H	15:44	W	DN	13	15:53	15:50	15:50	3	10	6	3	9	0.9	2	22
1071	9/24/98	M	H	15:49	W	DN	13	15:53	15:50	15:50	3	10	1	3	4	0.4	2	22
1072	9/24/98	M	H	15:49	W	DN	13	15:53	15:50	15:50	3	10	1	3	4	0.4	2	22
1073	10/16/98	F	W	15:41	W	R	13	15:50	15:50	15:50	0	10	9	0	9	0.9	2	22
1074	10/16/98	M	B	15:45	W	DN	13	15:50	15:50	15:50	0	10	5	0	5	0.5	2	22
1075	10/16/98	M	B	15:45	W	DN	13	15:50	15:50	15:50	0	10	5	0	5	0.5	2	22
1076	10/16/98	M	B	15:45	W	DN	13	15:50	15:50	15:50	0	10	5	0	5	0.5	2	22
1077	10/16/98	F	W	15:45	W	DN	13	15:50	15:50	15:50	0	10	5	0	5	0.5	2	22
1078	10/16/98	M	B	15:49	W	DN	13	15:50	15:50	15:50	0	10	1	0	1	0.1	2	22
1079	10/16/98	M	B	15:49	W	DN	13	15:50	15:50	15:50	0	10	1	0	1	0.1	2	22
1080	10/2/98	M	W	15:58	W	DN	13	16:13	16:09	16:09	4	19	11	4	15	0.7895	2	21

Non-Transfer Passengers Waiting Time Data (cont.)

O.N	DATE	SEX	E.C.	RAT	A.M.	ADW	BLN	BDT	EDT	SDT	SRI	BLH	W.B.	W.A.	WAIT	WTHR	LOC	D.T.
1081	10/2/98	M	H	16:18	W	DN	13	16:30	16:29	16:29	1	20	11	1	12	0.6	2	21
1082	10/16/98	F	H	16:16	W	DN	13	16:29	16:29	16:29	0	20	13	0	13	0.65	2	21
1083	10/16/98	M	H	16:26	W	T	13	16:29	16:29	16:29	0	20	3	0	3	0.15	2	21
1084	10/16/98	F	H	16:26	W	T	13	16:29	16:29	16:29	0	20	3	0	3	0.15	2	21
1085	10/2/98	M	B	16:44	W	DN	13	16:55	16:50	16:50	5	21	6	5	11	0.5238	2	21
1086	10/16/98	M	H	16:37	W	DN	13	16:53	16:50	16:50	3	21	13	3	16	0.7619	2	21
1087	10/16/98	M	H	16:41	W	DN	13	16:53	16:50	16:50	3	21	9	3	12	0.5714	2	21
1088	10/16/98	M	H	16:45	W	DN	13	16:53	16:50	16:50	3	21	5	3	8	0.381	2	21
1089	10/16/98	M	H	16:50	W	DN	13	16:53	16:50	16:50	3	21	0	3	3	0.1429	2	21
1090	7/17/98	F	W	14:10	W	R	15	14:15	14:11	14:11	4	26	1	4	5	0.1923	4	22
1091	7/17/98	F	H	14:13	W	T	15	14:15	14:37	14:11	4	26	2	0	2	0.0769	4	22
1092	7/17/98	F	H	14:13	W	T	15	14:15	14:37	14:11	4	26	2	0	2	0.0769	4	22
1093	7/17/98	M	H	14:13	W	T	15	14:15	14:37	14:11	4	26	2	0	2	0.0769	4	22
1094	10/29/98	M	H	14:18	W	DN	15	14:36	14:37	14:37	-1	26	18	0	18	0.6923	4	22
1095	10/29/98	F	H	14:30	W	T	15	14:36	14:37	14:37	-1	26	6	0	6	0.2308	4	22
1096	10/29/98	F	H	14:30	W	T	15	14:36	14:37	14:37	-1	26	6	0	6	0.2308	4	22
1097	12/4/98	M	H	14:30	W	DN	15	14:39	14:37	14:37	2	26	7	2	9	0.3462	4	22
1098	12/16/98	M	H	14:27	W	DN	15	14:37	14:37	14:37	0	26	10	0	10	0.3846	4	22
1099	12/16/98	M	A	14:31	W	DN	15	14:37	14:37	14:37	0	26	6	0	6	0.2308	4	22
1100	12/16/98	F	A	14:31	W	DN	15	14:37	14:37	14:37	0	26	6	0	6	0.2308	4	22
1101	7/17/98	M	A	14:56	W	DN	15	15:10	15:03	15:03	7	26	7	7	14	0.5385	4	22
1102	7/17/98	F	H	14:56	W	DN	15	15:10	15:03	15:03	7	26	7	7	14	0.5385	4	22
1103	10/29/98	F	W	14:57	R	DN	15	15:04	15:03	15:03	1	26	6	1	7	0.2692	4	22
1104	10/29/98	F	H	15:01	W	DN	15	15:04	15:03	15:03	1	26	2	1	3	0.1154	4	22
1105	10/29/98	F	H	15:01	W	DN	15	15:04	15:03	15:03	1	26	2	1	3	0.1154	4	22
1106	11/19/98	M	W	14:54	W	DN	15	15:03	15:03	15:03	0	26	9	0	9	0.3462	4	22
1107	11/19/98	F	W	14:54	W	DN	15	15:03	15:03	15:03	0	26	9	0	9	0.3462	4	22
1108	12/4/98	M	W	14:49	W	DN	15	15:03	15:03	15:03	0	26	14	0	14	0.5385	4	22
1109	10/29/98	F	H	15:28	W	DN	15	15:30	15:29	15:29	1	26	1	1	2	0.0769	4	22
1110	10/29/98	F	H	15:28	W	DN	15	15:30	15:29	15:29	1	26	1	1	2	0.0769	4	22



Non-Transfer Passengers Waiting Time Data (cont.)

O.N	DATE	SEX	E.C.	RAT	A.M.	ADW	BLN	BDT	EDT	SDT	SRI	BLH	W.B.	W.A.	WAIT	WTHR	LOC	D.T.
1111	11/19/98	F	H	15:10	W	DN	15	15:28	15:29	15:29	-1	26	18	0	18	0.6923	4	22
1112	11/19/98	M	B	15:17	W	S	15	15:28	15:29	15:29	-1	26	11	0	11	0.4231	4	22
1113	11/19/98	M	B	15:17	W	DN	15	15:28	15:29	15:29	-1	26	11	0	11	0.4231	4	22
1114	12/4/98	M	H	15:23	W	DN	15	15:29	15:29	15:29	0	26	6	0	6	0.2308	4	22
1115	12/4/98	M	H	15:24	W	DN	15	15:29	15:29	15:29	0	26	5	0	5	0.1923	4	22
1116	12/16/98	F	H	15:20	W	T	15	15:28	15:29	15:29	-1	26	8	0	8	0.3077	4	22
1117	12/16/98	M	H	15:20	W	T	15	15:28	15:29	15:29	-1	26	8	0	8	0.3077	4	22
1118	12/16/98	F	B	15:20	W	DN	15	15:28	15:29	15:29	-1	26	8	0	8	0.3077	4	22
1119	12/16/98	F	B	15:20	W	DN	15	15:28	15:29	15:29	-1	26	8	0	8	0.3077	4	22
1120	7/17/98	M	H	15:32	W	T	15	15:53	15:55	15:55	-2	26	21	0	21	0.8077	4	22
1121	7/17/98	M	H	15:32	W	T	15	15:53	15:55	15:55	-2	26	21	0	21	0.8077	4	22
1122	7/17/98	F	H	15:32	W	T	15	15:53	15:55	15:55	-2	26	21	0	21	0.8077	4	22
1123	7/17/98	M	W	15:40	W	T	15	15:53	15:55	15:55	-2	26	13	0	13	0.5	4	22
1124	11/19/98	M	W	15:44	W	DN	15	15:57	15:55	15:55	2	26	11	2	13	0.5	4	22
1125	11/19/98	F	H	15:50	W	DN	15	15:57	15:55	15:55	2	26	5	2	7	0.2692	4	22
1126	11/19/98	F	H	15:53	W	DN	15	15:57	15:55	15:55	2	26	2	2	4	0.1538	4	22
1127	12/4/98	F	A	15:34	W		15	15:57	15:55	15:55	2	26	21	2	23	0.8846	4	22
1128	12/4/98	M	H	15:42	W	T	15	15:57	15:55	15:55	2	26	13	2	15	0.5769	4	22
1129	12/4/98	F	H	15:42	W	T	15	15:57	15:55	15:55	2	26	13	2	15	0.5769	4	22
1130	12/4/98	F	W	15:48	W	T	15	15:57	15:55	15:55	2	26	7	2	9	0.3462	4	22
1131	12/4/98	M	B	15:48	W	T	15	15:57	15:55	15:55	2	26	7	2	9	0.3462	4	22
1132	12/4/98	M	W	15:55	W	DN	15	15:57	15:55	15:55	2	26	0	2	2	0.0769	4	22
1133	12/4/98	M	H	15:55	W	DN	15	15:57	15:55	15:55	2	26	0	2	2	0.0769	4	22
1134	12/4/98	M	H	15:55	W	DN	15	15:57	15:55	15:55	2	26	0	2	2	0.0769	4	22
1135	12/16/98	M	B	15:33	W	DN	15	16:02	15:55	15:55	7	26	22	7	29	1.1154	4	21
1136	12/16/98	M	B	15:33	W	DN	15	16:02	15:55	15:55	7	26	22	7	29	1.1154	4	21
1137	12/16/98	F	B	16:01	W	DN	15	16:02	16:21	15:55	7	26	1	0	1	0.0385	4	21
1138	12/16/98	F	B	16:01	W	DN	15	16:02	16:21	15:55	7	26	1	0	1	0.0385	4	21
1139	12/4/98	M	B	16:08	W	T	15	16:22	16:21	16:21	1	26	13	1	14	0.5385	4	21
1140	12/4/98	M	B	16:08	W	T	15	16:22	16:21	16:21	1	26	13	1	14	0.5385	4	21

Non-Transfer Passengers Waiting Time Data (cont.)

O.N	DATE	SEX	E.C.	RAT	A.M.	ADW	BLN	BDT	EDT	SDT	SRI	BLH	W.B.	W.A.	WAIT	WTHR	LOC	D.T.
1141	12/4/98	M	B	16:08	W	T	15	16:22	16:21	16:21	1	26	13	1	14	0.5385	4	21
1142	12/4/98	M	B	16:11	W	T	15	16:22	16:21	16:21	1	26	10	1	11	0.4231	4	21
1143	12/4/98	F	H	16:15	W	T	15	16:22	16:21	16:21	1	26	6	1	7	0.2692	4	21
1144	12/4/98	F	H	16:15	W	T	15	16:22	16:21	16:21	1	26	6	1	7	0.2692	4	21
1145	7/17/98	M	W	16:23	W	DN	15	16:52	16:50	16:50	2	29	27	2	29	1	4	21
1146	7/17/98	M	H	16:39	R	DN	15	16:52	16:50	16:50	2	29	11	2	13	0.4483	4	21
1147	7/17/98	F	W	16:56	W	DN	15	17:22	17:18	17:18	4	28	22	4	26	0.9286	4	21
1148	7/22/98	M	B	7:10	W	R	19	7:25	7:23	7:23	2	30	13	2	15	0.5	1	11
1149	7/20/98	F	H	7:46	W	DN	19	7:58	7:53	7:53	5	30	7	5	12	0.4	1	11
1150	7/22/98	F	W	7:50	W	DN	19	7:59	7:53	7:53	6	30	3	6	9	0.3	1	11
1151	7/22/98	M	W	7:50	W	DN	19	7:59	7:53	7:53	6	30	3	6	9	0.3	1	11
1152	7/27/98	M	H	7:45	W	T	19	7:55	7:53	7:53	2	30	8	2	10	0.3333	1	11
1153	7/27/98	F	W	7:50	W	R	19	7:55	7:53	7:53	2	30	3	2	5	0.1667	1	11
1154	7/20/98	F	W	8:15	W	T	19	8:31	8:27	8:27	4	34	12	4	16	0.4706	1	12
1155	7/22/98	M	W	8:29	W	T	19	8:35	8:53	8:27	8	34	6	0	6	0.1765	1	12
1156	7/20/98	M	W	8:43	W	R	19	8:57	8:53	8:53	4	26	10	4	14	0.5385	1	12
1157	7/20/98	F	W	8:53	W	DN	19	8:57	8:53	8:53	4	26	0	4	4	0.1538	1	12
1158	7/22/98	M	W	8:47	W	R	19	8:58	8:53	8:53	5	26	6	5	11	0.4231	1	12
1159	7/22/98	M	W	8:57	W	DN	19	8:58	9:24	8:53	5	26	1	0	1	0.0385	1	12
1160	7/27/98	M	A	8:56	W	R	19	8:58	9:24	8:53	5	26	2	0	2	0.0769	1	12
1161	7/27/98	F	W	9:24	W	DN	19	9:25	9:24	9:24	1	31	0	1	1	0.0323	1	12
1162	7/20/98	M	H	9:46	W	R	19	9:56	9:54	9:54	2	30	8	2	10	0.3333	1	12
1163	7/22/98	F	H	9:30	W	R	19	9:58	9:54	9:54	4	30	24	4	28	0.9333	1	12
1164	7/22/98	M	H	9:47	W	R	19	9:58	9:54	9:54	4	30	7	4	11	0.3667	1	12
1165	7/27/98	M	H	9:56	W	DN	19	9:57	10:28	9:54	3	30	1	0	1	0.0333	1	12
1166	7/20/98	M	H	10:28	U	DN	19	10:29	10:28	10:28	1	34	0	1	1	0.0294	1	12
1167	7/27/98	M	H	10:18	W	DN	19	10:28	10:28	10:28	0	34	10	0	10	0.2941	1	12
1168	7/15/98	M	W	13:37	U	DN	19	13:48	13:48	13:48	0	40	11	0	11	0.275	1	22
1169	6/23/98	F	H	14:07	U	R	19	14:33	14:28	14:28	5	40	21	5	26	0.65	1	22
1170	7/9/98	F	W	13:50	U	DN	19	14:32	14:28	14:28	4	40	38	4	42	1.05	1	22

Non-Transfer Passengers Waiting Time Data (cont.)

O.N	DATE	SEX	E.C.	RAT	A.M.	ADW	BLN	BDT	EDT	SDT	SRI	BLH	W.B.	W.A.	WAIT	WTHR	LOC	D.T.
1171	7/9/98	M	W	14:28	U	T	19	14:32	14:28	14:28	4	40	0	4	4	0.1	1	22
1172	7/9/98	F	W	14:28	U	T	19	14:32	14:28	14:28	4	40	0	4	4	0.1	1	22
1173	7/13/98	M	H	14:05	U	DN	19	14:27	14:28	14:28	-1	40	22	0	22	0.55	1	22
1174	9/14/98	M	H	14:17	W	T	19	14:40	14:47	14:47	-7	40	23	0	23	0.575	3	22
1175	9/14/98	F	H	14:17	W	T	19	14:40	14:47	14:47	-7	40	23	0	23	0.575	3	22
1176	6/23/98	F	W	14:38	U	DN	19	15:18	15:08	15:08	10	40	30	10	40	1	1	22
1177	7/9/98	F	H	15:07	U	DN	19	15:08	15:08	15:08	0	40	0	1	1	0.025	1	22
1178	7/15/98	F	H	15:01	U	DN	19	15:10	15:08	15:08	2	40	7	2	9	0.225	1	22
1179	7/15/98	M	H	15:04	U	R	19	15:10	<del>15:08</del>	15:08	2	40	4	2	6	0.15	1	22
1180	7/15/98	F	H	15:07	U	DN	19	15:10	15:08	15:08	2	40	1	2	3	0.075	1	22
1181	9/3/98	F	W	15:16	W	DN	19	15:41	15:21	15:21	20	34	5	20	25	0.7353	3	22
1182	9/25/98	M	W	15:37	D	DN	19	15:41	15:51	15:21	20	34	4	0	4	0.1176	3	22
1183	9/25/98	F	H	15:37	D	DN	19	15:41	15:51	15:21	20	34	4	0	4	0.1176	3	22
1184	7/7/98	M	W	15:50	U	R	19	15:53	15:50	15:50	3	42	0	3	3	0.0714	1	22
1185	9/3/98	M	H	15:54	W	DN	19	16:03	16:21	15:51	12	30	9	0	9	0.3	3	21
1186	9/25/98	M	W	15:48	W	DN	19	16:02	15:51	15:51	11	30	3	11	14	0.4667	3	21
1187	10/9/98	M	H	16:03	W	DN	19	16:03	16:21	15:51	12	30	0	0	0	0	3	21
1188	10/15/98	M	W	15:44	W	DN	19	15:52	15:51	15:51	1	30	7	1	8	0.2667	3	22
1189	9/25/98	M	W	16:39	W	DN	19	16:41	16:51	16:21	20	30	2	0	2	0.0667	3	21
1190	9/25/98	M	W	16:39	W	DN	19	16:41	16:51	16:21	20	30	2	0	2	0.0667	3	21
1191	9/25/98	M	B	16:40	W	DN	19	16:41	16:51	16:21	20	30	1	0	1	0.0333	3	21
1192	7/7/98	M	W	16:24	U	DN	19	16:25	16:24	16:24	1	34	0	1	1	0.0294	1	21
1193	7/13/98	M	A	16:57	U	DN	19	16:58	17:24	16:54	4	30	1	0	1	0.0333	1	21
1194	7/15/98	F	B	16:26	U	DN	19	16:57	16:54	16:54	3	30	28	3	31	1.0333	1	21
1195	7/15/98	M	W	16:53	U	DN	19	16:57	16:54	16:54	3	30	1	3	4	0.1333	1	21
1196	9/25/98	F	W	16:57	W	DN	19	17:17	17:22	17:22	-5	31	20	0	20	0.6452	3	21
1197	7/7/98	M	W	17:05	U	R	19	17:27	17:24	17:24	1	30	19	3	22	0.7333	1	21
1198	8/3/98	F	H	7:07	W	R	25	7:13	7:10	7:10	3	30	3	3	6	0.2	3	11
1199	7/31/98	F	W	7:21	W	DN	25	7:41	7:40	7:40	1	30	19	1	20	0.6667	3	11
1200	7/31/98	M	W	7:36	W	DN	25	7:41	7:40	7:40	1	30	4	1	5	0.1667	3	11

Non-Transfer Passengers Waiting Time Data (cont.)

O.N	DATE	SEX	E.C.	RAT	A.M.	ADW	BLN	BDT	EDT	SDT	SRI	BLH	W.B.	W.A.	WAIT	WTHR	LOC	D.T.
1201	8/3/98	F	W	7:37	W	DN	25	7:43	7:40	7:40	3	30	3	3	6	0.2	3	11
1202	8/13/98	M	H	7:33	W	DN	25	7:40	7:40	7:40	0	30	7	0	7	0.2333	3	11
1203	8/13/98	F	B	7:33	W	S	25	7:40	7:40	7:40	0	30	7	0	7	0.2333	3	11
1204	7/29/98	M	W	7:53	W	S	25	8:10	8:10	8:10	0	30	17	0	17	0.5667	3	11
1205	7/29/98	F	H	7:53	W	DN	25	8:10	8:10	8:10	0	30	17	0	17	0.5667	3	11
1206	7/29/98	M	H	8:03	W	DN	25	8:10	8:10	8:10	0	30	7	0	7	0.2333	3	11
1207	7/29/98	M	W	8:03	W	DN	25	8:10	8:10	8:10	0	30	7	0	7	0.2333	3	11
1208	7/29/98	M	W	8:10	W	DN	25	8:10	8:10	8:10	0	30	0	0	0	0	3	11
1209	7/31/98	F	H	8:03	W	DN	25	8:12	8:10	8:10	2	30	7	2	9	0.3	3	11
1210	7/31/98	M	H	8:09	W	DN	25	8:12	8:10	8:10	2	30	1	2	3	0.1	3	11
1211	7/31/98	M	W	8:09	W	T	25	8:12	8:10	8:10	2	30	1	2	3	0.1	3	11
1212	7/31/98	F	W	8:09	W	T	25	8:12	8:10	8:10	2	30	1	2	3	0.1	3	11
1213	7/31/98	M	H	8:09	W	T	25	8:12	8:10	8:10	2	30	1	2	3	0.1	3	11
1214	8/3/98	M	H	7:51	W	S	25	8:11	8:10	8:10	1	30	19	1	20	0.6667	3	11
1215	8/3/98	M	W	7:58	W	S	25	8:11	8:10	8:10	1	30	12	1	13	0.4333	3	11
1216	8/3/98	M	B	8:05	W	T	25	8:11	8:10	8:10	1	30	5	1	6	0.2	3	11
1217	8/13/98	M	B	8:10	W	DN	25	8:10	8:10	8:10	0	30	0	0	0	0	3	11
1218	7/29/98	M	B	8:16	W	DN	25	8:42	8:40	8:40	2	30	24	2	26	0.8667	3	12
1219	7/29/98	M	W	8:28	W	S	25	8:42	8:40	8:40	2	30	12	2	14	0.4667	3	12
1220	7/29/98	M	H	8:35	W	DN	25	8:42	8:40	8:40	2	30	5	2	7	0.2333	3	12
1221	7/31/98	M	W	8:21	W	S	25	8:44	8:40	8:40	4	30	19	4	23	0.7667	3	12
1222	7/31/98	F	B	8:21	W	DN	25	8:44	8:40	8:40	4	30	19	4	23	0.7667	3	12
1223	7/31/98	M	B	8:22	W	T	25	8:44	8:40	8:40	4	30	18	4	22	0.7333	3	12
1224	7/31/98	M	H	8:36	W	R	25	8:44	8:40	8:40	4	30	4	4	8	0.2667	3	12
1225	7/31/98	M	W	8:36	W	DN	25	8:44	8:40	8:40	4	30	4	4	8	0.2667	3	12
1226	8/3/98	M	H	8:36	W	T	25	8:43	8:40	8:40	3	30	4	3	7	0.2333	3	12
1227	8/3/98	M	H	8:39	W	R	25	8:43	8:40	8:40	3	30	1	3	4	0.1333	3	12
1228	8/3/98	M	B	9:20	W	S	25	9:43	9:40	8:40	3	30	20	3	23	0.7667	3	12
1229	8/13/98	M	B	8:22	W	R	25	8:43	8:40	8:40	3	30	18	3	21	0.7	3	12
1230	7/29/98	F	B	8:44	W	DN	25	9:10	9:10	9:10	0	30	26	0	26	0.8667	3	12

Non-Transfer Passengers Waiting Time Data (cont.)

O.N	DATE	SEX	E.C.	RAT	A.M.	ADW	BLN	BDT	EDT	SDT	SRI	BLH	W.B.	W.A.	WAIT	WTHR	LOC	D.T.
1231	7/29/98	F	W	9:01	W	DN	25	9:10	9:10	9:10	0	30	9	0	9	0.3	3	12
1232	8/13/98	M	W	9:04	W	DN	25	9:11	9:10	9:10	1	30	6	1	7	0.2333	3	12
1233	8/13/98	M	B	9:06	W	DN	25	9:11	9:10	9:10	1	30	4	1	5	0.1667	3	12
1234	9/14/98	F	W	8:32	W	DN	25	9:05	8:40	9:10	-5	30	8	25	33	1.1	3	12
1235	9/14/98	F	H	8:47	W	DN	25	9:05	9:10	9:10	-5	30	18	0	18	0.6	3	12
1236	9/14/98	M	H	8:53	W	DN	25	9:05	9:10	9:10	-5	30	12	0	12	0.4	3	12
1237	7/31/98	M	H	9:18	W	DN	25	9:41	9:40	9:40	1	30	22	1	23	0.7667	3	12
1238	7/31/98	F	B	9:27	W	DN	25	9:41	9:40	9:40	1	30	13	1	14	0.4667	3	12
1239	7/29/98	M	B	10:07	W	T	25	10:15	10:10	10:10	5	30	3	5	8	0.2667	3	12
1240	7/29/98	F	W	10:07	W	DN	25	10:15	10:10	10:10	5	30	3	5	8	0.2667	3	12
1241	7/29/98	M	W	10:09	W	T	25	10:15	10:10	10:10	5	30	1	5	6	0.2	3	12
1242	7/29/98	M	W	10:09	W	T	25	10:15	10:10	10:10	5	30	1	5	6	0.2	3	12
1243	7/29/98	M	H	10:12	W	DN	25	10:15	10:40	10:10	5	30	3	0	3	0.1	3	12
1244	7/31/98	M	W	9:49	W	DN	25	10:12	10:10	10:10	2	30	21	2	23	0.7667	3	12
1245	8/3/98	F	H	10:05	W	DN	25	10:15	10:10	10:10	5	30	5	5	10	0.3333	3	12
1246	8/13/98	F	H	9:37	W	DN	25	10:14	9:40	10:10	4	30	3	34	37	1.2333	3	12
1247	8/13/98	M	W	9:53	W	DN	25	10:14	10:10	10:10	4	30	17	4	21	0.7	3	12
1248	8/13/98	F	H	9:54	W	DN	25	10:14	10:10	10:10	4	30	16	4	20	0.6667	3	12
1249	7/29/98	F	W	10:21	W	R	25	10:41	10:40	10:40	1	30	19	1	20	0.6667	3	12
1250	7/29/98	M	H	10:35	W	DN	25	10:41	10:40	10:40	1	30	5	1	6	0.2	3	12
1251	7/29/98	M	H	10:35	W	DN	25	10:41	10:40	10:40	1	30	5	1	6	0.2	3	12
1252	7/31/98	M	W	10:15	W	DN	25	10:44	10:40	10:40	4	30	25	4	29	0.9667	3	12
1253	7/31/98	F	W	10:23	W	DN	25	10:44	10:40	10:40	4	30	17	4	21	0.7	3	12
1254	7/31/98	F	W	10:32	W	DN	25	10:44	10:40	10:40	4	30	8	4	12	0.4	3	12
1255	7/31/98	F	W	10:32	W	DN	25	10:44	10:40	10:40	4	30	8	4	12	0.4	3	12
1256	8/3/98	M	W	10:24	W	T	25	10:42	10:40	10:40	2	30	16	2	18	0.6	3	12
1257	8/3/98	F	H	10:30	W	T	25	10:42	10:40	10:40	2	30	10	2	12	0.4	3	12
1258	7/31/98	M	W	10:46	W	R	25	11:11	11:10	11:10	1	30	24	1	25	0.8333	3	12
1259	7/31/98	M	W	10:55	W	DN	25	11:11	11:10	11:10	1	30	15	1	16	0.5333	3	12
1260	10/15/98	M	W	14:35	W	DN	25	14:41	14:40	14:40	1	30	5	1	6	0.2	3	22

Non-Transfer Passengers Waiting Time Data (cont.)

O.N	DATE	SEX	E.C.	RAT	A.M.	ADW	BLN	BDT	EDT	SDT	SRI	BLH	W.B.	W.A.	WAIT	WTHR	LOC	D.T.
1261	10/15/98	M	B	14:36	W	DN	25	14:41	14:40	14:40	1	30	4	1	5	0.1667	3	22
1262	10/15/98	M	H	14:36	W	DN	25	14:41	14:40	14:40	1	30	4	1	5	0.1667	3	22
1263	9/3/98	F	H	14:40	W	DN	25	15:06	14:40	15:10	-4	30	0	26	26	0.8667	3	22
1264	9/3/98	M	H	14:54	W	DN	25	15:06	15:10	15:10	-4	30	12	0	12	0.4	3	22
1265	9/25/98	F	H	15:17	W	T	25	15:28	15:40	15:10	18	30	11	0	11	0.3667	3	22
1266	9/25/98	F	H	15:17	W	T	25	15:28	15:40	15:10	18	30	11	0	11	0.3667	3	22
1267	9/25/98	M	H	15:18	W	DN	25	15:28	15:40	15:10	18	30	10	0	10	0.3333	3	22
1268	10/9/98	M	H	14:47	W	DN	25	15:06	15:10	15:10	-4	30	19	0	19	0.6333	3	22
1269	10/9/98	M	B	14:47	W	DN	25	15:06	15:10	15:10	-4	30	19	0	19	0.6333	3	22
1270	10/9/98	F	H	15:22	W	DN	25	15:24	15:35	15:10	14	30	2	0	2	0.0667	3	22
1271	9/3/98	F	H	15:28	R	T	25	15:36	15:35	15:35	1	15	7	1	8	0.5333	3	22
1272	9/3/98	F	H	15:28	R	T	25	15:36	15:35	15:35	1	15	7	1	8	0.5333	3	22
1273	9/3/98	F	H	15:28	R	T	25	15:36	15:35	15:35	1	15	7	1	8	0.5333	3	22
1274	9/14/98	F	W	15:27	W	S	25	15:33	15:35	15:35	-2	15	6	0	6	0.4	3	22
1275	9/25/98	F	H	15:33	W	T	25	15:35	15:40	15:35	0	15	2	0	2	0.1333	3	22
1276	9/25/98	F	H	15:33	W	T	25	15:35	15:40	15:35	0	15	2	0	2	0.1333	3	22
1277	10/9/98	F	H	15:37	W	DN	25	15:38	15:40	15:35	3	15	1	0	1	0.0667	3	22
1278	10/9/98	M	H	15:37	W	DN	25	15:38	15:40	15:35	3	15	1	0	1	0.0667	3	22
1279	10/9/98	F	H	15:37	W	DN	25	15:38	15:40	15:35	3	15	1	0	1	0.0667	3	22
1280	10/15/98	F	H	15:21	W	T	25	15:35	15:35	15:35	0	15	14	0	14	0.9333	3	22
1281	9/3/98	F	H	15:49	W	DN	25	15:53	16:00	15:40	13	15	4	0	4	0.2667	3	22
1282	9/14/98	M	H	15:40	W	T	25	15:53	15:40	15:40	13	15	0	13	13	0.8667	3	22
1283	9/14/98	M	H	15:40	W	T	25	15:53	15:40	15:40	13	15	0	13	13	0.8667	3	22
1284	9/25/98	M	B	15:50	W	S	25	16:02	16:00	16:00	2	15	10	2	12	0.8	3	21
1285	9/25/98	M	H	16:12	W	DN	25	16:14	16:40	16:10	4	15	2	0	2	0.1333	3	21
1286	9/25/98	M	B	16:12	W	DN	25	16:14	16:40	16:10	4	15	2	0	2	0.1333	3	21
1287	9/25/98	M	H	16:32	W	DN	25	16:39	16:40	16:40	-1	30	7	0	7	0.2333	3	21
1288	9/25/98	F	A	16:37	W	DN	25	16:39	16:40	16:40	-1	30	2	0	2	0.0667	3	21
1289	8/5/98	M	H	7:13	W	DN	27	7:36	7:18	7:33	3	15	5	18	23	1.5333	2	11
1290	8/5/98	M	W	7:27	W	T	27	7:36	7:33	7:33	3	15	6	3	9	0.6	2	11

Non-Transfer Passengers Waiting Time Data (cont.)

O.N	DATE	SEX	E.C.	RAT	A.M.	ADW	BLN	BDT	EDT	SDT	SRI	BLH	W.B.	W.A.	WAIT	WTHR	LOC	D.T.
1291	12/17/98	M	H	7:31	W	S	27	7:37	7:33	7:33	4	15	2	4	6	0.4	2	11
1292	12/17/98	F	H	7:36	W	DN	27	7:37	7:48	7:33	4	15	1	0	1	0.0667	2	11
1293	7/23/98	M	B	7:31	W	DN	27	7:51	7:33	7:48	3	15	2	18	20	1.3333	2	11
1294	8/10/98	M	H	7:39	W	DN	27	7:49	7:48	7:48	1	15	9	1	10	0.6667	2	11
1295	8/10/98	M	B	7:43	W	DN	27	7:49	7:48	7:48	1	15	5	1	6	0.4	2	11
1296	12/17/98	M	B	7:51	W	DN	27	7:55	8:03	7:48	7	15	4	0	4	0.2667	2	11
1297	8/5/98	M	H	7:59	W	DN	27	8:06	8:03	8:03	3	15	4	3	7	0.4667	2	11
1298	12/17/98	F	B	8:03	W	DN	27	8:06	8:03	8:03	3	15	0	3	3	0.2	2	11
1299	12/17/98	F	H	8:05	W	DN	27	8:06	8:19	8:03	3	15	1	0	1	0.0667	2	11
1300	12/17/98	F	B	8:05	W	DN	27	8:06	8:19	8:03	3	15	1	0	1	0.0667	2	11
1301	8/5/98	M	H	8:20	W	DN	27	8:27	8:34	8:19	8	16	3	0	3	0.1875	2	11
1302	8/10/98	M	W	8:19	W	DN	27	8:21	8:19	8:19	2	16	0	2	2	0.125	2	11
1303	12/17/98	F	H	8:23	W	DN	27	8:25	8:34	8:19	6	16	2	0	2	0.125	2	11
1304	12/17/98	F	H	8:23	W	DN	27	8:25	8:34	8:19	6	16	2	0	2	0.125	2	11
1305	7/23/98	M	B	8:29	W	DN	27	8:37	8:34	8:34	3	15	5	3	8	0.5333	2	12
1306	8/5/98	F	B	8:38	W	S	27	8:55	8:54	8:54	1	20	16	1	17	0.85	2	12
1307	12/17/98	F	H	8:41	W	DN	27	8:56	8:54	8:54	2	20	13	2	15	0.75	2	12
1308	12/17/98	M	H	8:53	W	DN	27	8:56	8:54	8:54	2	20	1	2	3	0.15	2	12
1309	12/17/98	F	H	8:53	W	DN	27	8:56	8:54	8:54	2	20	1	2	3	0.15	2	12
1310	7/23/98	M	B	9:02	W	T	27	9:10	9:09	9:09	1	15	7	1	8	0.5333	2	12
1311	7/23/98	M	B	9:02	W	T	27	9:10	9:09	9:09	1	15	7	1	8	0.5333	2	12
1312	8/5/98	M	H	9:00	W	DN	27	9:14	9:09	9:09	5	15	9	5	14	0.9333	2	12
1313	12/17/98	F	W	9:00	W	DN	27	9:11	9:09	9:09	2	15	9	2	11	0.7333	2	12
1314	12/17/98	M	B	9:01	W	DN	27	9:11	9:09	9:09	2	15	8	2	10	0.6667	2	12
1315	12/17/98	M	H	9:04	W	DN	27	9:11	9:09	9:09	2	15	5	2	7	0.4667	2	12
1316	12/17/98	F	B	9:07	W	DN	27	9:11	9:09	9:09	2	15	2	2	4	0.2667	2	12
1317	12/17/98	M	H	9:07	W	DN	27	9:11	9:09	9:09	2	15	2	2	4	0.2667	2	12
1318	8/10/98	M	W	9:15	W	DN	27	9:27	9:24	9:24	3	15	9	3	12	0.8	2	12
1319	12/17/98	M	H	9:23	W	DN	27	9:27	9:24	9:24	3	15	1	3	4	0.2667	2	12
1320	12/17/98	M	W	9:24	W	DN	27	9:27	9:24	9:24	3	15	0	3	3	0.2	2	12

Non-Transfer Passengers Waiting Time Data (cont.)

O.N	DATE	SEX	E.C.	RAT	A.M.	ADW	BLN	BDT	EDT	SDT	SRI	BLH	W.B.	W.A.	WAIT	WTHR	LOC	D.T.
1321	12/17/98	F	H	9:26	W	DN	27	9:27	9:39	9:24	3	15	1	0	1	0.0667	2	12
1322	8/5/98	F	H	9:40	W	DN	27	9:43	9:54	9:39	4	15	3	0	3	0.2	2	12
1323	8/10/98	M	H	9:31	W	DN	27	9:37	9:39	9:39	-2	15	6	0	6	0.4	2	12
1324	8/10/98	M	B	9:31	W	T	27	9:37	9:39	9:39	-2	15	6	0	6	0.4	2	12
1325	7/23/98	M	H	9:40	W	DN	27	9:57	9:54	9:54	3	15	14	3	17	1.1333	2	12
1326	8/10/98	F	B	9:48	W	DN	27	9:55	9:54	9:54	1	15	7	0	7	0.4667	2	12
1327	7/23/98	F	H	10:09	W	DN	27	10:10	10:09	10:09	1	15	0	1	1	0.0667	2	12
1328	8/10/98	F	H	10:08	W	DN	27	10:16	10:09	10:09	7	15	1	7	8	0.5333	2	12
1329	8/10/98	F	H	10:11	W	DN	27	10:16	10:24	10:09	7	15	5	0	5	0.3333	2	12
1330	8/10/98	M	B	10:14	W	DN	27	10:16	10:24	10:09	7	15	2	0	2	0.1333	2	12
1331	8/10/98	M	H	10:14	W	DN	27	10:16	10:24	10:09	7	15	2	0	2	0.1333	2	12
1332	7/23/98	F	W	10:14	W	T	27	10:29	10:24	10:24	5	15	10	5	15	1	2	12
1333	7/23/98	M	W	10:14	W	T	27	10:29	10:24	10:24	5	15	10	5	15	1	2	12
1334	7/23/98	M	W	10:14	W	T	27	10:29	10:24	10:24	5	15	10	5	15	1	2	12
1335	7/23/98	F	W	10:22	W	DN	27	10:29	10:24	10:24	5	15	2	5	7	0.4667	2	12
1336	8/5/98	F	H	10:18	W	DN	27	10:28	10:24	10:24	4	15	6	4	10	0.6667	2	12
1337	8/5/98	F	H	10:18	W	DN	27	10:28	10:24	10:24	4	15	6	4	10	0.6667	2	12
1338	8/5/98	F	H	10:18	W	DN	27	10:28	10:24	10:24	4	15	6	4	10	0.6667	2	12
1339	8/5/98	M	H	10:21	W	DN	27	10:28	10:24	10:24	4	15	3	4	7	0.4667	2	12
1340	8/5/98	F	H	10:35	W	DN	27	10:43	10:39	10:39	4	15	4	4	8	0.5333	2	12
1341	8/10/98	M	H	10:46	W	DN	27	11:02	10:54	10:54	8	15	8	8	16	1.0667	2	12
1342	9/24/98	M	H	13:38	W	DN	27	13:41	13:50	13:37	4	15	3	0	3	0.2	2	22
1343	10/1/98	F	H	13:42	W	T	27	13:50	13:50	13:50	0	13	8	0	8	0.6154	2	22
1344	10/1/98	F	H	13:42	W	T	27	13:50	13:50	13:50	0	13	8	0	8	0.6154	2	22
1345	10/1/98	F	H	13:43	W	T	27	13:50	13:50	13:50	0	13	7	0	7	0.5385	2	22
1346	10/1/98	F	H	13:43	W	T	27	13:50	13:50	13:50	0	13	7	0	7	0.5385	2	22
1347	10/1/98	M	H	13:49	W	DN	27	13:50	13:50	13:50	0	13	1	0	1	0.0769	2	22
1348	10/1/98	F	B	13:49	W	DN	27	13:50	13:50	13:50	0	13	1	0	1	0.0769	2	22
1349	10/1/98	M	H	13:50	W	DN	27	13:50	13:50	13:50	0	13	0	0	0	0	2	22
1350	10/8/98	F	W	13:45	W	DN	27	13:51	13:50	13:50	1	13	5	1	6	0.4615	2	22



Non-Transfer Passengers Waiting Time Data (cont.)

O.N	DATE	SEX	E.C.	RAT	A.M.	ADW	BLN	BDT	EDT	SDT	SRI	BLH	W.B.	W.A.	WAIT	WTHR	LOC	D.T.
1351	10/8/98	F	W	13:47	W	DN	27	13:51	13:50	13:50	1	13	3	1	4	0.3077	2	22
1352	9/24/98	F	H	13:58	W	DN	27	14:07	14:05	14:05	2	15	7	2	9	0.6	2	22
1353	9/24/98	F	H	13:58	W	DN	27	14:07	14:05	14:05	2	15	7	2	9	0.6	2	22
1354	9/24/98	F	H	13:58	W	DN	27	14:07	14:05	14:05	2	15	7	2	9	0.6	2	22
1355	9/24/98	M	B	14:00	W	DN	27	14:07	14:05	14:05	2	15	5	2	7	0.4667	2	22
1356	9/24/98	M	W	14:03	W	DN	27	14:07	14:05	14:05	2	15	2	2	4	0.2667	2	22
1357	9/24/98	M	W	14:05	W	DN	27	14:07	14:05	14:05	2	15	0	2	2	0.1333	2	22
1358	9/24/98	M	A	14:06	W	DN	27	14:07	14:20	14:05	2	15	1	0	1	0.0667	2	22
1359	9/24/98	F	H	14:06	W	DN	27	14:07	14:20	14:05	2	15	1	0	1	0.0667	2	22
1360	9/24/98	M	B	14:06	W	DN	27	14:07	14:20	14:05	2	15	1	0	1	0.0667	2	22
1361	10/1/98	F	H	13:58	W	DN	27	14:06	14:05	14:05	1	15	7	1	8	0.5333	2	22
1362	10/1/98	F	H	13:58	W	DN	27	14:06	14:05	14:05	1	15	7	1	8	0.5333	2	22
1363	10/1/98	F	H	13:58	W	DN	27	14:06	14:05	14:05	1	15	7	1	8	0.5333	2	22
1364	10/8/98	M	H	13:53	W	DN	27	14:11	14:05	14:05	6	15	12	6	18	1.2	2	22
1365	10/8/98	M	W	14:03	R	DN	27	14:11	14:05	14:05	6	15	2	6	8	0.5333	2	22
1366	10/8/98	M	W	14:03	R	DN	27	14:11	14:05	14:05	6	15	2	6	8	0.5333	2	22
1367	10/8/98	M	W	14:03	R	DN	27	14:11	14:05	14:05	6	15	2	6	8	0.5333	2	22
1368	10/8/98	F	W	14:03	R	DN	27	14:11	14:05	14:05	6	15	2	6	8	0.5333	2	22
1369	10/8/98	F	W	14:10	W	DN	27	14:11	14:20	14:05	6	15	1	0	1	0.0667	2	22
1370	9/24/98	F	B	14:21	W	DN	27	14:22	14:35	14:20	2	15	1	0	1	0.0667	2	22
1371	9/24/98	M	B	14:21	W	DN	27	14:22	14:35	14:20	2	15	1	0	1	0.0667	2	22
1372	10/1/98	F	W	14:13	W	DN	27	14:20	14:20	14:20	0	15	7	0	7	0.4667	2	22
1373	10/1/98	F	H	14:13	W	DN	27	14:20	14:20	14:20	0	15	7	0	7	0.4667	2	22
1374	10/1/98	F	H	14:13	W	DN	27	14:20	14:20	14:20	0	15	7	0	7	0.4667	2	22
1375	9/24/98	F	B	14:23	W	DN	27	14:38	14:35	14:35	3	15	12	3	15	1	2	22
1376	9/24/98	M	H	14:24	W	DN	27	14:38	14:35	14:35	3	15	11	3	14	0.9333	2	22
1377	9/24/98	F	O	14:28	W	DN	27	14:38	14:35	14:35	3	15	7	3	10	0.6667	2	22
1378	9/24/98	F	O	14:28	W	DN	27	14:38	14:35	14:35	3	15	7	3	10	0.6667	2	22
1379	9/24/98	F	H	14:33	W	DN	27	14:38	14:35	14:35	3	15	2	3	5	0.3333	2	22
1380	9/24/98	F	H	14:34	W	DN	27	14:38	14:35	14:35	3	15	1	3	4	0.2667	2	22

Non-Transfer Passengers Waiting Time Data (cont.)

O.N	DATE	SEX	E.C.	RAT	A.M.	ADW	BLN	BDT	EDT	SDT	SRI	BLH	W.B.	W.A.	WAIT	WTHR	LOC	D.T.
1381	10/1/98	F	B	14:27	W	DN	27	14:38	14:35	14:35	3	15	8	3	11	0.7333	2	22
1382	10/1/98	F	H	14:28	W	DN	27	14:38	14:35	14:35	3	15	7	3	10	0.6667	2	22
1383	10/1/98	M	B	14:30	W	DN	27	14:38	14:35	14:35	3	15	5	3	8	0.5333	2	22
1384	10/1/98	F	H	14:31	W	DN	27	14:38	14:35	14:35	3	15	4	3	7	0.4667	2	22
1385	10/1/98	F	H	14:34	W	DN	27	14:38	14:35	14:35	3	15	1	3	4	0.2667	2	22
1386	10/1/98	F	H	14:34	W	DN	27	14:38	14:35	14:35	3	15	1	3	4	0.2667	2	22
1387	10/8/98	F	W	14:25	W	DN	27	14:39	14:35	14:35	4	15	10	4	14	0.9333	2	22
1388	10/8/98	M	H	14:30	W	DN	27	14:39	14:35	14:35	4	15	5	4	9	0.6	2	22
1389	10/1/98	F	H	14:45	W	DN	27	14:53	14:50	14:50	3	15	5	3	8	0.5333	2	22
1390	10/1/98	F	H	14:47	W	DN	27	14:53	14:50	14:50	3	15	3	3	6	0.4	2	22
1391	10/1/98	F	H	14:47	W	DN	27	14:53	14:50	14:50	3	15	3	3	6	0.4	2	22
1392	10/1/98	F	H	14:50	W	DN	27	14:53	14:50	14:50	3	15	0	3	3	0.2	2	22
1393	10/1/98	F	H	14:50	W	DN	27	14:53	14:50	14:50	3	15	0	3	3	0.2	2	22
1394	10/8/98	F	H	14:45	W	DN	27	14:55	14:50	14:50	5	15	5	5	10	0.6667	2	22
1395	10/8/98	F	H	14:45	W	DN	27	14:55	14:50	14:50	5	15	5	5	10	0.6667	2	22
1396	10/8/98	F	H	14:45	W	DN	27	14:55	14:50	14:50	5	15	5	5	10	0.6667	2	22
1397	10/8/98	M	H	14:47	W	DN	27	14:55	14:50	14:50	5	15	3	5	8	0.5333	2	22
1398	10/8/98	M	W	14:48	W	DN	27	14:55	14:50	14:50	5	15	2	5	7	0.4667	2	22
1399	10/8/98	M	B	14:53	W	DN	27	14:55	14:59	14:50	5	15	2	0	2	0.1333	2	22
1400	9/24/98	M	B	15:02	W	DN	27	15:02	15:14	14:59	3	9	0	0	0	0	2	22
1401	10/16/98	F	B	14:55	W	DN	27	14:59	14:59	14:59	0	9	4	0	4	0.4444	2	22
1402	9/24/98	M	W	15:03	W	DN	27	15:16	15:14	15:14	2	15	11	2	13	0.8667	2	22
1403	9/24/98	F	H	15:14	W	DN	27	15:16	15:14	15:14	2	15	0	2	2	0.1333	2	22
1404	9/24/98	F	H	15:14	W	DN	27	15:16	15:14	15:14	2	15	0	2	2	0.1333	2	22
1405	9/24/98	M	H	15:15	W	DN	27	15:16	15:29	15:14	2	15	1	0	1	0.0667	2	22
1406	10/1/98	M	H	14:58	W	DN	27	15:14	14:59	15:14	0	15	1	15	16	1.0667	2	22
1407	10/1/98	M	H	15:05	W	DN	27	15:14	15:14	15:14	0	15	9	0	9	0.6	2	22
1408	10/1/98	M	H	15:10	W	DN	27	15:14	15:14	15:14	0	15	4	0	4	0.2667	2	22
1409	10/1/98	M	H	15:10	W	DN	27	15:14	15:14	15:14	0	15	4	0	4	0.2667	2	22
1410	10/1/98	F	B	15:11	W	DN	27	15:14	15:14	15:14	0	15	3	0	3	0.2	2	22

Non-Transfer Passengers Waiting Time Data (cont.)

O.N	DATE	SEX	E.C.	RAT	A.M.	ADW	BLN	BDT	EDT	SDT	SRI	BLH	W.B.	W.A.	WAIT	WTHR	LOC	D.T.
1411	10/1/98	M	H	15:11	W	DN	27	15:14	15:14	15:14	0	15	3	0	3	0.2	2	22
1412	10/1/98	M	H	15:14	W	DN	27	15:14	15:14	15:14	0	15	0	0	0	0	2	22
1413	10/8/98	F	B	15:01	W	DN	27	15:15	15:14	15:14	1	15	13	1	14	0.9333	2	22
1414	10/8/98	M	W	15:05	W	DN	27	15:15	15:14	15:14	1	15	9	1	10	0.6667	2	22
1415	10/16/98	M	B	15:06	W	DN	27	15:13	15:14	15:14	-1	15	7	0	7	0.4667	2	22
1416	10/16/98	M	B	15:06	W	DN	27	15:13	15:14	15:14	-1	15	7	0	7	0.4667	2	22
1417	9/24/98	M	B	15:23	W	DN	27	15:33	15:29	15:29	4	15	6	4	10	0.6667	2	22
1418	9/24/98	F	B	15:23	W	DN	27	15:33	15:29	15:29	4	15	6	4	10	0.6667	2	22
1419	9/24/98	M	H	15:23	W	DN	27	15:33	15:29	15:29	4	15	6	4	10	0.6667	2	22
1420	9/24/98	F	M	15:26	W	DN	27	15:33	15:29	15:29	4	15	3	4	7	0.4667	2	22
1421	9/24/98	M	H	15:32	W	DN	27	15:33	15:43	15:29	4	15	1	0	1	0.0667	2	22
1422	10/8/98	F	B	15:26	W	DN	27	15:36	15:29	15:29	7	15	3	7	10	0.6667	2	22
1423	10/8/98	F	B	15:26	W	DN	27	15:36	15:29	15:29	7	15	3	7	10	0.6667	2	22
1424	10/8/98	M	W	15:32	W	DN	27	15:36	15:43	15:29	7	15	4	0	4	0.2667	2	22
1425	10/8/98	F	W	15:32	W	DN	27	15:36	15:43	15:29	7	15	4	0	4	0.2667	2	22
1426	10/16/98	F	B	15:20	W	T	27	15:37	15:29	15:29	8	15	9	6	15	1	2	22
1427	10/16/98	F	B	15:20	W	T	27	15:37	15:29	15:29	8	15	9	6	15	1	2	22
1428	10/16/98	M	H	15:21	W	DN	27	15:37	15:29	15:29	8	15	8	6	14	0.9333	2	22
1429	10/16/98	M	W	15:23	W	S	27	15:37	15:29	15:29	8	15	6	6	12	0.8	2	22
1430	10/16/98	F	H	15:34	W	DN	27	15:37	15:43	15:29	8	15	1	0	1	0.0667	2	22
1431	10/16/98	M	H	15:31	W	S	27	15:37	15:43	15:29	8	15	6	0	6	0.4	2	22
1432	9/24/98	F	W	15:37	W	DN	27	15:44	15:43	15:43	1	14	6	1	7	0.5	2	22
1433	9/24/98	M	H	15:40	W	DN	27	15:44	15:43	15:43	1	14	3	1	4	0.2857	2	22
1434	9/24/98	F	H	15:42	W	DN	27	15:44	15:43	15:43	1	14	1	1	2	0.1429	2	22
1435	10/16/98	F	H	15:36	W	DN	27	15:44	15:43	15:43	1	14	7	1	8	0.5714	2	22
1436	10/16/98	M	H	15:38	W	DN	27	15:44	15:43	15:43	1	14	5	1	6	0.4286	2	22
1437	10/2/98	M	W	15:58	W	DN	27	16:05	15:58	15:58	7	15	0	7	7	0.4667	2	21
1438	10/2/98	M	B	15:59	W	DN	27	16:05	16:18	15:58	7	15	6	0	6	0.4	2	21
1439	10/2/98	F	H	16:05	W	T	27	16:21	16:18	16:18	3	20	13	3	16	0.8	2	21
1440	10/2/98	F	H	16:05	W	T	27	16:21	16:18	16:18	3	20	13	3	16	0.8	2	21

Non-Transfer Passengers Waiting Time Data (cont.)

O.N	DATE	SEX	E.C.	RAT	A.M.	ADW	BLN	BDT	EDT	SDT	SRI	BLH	W.B.	W.A.	WAIT	WTHR	LOC	D.T.
1441	10/2/98	F	H	16:07	W	T	27	16:21	16:18	16:18	3	20	11	3	14	0.7	2	21
1442	10/2/98	M	H	16:07	W	T	27	16:21	16:18	16:18	3	20	11	3	14	0.7	2	21
1443	10/2/98	F	W	16:17	W	DN	27	16:21	16:18	16:18	3	20	1	3	4	0.2	2	21
1444	10/2/98	F	B	16:18	W	DN	27	16:21	16:18	16:18	3	20	0	3	3	0.15	2	21
1445	10/2/98	M	H	16:20	W	DN	27	16:21	16:33	16:18	3	20	1	0	1	0.05	2	21
1446	10/16/98	M	H	15:52	W	DN	27	16:20	15:58	16:18	2	20	6	22	28	1.4	2	21
1447	10/16/98	F	H	15:58	W	DN	27	16:20	15:58	16:18	2	20	0	22	22	1.1	2	21
1448	10/16/98	M	H	16:05	W	T	27	16:20	16:18	16:18	2	20	13	2	15	0.75	2	21
1449	10/16/98	F	H	16:05	W	T	27	16:20	16:18	16:18	2	20	13	2	15	0.75	2	21
1450	10/16/98	F	H	16:05	W	T	27	16:20	16:18	16:18	2	20	13	2	15	0.75	2	21
1451	10/16/98	F	H	16:05	W	T	27	16:20	16:18	16:18	2	20	13	2	15	0.75	2	21
1452	10/16/98	M	H	16:07	W	DN	27	16:20	16:18	16:18	2	20	11	2	13	0.65	2	21
1453	10/16/98	F	H	16:20	W	DN	27	16:20	16:33	16:18	2	20	0	0	0	0	2	21
1454	10/16/98	M	H	16:35	W	DN	27	16:37	16:48	16:33	4	15	2	0	2	0.1333	2	21
1455	10/16/98	F	B	16:35	W	DN	27	16:37	16:48	16:33	4	15	2	0	2	0.1333	2	21
1456	10/2/98	M	H	16:40	W	DN	27	16:51	16:48	16:48	3	15	8	3	11	0.7333	2	21
1457	10/2/98	M	B	16:45	W	DN	27	16:51	16:48	16:48	3	15	3	3	6	0.4	2	21
1458	10/2/98	F	B	16:47	W	T	27	16:51	16:48	16:48	3	15	1	3	4	0.2667	2	21
1459	10/2/98	F	B	16:47	W	T	27	16:51	16:48	16:48	3	15	1	3	4	0.2667	2	21
1460	10/2/98	M	H	16:50	W	T	27	16:51	17:08	16:48	3	15	1	0	1	0.0667	2	21
1461	10/2/98	M	H	16:50	W	DN	27	16:51	17:08	16:48	3	15	1	0	1	0.0667	2	21
1462	10/16/98	F	B	16:37	W	DN	27	16:51	16:48	16:48	3	15	11	3	14	0.9333	2	21
1463	10/16/98	F	H	16:37	W	DN	27	16:51	16:48	16:48	3	15	11	3	14	0.9333	2	21
1464	10/16/98	M	H	16:37	W	DN	27	16:51	16:48	16:48	3	15	11	3	14	0.9333	2	21
1465	10/16/98	M	H	16:37	W	DN	27	16:51	16:48	16:48	3	15	11	3	14	0.9333	2	21
1466	10/2/98	F	B	16:52	W	DN	27	17:15	17:08	17:08	7	20	16	7	23	1.15	2	21
1467	10/2/98	F	H	16:52	W	DN	27	17:15	17:08	17:08	7	20	16	7	23	1.15	2	21
1468	10/2/98	F	H	16:55	W	T	27	17:15	17:08	17:08	7	20	13	7	20	1	2	21
1469	10/2/98	F	H	16:55	W	T	27	17:15	17:08	17:08	7	20	13	7	20	1	2	21
1470	10/2/98	F	H	16:56	W	DN	27	17:15	17:08	17:08	7	20	12	7	19	0.95	2	21

Non-Transfer Passengers Waiting Time Data (cont.)

O.N	DATE	SEX	E.C.	RAT	A.M.	ADW	BLN	BDT	EDT	SDT	SRI	BLH	W.B.	W.A.	WAIT	WTHR	LOC	D.T.
1471	10/2/98	M	W	16:59	W	T	27	17:15	17:08	17:08	7	20	9	7	16	0.8	2	21
1472	10/2/98	M	W	16:59	W	T	27	17:15	17:08	17:08	7	20	9	7	16	0.8	2	21
1473	10/2/98	M	H	16:59	W	T	27	17:15	17:08	17:08	7	20	9	7	16	0.8	2	21
1474	10/2/98	M	H	16:59	W	DN	27	17:15	17:08	17:08	7	20	9	7	16	0.8	2	21
1475	10/2/98	F	B	17:00	W	DN	27	17:15	17:08	17:08	7	20	8	7	15	0.75	2	21
1476	10/2/98	F	B	17:03	W	DN	27	17:15	17:08	17:08	7	20	5	7	12	0.6	2	21
1477	10/2/98	F	H	17:05	W	DN	27	17:15	17:08	17:08	7	20	3	7	10	0.5	2	21
1478	10/2/98	F	H	17:09	W	DN	27	17:15	17:29	17:08	7	20	6	0	6	0.3	2	21
1479	10/2/98	F	H	17:10	W	DN	27	17:15	17:29	17:08	7	20	5	0	5	0.25	2	21
1480	10/2/98	F	B	17:13	W	DN	27	17:15	17:29	17:08	7	20	2	0	2	0.1	2	21
1481	10/2/98	M	B	17:14	W	DN	27	17:15	17:29	17:08	7	20	1	0	1	0.05	2	21
1482	10/2/98	F	H	17:14	W	DN	27	17:15	17:29	17:08	7	20	1	0	1	0.05	2	21
1483	10/2/98	F	H	17:14	W	DN	27	17:15	17:29	17:08	7	20	1	0	1	0.05	2	21
1484	10/2/98	F	H	17:14	W	DN	27	17:15	17:29	17:08	7	20	1	0	1	0.05	2	21
1485	10/16/98	M	H	16:55	W	T	27	17:11	17:08	17:08	3	20	13	3	16	0.8	2	21
1486	10/16/98	M	H	16:55	W	T	27	17:11	17:08	17:08	3	20	13	3	16	0.8	2	21
1487	10/16/98	M	H	16:56	W	DN	27	17:11	17:08	17:08	3	20	12	3	15	0.75	2	21
1488	10/16/98	F	W	17:00	W	DN	27	17:11	17:08	17:08	3	20	8	3	11	0.55	2	21
1489	10/16/98	M	W	17:05	W	DN	27	17:11	17:08	17:08	3	20	3	3	6	0.3	2	21
1490	10/16/98	M	H	17:05	W	DN	27	17:11	17:08	17:08	3	20	3	3	6	0.3	2	21
1491	10/16/98	M	H	17:06	W	DN	27	17:11	17:08	17:08	3	20	2	3	5	0.25	2	21
1492	10/16/98	F	H	17:10	W	DN	27	17:11	17:29	17:08	3	20	1	0	1	0.05	2	21
1493	10/16/98	F	H	17:10	W	DN	27	17:11	17:29	17:08	3	20	1	0	1	0.05	2	21
1494	10/2/98	M	B	17:20	W	DN	27	17:33	17:29	17:29	4	21	9	4	13	0.619	2	21
1495	10/2/98	M	A	17:27	W	DN	27	17:33	17:29	17:29	4	21	2	4	6	0.2857	2	21
1496	10/2/98	F	H	17:27	W	T	27	17:33	17:29	17:29	4	21	2	4	6	0.2857	2	21
1497	10/2/98	F	H	17:29	W	DN	27	17:33	17:29	17:29	4	21	0	4	4	0.1905	2	21
1498	10/2/98	F	H	17:29	W	DN	27	17:33	17:29	17:29	4	21	0	4	4	0.1905	2	21
1499	10/2/98	F	H	17:29	W	T	27	17:33	17:29	17:29	4	21	0	4	4	0.1905	2	21
1500	10/2/98	M	H	17:30	W	DN	27	17:33	17:49	17:29	4	21	3	0	3	0.1429	2	21

Non-Transfer Passengers Waiting Time Data (cont.)

O.N	DATE	SEX	E.C.	RAT	A.M.	ADW	BLN	BDT	EDT	SDT	SRI	BLH	W.B.	W.A.	WAIT	WTHR	LOC	D.T.
1501	10/2/98	F	H	17:30	W	DN	27	17:33	17:49	17:29	4	21	3	0	3	0.1429	2	21
1502	10/2/98	M	B	17:30	W	DN	27	17:33	17:49	17:29	4	21	3	0	3	0.1429	2	21
1503	10/2/98	M	H	17:30	W	DN	27	17:33	17:49	17:29	4	21	3	0	3	0.1429	2	21
1504	10/2/98	F	H	17:32	W	DN	27	17:33	17:49	17:29	4	21	1	0	1	0.0476	2	21
1505	10/2/98	M	W	17:38	W	T	27	17:49	17:49	17:49	0	20	11	0	11	0.55	2	21
1506	10/2/98	F	W	17:38	W	T	27	17:49	17:49	17:49	0	20	11	0	11	0.55	2	21
1507	10/2/98	F	W	17:38	W	T	27	17:49	17:49	17:49	0	20	11	0	11	0.55	2	21
1508	10/2/98	F	H	17:42	W	DN	27	17:49	17:49	17:49	0	20	7	0	7	0.35	2	21
1509	10/2/98	F	H	17:42	W	DN	27	17:49	17:49	17:49	0	20	7	0	7	0.35	2	21
1510	10/2/98	F	H	17:47	W	DN	27	17:49	17:49	17:49	0	20	2	0	2	0.1	2	21
1511	7/20/98	F	H	8:41	W	DN	29	8:51	8:50	8:50	1	32	9	1	10	0.3125	1	12
1512	7/20/98	F	H	7:43	W	DN	30	8:01	8:00	8:00	1	30	17	1	18	0.6	1	11
1513	7/22/98	F	H	8:11	W	DN	30	8:30	8:30	8:30	0	30	19	0	19	0.6333	1	11
1514	7/20/98	M	H	8:41	W	DN	30	9:00	9:00	9:00	0	30	19	0	19	0.6333	1	12
1515	7/20/98	M	H	8:53	W	DN	30	9:00	9:00	9:00	0	30	7	0	7	0.2333	1	12
1516	7/20/98	M	W	9:27	W	S	30	9:30	9:30	9:30	0	30	3	0	3	0.1	1	12
1517	7/22/98	F	W	10:15	W	T	30	10:32	10:30	10:30	2	30	15	2	17	0.5667	1	12
1518	7/22/98	F	W	10:15	W	T	30	10:32	10:30	10:30	2	30	15	2	17	0.5667	1	12
1519	7/22/98	F	W	10:15	W	T	30	10:32	10:30	10:30	2	30	15	2	17	0.5667	1	12
1520	7/22/98	M	W	10:15	W	T	30	10:32	10:30	10:30	2	30	15	2	17	0.5667	1	12
1521	7/22/98	M	W	10:15	W	T	30	10:32	10:30	10:30	2	30	15	2	17	0.5667	1	12
1522	7/22/98	M	W	10:15	W	T	30	10:32	10:30	10:30	2	30	15	2	17	0.5667	1	12
1523	7/22/98	M	W	10:15	W	T	30	10:32	10:30	10:30	2	30	15	2	17	0.5667	1	12
1524	7/22/98	F	W	10:15	W	T	30	10:32	10:30	10:30	2	30	15	2	17	0.5667	1	12
1525	7/22/98	F	W	10:15	W	T	30	10:32	10:30	10:30	2	30	15	2	17	0.5667	1	12
1526	7/22/98	F	W	10:15	W	DN	30	10:32	10:30	10:30	2	30	15	2	17	0.5667	1	12
1527	6/23/98	F	W	13:56	U	T	30	14:06	14:00	14:00	6	30	4	6	10	0.3333	1	22
1528	6/23/98	F	W	13:56	U	T	30	14:06	14:00	14:00	6	30	4	6	10	0.3333	1	22
1529	7/15/98	F	W	13:50	U	DN	30	14:08	14:00	14:00	8	30	10	8	18	0.6	1	22
1530	7/15/98	M	H	13:51	U	S	30	14:08	14:00	14:00	7	30	9	8	17	0.5667	1	22

Non-Transfer Passengers Waiting Time Data (cont.)

O.N	DATE	SEX	E.C.	RAT	A.M.	ADW	BLN	BDT	EDT	SDT	SRI	BLH	W.B.	W.A.	WAIT	WTHR	LOC	D.T.
1531	6/23/98	M	W	14:34	U	DN	30	14:36	15:00	14:30	6	30	2	0	2	0.0667	1	22
1532	7/9/98	F	W	14:30	U	DN	30	14:31	14:30	14:30	1	30	0	1	1	0.0333	1	22
1533	7/9/98	M	H	14:30	U	DN	30	14:31	14:30	14:30	1	30	0	1	1	0.0333	1	22
1534	7/13/98	M	B	14:50	U	S	30	15:05	15:00	15:00	5	30	10	5	15	0.5	1	22
1535	7/9/98	M	W	15:24	U	DN	30	15:30	15:30	15:30	0	30	6	0	6	0.2	1	22
1536	7/9/98	M	W	15:24	U	R	30	15:30	15:30	15:30	0	30	6	0	6	0.2	1	22
1537	7/9/98	M	B	15:25	U	T	30	15:30	15:30	15:30	0	30	5	0	5	0.1667	1	22
1538	7/7/98	M	H	15:53	U	R	30	16:01	16:00	16:00	1	30	7	1	8	0.2667	1	21
1539	7/7/98	M	A	16:00	U	DN	30	16:01	16:00	16:00	1	30	0	1	1	0.0333	1	21
1540	7/13/98	F	H	15:50	U	S	30	16:03	16:00	16:00	3	30	10	3	13	0.4333	1	21
1541	7/7/98	F	H	16:23	U	DN	30	16:36	16:30	16:30	6	30	7	6	13	0.4333	1	21
1542	7/13/98	M	W	16:16	U	DN	30	16:38	16:30	16:30	8	30	14	8	22	0.7333	1	21
1543	7/15/98	F	W	16:27	U	DN	30	16:37	16:30	16:30	7	30	3	7	10	0.3333	1	21
1544	7/7/98	F	B	16:56	U	DN	30	17:09	17:00	17:00	9	30	4	9	13	0.4333	1	21
1545	7/7/98	M	B	17:19	U	R	30	17:30	17:30	17:30	0	30	11	0	11	0.3667	1	21
1546	10/29/98	F	W	14:02	W	DN	32	14:03	14:43	13:58	5	46	1	0	1	0.0217	4	22
1547	12/16/98	M	B	15:30	W	DN	32	15:32	16:14	15:29	3	46	2	0	2	0.0435	4	22
1548	12/16/98	M	B	15:30	W	DN	32	15:32	16:14	15:29	3	46	2	0	2	0.0435	4	22
1549	12/16/98	F	B	15:30	W	DN	32	15:32	16:14	15:29	3	46	2	0	2	0.0435	4	22
1550	12/16/98	F	B	15:30	W	DN	32	15:32	16:14	15:29	3	46	2	0	2	0.0435	4	22
1551	7/17/98	M	B	15:31	W	DN	32	16:16	16:13	16:13	3	45	42	3	45	1	4	21
1552	7/17/98	F	H	16:01	W	DN	32	16:16	16:13	16:13	3	45	12	3	15	0.3333	4	21
1553	11/19/98	F	H	16:07	W	DN	32	16:17	16:14	16:14	3	45	7	3	10	0.2222	4	21
1554	12/17/98	M	W	7:07	W	DN	33	7:08	7:37	7:06	2	31	1	0	1	0.0323	2	11
1555	7/23/98	M	H	7:27	W	DN	33	7:37	7:37	7:37	0	31	10	0	10	0.3226	2	11
1556	8/5/98	F	H	7:25	W	DN	33	7:38	7:37	7:37	1	31	12	1	13	0.4194	2	11
1557	8/5/98	M	H	7:37	W	DN	33	7:38	7:37	7:37	1	31	0	1	1	0.0323	2	11
1558	8/5/98	F	H	7:37	W	DN	33	7:38	7:37	7:37	1	31	0	1	1	0.0323	2	11
1559	8/10/98	M	H	7:14	W	DN	33	7:37	7:37	7:37	0	31	23	0	23	0.7419	2	11
1560	8/10/98	M	H	7:16	W	R	33	7:37	7:37	7:37	0	31	21	0	21	0.6774	2	11

Non-Transfer Passengers Waiting Time Data (cont.)

O.N	DATE	SEX	E.C.	RAT	A.M.	ADW	BLN	BDT	EDT	SDT	SRI	BLH	W.B.	W.A.	WAIT	WTHR	LOC	D.T.
1561	8/10/98	M	H	7:27	W	T	33	7:37	7:37	7:37	0	31	10	0	10	0.3226	2	11
1562	8/10/98	F	B	7:32	W	DN	33	7:37	7:37	7:37	0	31	5	0	5	0.1613	2	11
1563	12/17/98	M	H	7:13	W	DN	33	7:37	7:37	7:37	0	31	24	0	24	0.7742	2	11
1564	12/17/98	M	B	7:13	W	DN	33	7:37	7:37	7:37	0	31	24	0	24	0.7742	2	11
1565	12/17/98	M	H	7:22	W	S	33	7:37	7:37	7:37	0	31	15	0	15	0.4839	2	11
1566	12/17/98	M	B	7:27	W	DN	33	7:37	7:37	7:37	0	31	10	0	10	0.3226	2	11
1567	12/17/98	F	W	7:28	W	DN	33	7:37	7:37	7:37	0	31	9	0	9	0.2903	2	11
1568	12/17/98	F	H	7:31	W	DN	33	7:37	7:37	7:37	0	31	6	0	6	0.1935	2	11
1569	12/17/98	F	H	7:31	W	DN	33	7:37	7:37	7:37	0	31	6	0	6	0.1935	2	11
1570	12/17/98	F	O	7:34	W	DN	33	7:37	7:37	7:37	0	31	3	0	3	0.0968	2	11
1571	12/17/98	M	H	7:45	W	DN	33	7:53	7:45	7:45	8	8	0	8	8	1	2	11
1572	12/17/98	F	H	7:45	W	DN	33	7:53	7:45	7:45	8	8	0	8	8	1	2	11
1573	12/17/98	M	H	7:47	W	DN	33	7:53	8:04	7:45	8	8	6	0	6	0.75	2	11
1574	12/17/98	M	O	8:04	W	DN	33	8:05	8:04	8:04	1	19	0	1	1	0.0526	2	11
1575	7/23/98	M	H	7:52	W	T	33	8:06	8:05	8:05	1	20	13	1	14	0.7	2	11
1576	8/10/98	M	H	8:22	W	DN	33	8:33	8:32	8:32	1	28	10	1	11	0.3929	2	12
1577	8/10/98	M	W	8:32	W	DN	33	8:33	8:32	8:32	1	28	0	1	1	0.0357	2	12
1578	8/10/98	M	W	8:32	W	DN	33	8:33	8:32	8:32	1	28	0	1	1	0.0357	2	12
1579	12/17/98	F	B	8:13	W	S	33	8:33	8:32	8:32	1	28	19	1	20	0.7143	2	12
1580	12/17/98	M	B	8:23	W	S	33	8:33	8:32	8:32	1	28	9	1	10	0.3571	2	12
1581	12/17/98	F	H	8:28	W	DN	33	8:33	8:32	8:32	1	28	4	1	5	0.1786	2	12
1582	12/17/98	M	H	8:28	W	DN	33	8:33	8:32	8:32	1	28	4	1	5	0.1786	2	12
1583	8/5/98	F	B	8:07	W	DN	33	8:33	8:33	8:33	0	28	26	0	26	0.9286	2	12
1584	8/5/98	M	H	8:17	W	DN	33	8:33	8:33	8:33	0	28	16	0	16	0.5714	2	12
1585	8/5/98	M	H	8:26	W	DN	33	8:33	8:33	8:33	0	28	7	0	7	0.25	2	12
1586	8/5/98	M	W	8:31	W	DN	33	8:33	8:33	8:33	0	28	2	0	2	0.0714	2	12
1587	8/10/98	M	W	8:51	W	DN	33	9:00	9:00	9:00	0	28	9	0	9	0.3214	2	12
1588	12/17/98	F	H	8:41	W	DN	33	8:58	9:00	9:00	-2	28	17	2	19	0.6786	2	12
1589	8/5/98	M	W	8:37	W	DN	33	9:01	9:01	9:01	0	28	24	0	24	0.8571	2	12
1590	8/5/98	M	W	9:19	W	S	33	9:30	9:29	9:29	1	28	10	1	11	0.3929	2	12



Non-Transfer Passengers Waiting Time Data (cont.)

O.N	DATE	SEX	E.C.	RAT	A.M.	ADW	BLN	BDT	EDT	SDT	SRI	BLH	W.B.	W.A.	WAIT	WTHR	LOC	D.T.
1591	8/10/98	M	H	9:37	W	DN	33	9:56	9:56	9:56	0	28	19	0	19	0.6786	2	12
1592	8/5/98	M	B	9:35	W	R	33	9:58	9:57	9:57	1	28	22	1	23	0.8214	2	12
1593	8/10/98	M	H	10:06	W	DN	33	10:25	10:24	10:24	1	28	18	1	19	0.6786	2	12
1594	8/10/98	M	H	10:07	W	DN	33	10:25	10:24	10:24	1	28	17	1	18	0.6429	2	12
1595	7/23/98	M	W	10:02	W	DN	33	10:25	10:25	10:25	0	28	23	0	23	0.8214	2	12
1596	7/23/98	M	H	10:19	W	DN	33	10:25	10:25	10:25	0	28	6	0	6	0.2143	2	12
1597	8/5/98	M	H	10:05	W	DN	33	10:28	10:25	10:25	3	28	20	3	23	0.8214	2	12
1598	8/10/98	M	W	10:37	W	S	33	10:54	10:52	10:52	2	28	15	2	17	0.6071	2	12
1599	8/10/98	F	B	10:44	W	DN	33	10:54	10:52	10:52	2	28	8	2	10	0.3571	2	12
1600	8/5/98	M	H	10:32	W	R	33	10:54	10:53	10:53	1	28	21	1	22	0.7857	2	12
1601	8/5/98	F	H	10:49	W	DN	33	10:54	10:53	10:53	1	28	4	1	5	0.1786	2	12
1602	9/24/98	M	H	14:03	W	DN	33	14:06	14:05	14:05	1	25	2	1	3	0.12	2	22
1603	10/1/98	M	B	13:44	W	S	33	14:06	14:05	14:05	1	25	21	1	22	0.88	2	22
1604	10/1/98	M	W	13:52	W	DN	33	14:06	14:05	14:05	1	25	13	1	14	0.56	2	22
1605	10/8/98	F	H	13:40	W	DN	33	14:05	13:40	14:05	0	25	0	25	25	1	2	22
1606	10/8/98	F	H	13:40	W	DN	33	14:05	13:40	14:05	0	25	0	25	25	1	2	22
1607	10/8/98	M	W	13:49	W	S	33	14:05	14:05	14:05	0	25	16	0	16	0.64	2	22
1608	9/24/98	M	W	14:22	W	S	33	14:33	14:33	14:33	0	28	11	0	11	0.3929	2	22
1609	10/8/98	F	B	14:07	W	DN	33	14:33	14:33	14:33	0	28	26	0	26	0.9286	2	22
1610	10/8/98	M	W	14:07	W	DN	33	14:33	14:33	14:33	0	28	26	0	26	0.9286	2	22
1611	9/24/98	M	H	14:50	W	DN	33	15:02	15:01	15:01	1	28	11	1	12	0.4286	2	22
1612	10/1/98	M	B	14:45	W	DN	33	15:20	15:01	15:01	19	28	16	19	35	1.25	2	22
1613	10/1/98	M	H	15:14	W	DN	33	15:20	15:25	15:01	19	28	6	0	6	0.2143	2	22
1614	10/8/98	M	H	14:42	W	DN	33	15:00	15:01	15:01	-1	28	8	0	8	0.2857	2	22
1615	10/8/98	M	W	14:57	W	DN	33	15:00	15:01	15:01	-1	28	3	0	3	0.1071	2	22
1616	10/16/98	M	B	14:55	W	DN	33	15:00	15:01	15:01	-1	28	5	0	5	0.1786	2	22
1617	10/16/98	M	B	14:55	W	DN	33	15:00	15:01	15:01	-1	28	5	0	5	0.1786	2	22
1618	10/16/98	F	H	14:57	W	DN	33	15:00	15:01	15:01	-1	28	3	0	3	0.1071	2	22
1619	10/8/98	M	H	15:05	W	DN	33	15:25	15:25	15:25	0	24	20	0	20	0.8333	2	22
1620	10/8/98	M	H	15:07	W	DN	33	15:25	15:25	15:25	0	24	18	0	18	0.75	2	22

Non-Transfer Passengers Waiting Time Data (cont.)

O.N	DATE	SEX	E.C.	RAT	A.M.	ADW	BLN	BDT	EDT	SDT	SRI	BLH	W.B.	W.A.	WAIT	WTHR	LOC	D.T.
1621	10/8/98	M	H	15:07	W	DN	33	15:25	15:25	15:25	0	24	18	0	18	0.75	2	22
1622	10/8/98	M	B	15:17	W	DN	33	15:25	15:25	15:25	0	24	8	0	8	0.3333	2	22
1623	10/8/98	F	B	15:18	W	DN	33	15:25	15:25	15:25	0	24	7	0	7	0.2917	2	22
1624	10/8/98	F	B	15:25	W	DN	33	15:25	15:25	15:25	0	24	0	0	0	0	2	22
1625	10/16/98	F	H	15:11	W	DN	33	15:24	15:25	15:25	-1	24	13	0	13	0.5417	2	22
1626	10/16/98	M	H	15:16	W	DN	33	15:24	15:25	15:25	-1	24	8	0	8	0.3333	2	22
1627	10/16/98	M	H	15:18	W	DN	33	15:24	15:25	15:25	-1	24	6	0	6	0.25	2	22
1628	9/24/98	M	O	15:26	W	DN	33	15:32	15:31	15:31	1	19	5	1	6	0.3158	2	22
1629	9/24/98	M	W	15:30	W	DN	33	15:32	15:31	15:31	1	19	1	1	2	0.1053	2	22
1630	10/1/98	F	H	15:28	W	DN	33	15:31	15:31	15:31	0	19	3	0	3	0.1579	2	22
1631	10/16/98	M	H	16:44	W	DN	33	16:57	16:55	16:55	2	30	11	2	13	0.4333	2	21
1632	10/16/98	M	H	15:41	W	DN	33	15:59	15:57	15:57	2	26	16	2	18	0.6923	2	22
1633	10/16/98	M	H	15:50	W	DN	33	15:59	15:57	15:57	2	26	7	2	9	0.3462	2	22
1634	10/16/98	M	W	15:54	W	DN	33	15:59	15:57	15:57	2	26	3	2	5	0.1923	2	22
1635	10/2/98	M	H	16:08	W	DN	33	16:24	16:25	16:25	-1	28	16	0	16	0.5714	2	21
1636	10/2/98	M	H	16:24	W	DN	33	16:24	16:25	16:25	-1	28	0	0	0	0	2	21
1637	10/16/98	F	W	16:16	W	DN	33	16:25	16:25	16:25	0	28	9	0	9	0.3214	2	21
1638	10/16/98	M	H	16:20	W	DN	33	16:25	16:25	16:25	0	28	5	0	5	0.1786	2	21
1639	10/2/98	F	B	16:51	W	DN	33	16:55	16:55	16:55	0	30	4	0	4	0.1333	2	21
1640	10/2/98	F	B	17:12	W	DN	33	17:26	17:21	17:21	5	26	9	5	14	0.5385	2	21
1641	10/2/98	M	W	17:22	W	DN	33	17:26	17:49	17:21	5	26	4	0	4	0.1538	2	21
1642	10/2/98	F	B	17:35	W	DN	33	17:49	17:49	17:49	0	28	14	0	14	0.5	2	21
1643	7/22/98	F	W	7:14	W	DN	38	7:20	7:31	7:13	7	32	6	0	6	0.1875	1	11
1644	7/27/98	M	W	7:03	W	R	38	7:20	7:13	7:13	7	32	10	7	17	0.5313	1	11
1645	7/27/98	F	W	7:04	W	DN	38	7:20	7:13	7:13	7	32	9	7	16	0.5	1	11
1646	7/20/98	F	W	7:13	W	DN	38	7:28	7:13	7:31	-3	18	0	15	15	0.8333	1	11
1647	7/20/98	M	W	7:17	W	R	38	7:28	7:31	7:31	-3	18	11	0	11	0.6111	1	11
1648	7/22/98	M	W	8:10	W	R	38	8:20	8:17	8:17	3	16	7	3	10	0.625	1	11
1649	7/22/98	F	B	8:51	W	DN	38	8:52	9:01	8:49	3	18	1	0	1	0.0556	1	12
1650	7/27/98	M	W	8:29	W	S	38	8:51	8:31	8:49	2	18	2	20	22	1.2222	1	12

Non-Transfer Passengers Waiting Time Data (cont.)

O.N	DATE	SEX	E.C.	RAT	A.M.	ADW	BLN	BDT	EDT	SDT	SRI	BLH	W.B.	W.A.	WAIT	WTHR	LOC	D.T.
1651	7/20/98	M	B	9:14	W	DN	38	9:26	9:22	9:22	4	21	8	4	12	0.5714	1	12
1652	7/20/98	M	W	9:17	U	S	38	9:26	9:22	9:22	4	21	5	4	9	0.4286	1	12
1653	7/22/98	F	H	8:57	W	DN	38	9:24	9:01	9:22	2	21	4	23	27	1.2857	1	12
1654	7/27/98	M	B	9:25	W	T	38	9:26	9:54	9:22	4	21	1	0	1	0.0476	1	12
1655	7/27/98	F	B	9:25	W	T	38	9:26	9:54	9:22	4	21	1	0	1	0.0476	1	12
1656	7/27/98	F	B	9:25	W	T	38	9:26	9:54	9:22	4	21	1	0	1	0.0476	1	12
1657	7/22/98	M	W	9:40	W	DN	38	9:59	9:54	9:54	5	32	14	5	19	0.5938	1	12
1658	7/22/98	F	W	9:40	W	R	38	9:59	9:54	9:54	5	32	14	5	19	0.5938	1	12
1659	7/22/98	M	H	9:40	W	DN	38	9:59	9:54	9:54	5	32	14	5	19	0.5938	1	12
1660	7/22/98	M	W	9:46	W	R	38	9:59	9:54	9:54	5	32	8	5	13	0.4063	1	12
1661	7/27/98	M	B	9:50	W	DN	38	10:02	9:54	9:54	8	32	4	8	12	0.375	1	12
1662	7/20/98	F	H	10:25	W	DN	38	10:31	10:26	10:26	5	32	1	5	6	0.1875	1	12
1663	7/27/98	F	H	10:15	W	DN	38	10:29	10:26	10:26	3	32	11	3	14	0.4375	1	12
1664	7/22/98	M	W	10:34	W	S	38	11:01	10:58	10:58	3	32	24	3	27	0.8438	1	12
1665	7/22/98	F	H	10:56	W	T	38	11:01	10:58	10:58	3	32	2	3	5	0.1563	1	12
1666	7/22/98	F	H	10:56	W	T	38	11:01	10:58	10:58	3	32	2	3	5	0.1563	1	12
1667	7/27/98	M	H	10:32	W	S	38	11:02	10:58	10:58	4	32	26	4	30	0.9375	1	12
1668	7/27/98	F	H	10:45	W	R	38	11:02	10:58	10:58	4	32	13	4	17	0.5313	1	12
1669	7/27/98	M	B	10:50	W	T	38	11:02	10:58	10:58	4	32	8	4	12	0.375	1	12
1670	6/23/98	M	W	14:07	U	DN	38	14:21	14:09	14:09	12	31	2	12	14	0.4516	1	22
1671	7/13/98	M	W	13:46	U	S	38	14:05	14:09	14:09	-4	31	19	0	19	0.6129	1	22
1672	7/13/98	F	W	14:00	U	R	38	14:05	14:09	14:09	-4	31	5	0	5	0.1613	1	22
1673	6/23/98	F	H	14:41	U	R	38	14:56	14:41	14:41	15	32	0	15	15	0.4688	1	22
1674	7/9/98	M	W	14:29	U	R	38	14:45	14:41	14:41	4	32	12	4	16	0.5	1	22
1675	7/9/98	M	H	14:43	U	DN	38	14:45	15:14	14:41	4	33	2	0	2	0.0606	1	22
1676	7/13/98	F	W	14:32	U	T	38	14:48	14:41	14:41	7	32	9	7	16	0.5	1	22
1677	7/13/98	M	W	14:32	U	T	38	14:48	14:41	14:41	7	32	9	7	16	0.5	1	22
1678	7/15/98	M	W	14:31	U	S	38	14:46	14:41	14:41	5	32	10	5	15	0.4688	1	22
1679	7/15/98	F	W	14:37	U	S	38	14:46	14:41	14:41	5	32	4	5	9	0.2813	1	22
1680	7/9/98	M	W	15:10	U	DN	38	15:19	15:14	15:14	5	33	4	5	9	0.2727	1	22

Non-Transfer Passengers Waiting Time Data (cont.)

O.N	DATE	SEX	E.C.	RAT	A.M.	ADW	BLN	BDT	EDT	SDT	SRI	BLH	W.B.	W.A.	WAIT	WTHR	LOC	D.T.
1681	7/9/98	F	B	15:10	U	DN	38	15:19	15:14	15:14	5	33	4	5	9	0.2727	1	22
1682	7/13/98	M	W	15:04	U	R	38	15:24	15:14	15:14	10	33	10	10	20	0.6061	1	22
1683	7/13/98	F	W	15:04	U	T	38	15:24	15:14	15:14	10	33	10	10	20	0.6061	1	22
1684	7/13/98	M	W	15:04	U	T	38	15:24	15:14	15:14	10	33	10	10	20	0.6061	1	22
1685	7/13/98	M	W	15:04	U	T	38	15:24	15:14	15:14	10	33	10	10	20	0.6061	1	22
1686	7/13/98	M	W	15:04	U	T	38	15:24	15:14	15:14	10	33	10	10	20	0.6061	1	22
1687	7/13/98	F	W	15:04	U	T	38	15:24	15:14	15:14	10	33	10	10	20	0.6061	1	22
1688	7/13/98	M	W	15:04	U	T	38	15:24	15:14	15:14	10	33	10	10	20	0.6061	1	22
1689	7/13/98	M	W	15:04	U	T	38	15:24	15:14	15:14	10	33	10	10	20	0.6061	1	22
1690	7/15/98	F	W	15:06	U	DN	38	15:25	15:14	15:14	11	33	8	11	19	0.5758	1	22
1691	7/15/98	M	W	15:06	U	R	38	15:25	15:14	15:14	11	33	8	11	19	0.5758	1	22
1692	7/15/98	M	H	15:15	U	DN	38	15:25	15:49	15:14	11	33	10	0	10	0.303	1	22
1693	7/15/98	M	W	15:24	U	DN	38	15:25	15:49	15:14	11	33	1	0	1	0.0303	1	22
1694	7/7/98	M	H	15:54	U	DN	38	15:55	16:22	15:49	7	35	1	0	1	0.0286	1	22
1695	7/13/98	F	H	15:49	U	DN	38	15:58	15:49	15:49	9	35	0	9	9	0.2571	1	22
1696	7/7/98	M	W	16:23	U	DN	38	16:48	16:58	16:22	26	33	15	0	15	0.4545	1	21
1697	7/13/98	F	B	16:12	U	DN	38	16:28	16:22	16:22	6	33	10	6	16	0.4848	1	21
1698	7/13/98	M	H	16:15	U	DN	38	16:28	16:22	16:22	6	33	7	6	13	0.3939	1	21
1699	7/15/98	M	W	16:24	U	DN	38	16:25	16:58	16:22	3	33	1	0	1	0.0303	1	21
1700	7/13/98	M	B	16:41	U	DN	38	17:03	16:58	16:58	5	36	17	5	22	0.6111	1	21
1701	7/13/98	M	W	17:01	U	DN	38	17:03	17:32	16:58	5	36	2	0	2	0.0556	1	21
1702	7/15/98	M	W	16:51	U	DN	38	17:04	16:58	16:58	6	36	7	6	13	0.3611	1	21
1703	7/15/98	F	H	16:54	U	DN	38	17:04	16:58	16:58	6	36	4	6	10	0.2778	1	21
1704	7/17/98	F	H	14:36	W	S	39	14:40	15:05	14:35	5	40	4	0	4	0.1	4	22
1705	7/17/98	M	H	14:36	W	T	39	14:40	15:05	14:35	5	40	4	0	4	0.1	4	22
1706	10/29/98	M	W	14:14	W	DN	39	14:43	14:35	14:35	8	40	21	8	29	0.725	4	22
1707	10/29/98	F	B	14:27	W	DN	39	14:43	14:35	14:35	8	40	8	8	16	0.4	4	22
1708	10/29/98	M	H	14:35	B	DN	39	14:43	14:35	14:35	8	40	0	8	8	0.2	4	22
1709	12/16/98	M	B	14:25	W	DN	39	14:41	14:35	14:35	6	40	10	6	16	0.4	4	22
1710	12/16/98	F	B	14:37	W	DN	39	14:41	15:05	14:35	6	40	4	0	4	0.1	4	22

Non-Transfer Passengers Waiting Time Data (cont.)

O.N	DATE	SEX	E.C.	RAT	A.M.	ADW	BLN	BDT	EDT	SDT	SRI	BLH	W.B.	W.A.	WAIT	WTHR	LOC	D.T.
1711	12/16/98	F	B	14:37	W	DN	39	14:41	15:05	14:35	6	40	4	0	4	0.1	4	22
1712	11/19/98	M	B	14:57	W	DN	39	15:10	15:05	15:05	5	30	8	5	13	0.4333	4	22
1713	11/19/98	F	B	14:57	W	DN	39	15:10	15:05	15:05	5	30	8	5	13	0.4333	4	22
1714	11/19/98	M	B	15:09	W	DN	39	15:10	15:38	15:05	5	30	1	0	1	0.0333	4	22
1715	9/17/98	M	W	15:19	W	DN	39	15:35	15:33	15:33	2	33	14	2	16	0.4848	3	22
1716	9/25/98	M	H	15:33	W	DN	39	15:33	15:33	15:33	0	33	0	0	0	0	3	22
1717	10/9/98	F	H	15:29	W	DN	39	15:38	15:33	15:33	5	33	4	5	9	0.2727	3	22
1718	10/9/98	F	B	15:35	W	DN	39	15:38	16:06	15:33	5	33	3	0	3	0.0909	3	22
1719	10/29/98	F	H	15:40	W	DN	39	15:45	16:11	15:38	7	33	5	0	5	0.1515	4	22
1720	10/29/98	M	H	15:44	W	DN	39	15:45	16:11	15:38	7	33	1	0	1	0.0303	4	22
1721	11/19/98	M	H	15:39	W	DN	39	15:40	16:11	15:38	2	33	1	0	1	0.0303	4	22
1722	12/4/98	F	A	15:25	W	DN	39	15:44	15:38	15:38	6	33	13	6	19	0.5758	4	22
1723	9/17/98	M	W	16:05	W	DN	39	16:07	16:06	16:06	1	33	1	1	2	0.0606	3	21
1724	10/15/98	F	H	16:08	W	DN	39	16:16	16:39	16:06	10	33	8	0	8	0.2424	3	21
1725	11/19/98	M	W	16:15	W	DN	39	16:15	16:44	16:11	4	33	0	0	0	0	4	21
1726	11/19/98	M	H	16:15	W	DN	39	16:15	16:44	16:11	4	33	0	0	0	0	4	21
1727	11/19/98	F	H	16:15	W	DN	39	16:15	16:44	16:11	4	33	0	0	0	0	4	21
1728	11/19/98	F	H	16:15	W	DN	39	16:15	16:44	16:11	4	33	0	0	0	0	4	21
1729	12/4/98	F	H	16:13	W	T	39	16:16	16:44	16:11	5	33	3	0	3	0.0909	4	21
1730	12/4/98	F	H	16:13	W	T	39	16:16	16:44	16:11	5	33	3	0	3	0.0909	4	21
1731	10/9/98	F	H	16:32	W	DN	39	16:44	16:39	16:39	5	33	7	5	12	0.3636	3	21
1732	10/9/98	M	W	16:33	W	DN	39	16:44	16:39	16:39	5	33	6	5	11	0.3333	3	21
1733	7/17/98	M	W	16:35	W	DN	39	16:47	16:44	16:44	3	33	9	3	12	0.3636	4	21
1734	10/30/98	M	B	7:06	W	DN	40	7:21	7:22	7:22	-1	40	15	0	15	0.375	5	11
1735	7/10/98	F	W	7:08	R	R	40	7:25	7:23	7:23	2	40	15	2	17	0.425	5	11
1736	11/6/98	M	H	8:02	W	DN	40	8:08	8:04	8:04	4	42	2	4	6	0.1429	5	11
1737	10/30/98	M	A	8:21	D	R	40	8:44	8:44	8:44	0	40	23	0	23	0.575	5	12
1738	11/6/98	M	W	8:26	B	T	40	8:44	8:44	8:44	0	40	14	0	14	0.35	5	12
1739	11/6/98	M	A	8:41	D	DN	40	8:44	8:44	8:44	0	40	3	0	3	0.075	5	12
1740	9/14/98	F	A	7:41	R	DN	44	7:41	7:44	7:44	-3	27	0	0	0	0	3	11

Non-Transfer Passengers Waiting Time Data (cont.)

O.N	DATE	SEX	E.C.	RAT	A.M.	ADW	BLN	BDT	EDT	SDT	SRI	BLH	W.B.	W.A.	WAIT	WTHR	LOC	D.T.
1741	9/14/98	M	A	7:41	R	DN	44	7:41	7:44	7:44	-3	27	0	0	0	0	3	11
1742	9/3/98	F	B	15:13	W	DN	44	15:20	15:38	15:06	14	34	7	0	7	0.2059	3	22
1743	10/9/98	M	H	15:00	W	DN	44	15:04	15:06	15:06	-2	34	4	0	4	0.1176	3	22
1744	10/15/98	M	W	15:00	B	DN	44	15:11	15:06	15:06	5	34	6	5	11	0.3235	3	22
1745	10/9/98	F	W	15:09	W	DN	44	15:25	15:38	15:06	-7	34	16	0	16	0.4706	3	22
1746	10/9/98	M	H	15:21	W	DN	44	15:25	15:38	15:06	-7	34	4	0	4	0.1176	3	22
1747	9/14/98	M	W	15:50	W	DN	44	15:58	16:08	15:38	0	32	8	0	8	0.25	3	22
1748	9/14/98	M	B	15:55	W	S	44	15:58	16:08	15:38	0	32	3	0	3	0.0938	3	22
1749	9/14/98	M	H	15:58	W	DN	44	15:58	16:08	15:38	0	32	0	0	0	0	3	22
1750	9/25/98	M	B	15:48	W	DN	44	15:58	16:08	15:38	0	32	10	0	10	0.3125	3	22
1751	10/9/98	M	B	15:32	W	S	44	16:01	15:38	15:38	-7	32	6	23	29	0.9063	3	21
1752	10/9/98	M	B	15:49	W	DN	44	16:01	16:08	15:38	-7	32	12	0	12	0.375	3	21
1753	9/25/98	M	A	16:12	W	DN	44	16:30	16:38	16:08	-8	30	18	0	18	0.6	3	21
1754	9/25/98	F	W	16:53	W	DN	44	16:58	17:08	16:38	-10	30	5	0	5	0.1667	3	21
1755	10/2/98	M	B	16:28	W	DN	62	16:50	16:49	16:49	1	60	21	1	22	0.3667	2	21
1756	10/2/98	M	B	17:19	W	DN	62	17:48	17:49	17:49	-1	60	29	0	29	0.4833	2	21
1757	10/2/98	M	W	17:19	W	DN	62	17:48	17:49	17:49	-1	60	29	0	29	0.4833	2	21
1758	11/5/98	F	B	14:13	W	DN	74	14:23	14:23	14:23	0	38	10	0	10	0.2632	6	22
1759	10/22/98	M	W	14:53	W	DN	74	15:05	15:03	15:03	2	40	10	2	12	0.3	6	22
1760	10/22/98	M	A	15:05	W	DN	74	15:05	15:41	15:03	2	40	0	0	0	0	6	22
1761	10/23/98	M	W	14:54	W	DN	74	15:08	15:03	15:03	5	40	9	5	14	0.35	6	22
1762	10/23/98	F	A	15:01	W	T	74	15:08	15:03	15:03	5	40	2	5	7	0.175	6	22
1763	11/5/98	M	W	14:56	W	DN	74	15:04	15:03	15:03	1	40	7	1	8	0.2	6	22
1764	10/22/98	F	W	15:24	W	T	74	15:42	15:41	15:41	1	38	17	1	18	0.4737	6	22
1765	10/22/98	M	W	15:29	W	DN	74	15:42	15:41	15:41	1	38	12	1	13	0.3421	6	22
1766	10/23/98	M	H	15:33	W	DN	74	15:50	15:41	15:41	9	38	8	9	17	0.4474	6	22
1767	11/5/98	M	W	15:35	W	DN	74	15:40	15:41	15:41	-1	38	5	0	5	0.1316	6	22
1768	10/23/98	M	W	16:21	W	DN	74	16:21	16:57	16:19	2	38	0	0	0	0	6	21
1769	7/27/98	F	W	7:05	W	DN	86	7:12	7:09	7:09	3	11	4	3	7	0.6364	1	11
1770	7/20/98	F	A	7:23	W	DN	86	7:33	7:31	7:31	2	11	8	2	10	0.9091	1	11

Non-Transfer Passengers Waiting Time Data (cont.)

O.N	DATE	SEX	E.C.	RAT	A.M.	ADW	BLN	BDT	EDT	SDT	SRI	BLH	W.B.	W.A.	WAIT	WTHR	LOC	D.T.
1771	7/20/98	M	H	7:27	W	DN	86	7:33	7:31	7:31	2	11	4	2	6	0.5455	1	11
1772	7/22/98	F	A	7:42	W	DN	86	7:43	7:42	7:42	1	11	0	1	1	0.0909	1	11
1773	7/20/98	M	W	8:29	W	T	86	8:29	8:37	8:26	3	11	0	0	0	0	1	11
1774	7/20/98	M	W	8:29	B	T	86	8:29	8:37	8:26	3	11	0	0	0	0	1	11
1775	7/27/98	F	B	8:30	W	DN	86	8:38	8:37	8:37	1	11	7	1	8	0.7273	1	12
1776	7/27/98	F	W	8:32	W	DN	86	8:38	8:37	8:37	1	11	5	1	6	0.5455	1	12
1777	7/27/98	M	H	9:16	W	R	86	9:23	9:21	9:21	2	11	5	2	7	0.6364	1	12
1778	7/27/98	M	H	9:50	B	DN	86	9:51	10:03	9:49	2	14	1	0	1	0.0714	1	12
1779	7/22/98	M	H	10:12	W	R	86	10:22	10:17	10:17	5	14	5	5	10	0.7143	1	12
1780	7/27/98	F	W	10:14	W	DN	86	10:19	10:17	10:17	2	14	3	2	5	0.3571	1	12
1781	7/27/98	M	H	10:34	U	T	86	10:36	10:45	10:31	5	14	2	0	2	0.1429	1	12
1782	7/13/98	M	B	13:42	U	DN	86	14:06	13:47	14:01	5	14	5	19	24	1.7143	1	22
1783	7/13/98	F	H	13:44	U	R	86	14:06	13:47	14:01	5	14	3	19	22	1.5714	1	22
1784	7/13/98	M	W	13:51	U	S	86	14:06	14:01	14:01	5	14	10	5	15	1.0714	1	22
1785	6/23/98	F	W	14:49	U	DN	86	14:55	14:57	14:43	12	14	6	0	6	0.4286	1	22
1786	6/23/98	M	W	14:50	U	R	86	14:55	14:57	14:43	12	14	5	0	5	0.3571	1	22
1787	7/9/98	M	W	14:37	U	DN	86	14:46	14:43	14:43	3	14	6	3	9	0.6429	1	22
1788	6/23/98	M	B	14:50	U	T	86	15:03	14:57	14:57	6	14	7	6	13	0.9286	1	22
1789	7/9/98	M	W	15:02	U	T	86	15:11	15:11	15:11	0	14	9	0	9	0.6429	1	22
1790	7/13/98	F	W	15:37	U	T	86	15:52	15:40	15:40	12	14	3	12	15	1.0714	1	22
1791	7/7/98	M	W	16:00	U	DN	86	16:15	16:08	16:08	7	14	8	7	15	1.0714	1	21
1792	7/7/98	F	W	16:12	U	T	86	16:15	16:22	16:08	7	14	3	0	3	0.2143	1	21
1793	7/7/98	M	W	16:12	U	T	86	16:15	16:22	16:08	7	14	3	0	3	0.2143	1	21
1794	7/7/98	M	W	16:12	U	T	86	16:15	16:22	16:08	7	14	3	0	3	0.2143	1	21
1795	7/7/98	M	H	16:19	U	R	86	16:22	16:22	16:22	0	14	3	0	3	0.2143	1	21
1796	7/13/98	M	W	16:17	U	S	86	16:39	16:22	16:33	6	11	5	17	22	2	1	21
1797	7/15/98	F	W	16:56	U	S	86	17:03	17:06	16:55	8	11	7	0	7	0.6364	1	21
1798	8/10/98	M	H	9:34	B	DN	111	9:36	10:08	9:33	3	37	2	0	2	0.0541	2	12
1799	7/23/98	F	H	10:05	W	T	111	10:11	10:08	10:08	3	35	3	3	6	0.1714	2	12
1800	7/23/98	F	H	10:05	W	T	111	10:11	10:08	10:08	3	35	3	3	6	0.1714	2	12

Non-Transfer Passengers Waiting Time Data (cont.)

O.N	DATE	SEX	E.C.	RAT	A.M.	ADW	BLN	BDT	EDT	SDT	SRI	BLH	W.B.	W.A.	WAIT	WTHR	LOC	D.T.
1801	8/5/98	F	W	9:56	W	T	111	10:12	10:08	10:08	4	35	12	4	16	0.4571	2	12
1802	8/5/98	F	W	9:56	W	T	111	10:12	10:08	10:08	4	35	12	4	16	0.4571	2	12
1803	8/5/98	M	H	10:42	W	DN	111	10:43	10:43	10:43	0	35	1	0	1	0.0286	2	12
1804	8/10/98	M	H	10:45	W	DN	111	10:52	11:18	10:43	9	35	7	0	7	0.2	2	12
1805	9/24/98	F	W	14:05	W	DN	111	14:15	14:13	14:13	2	35	8	2	10	0.2857	2	22
1806	10/1/98	F	W	13:54	W	DN	111	14:14	14:13	14:13	1	35	19	1	20	0.5714	2	22
1807	10/1/98	M	B	14:03	W	DN	111	14:14	14:13	14:13	1	35	10	1	11	0.3143	2	22
1808	10/1/98	F	B	14:03	W	DN	111	14:14	14:13	14:13	1	35	10	1	11	0.3143	2	22
1809	10/8/98	M	H	13:52	W	T	111	14:15	14:13	14:13	2	35	21	2	23	0.6571	2	22
1810	10/8/98	M	H	13:52	W	T	111	14:15	14:13	14:13	2	35	21	2	23	0.6571	2	22
1811	10/8/98	F	H	14:07	W	DN	111	14:15	14:13	14:13	2	35	6	2	8	0.2286	2	22
1812	10/8/98	M	W	14:07	W	DN	111	14:15	14:13	14:13	2	35	6	2	8	0.2286	2	22
1813	10/1/98	M	H	14:41	W	DN	111	14:45	14:45	14:45	0	32	4	0	4	0.125	2	22
1814	10/8/98	M	H	14:25	W	DN	111	14:46	14:45	14:45	1	32	20	1	21	0.6563	2	22
1815	9/24/98	F	B	15:07	W	DN	111	15:20	15:20	15:20	0	35	13	0	13	0.3714	2	22
1816	10/1/98	F	B	15:17	W	DN	111	15:20	15:20	15:20	0	35	3	0	3	0.0857	2	22
1817	10/1/98	F	H	15:17	W	DN	111	15:20	15:20	15:20	0	35	3	0	3	0.0857	2	22
1818	10/1/98	F	H	15:19	W	DN	111	15:20	15:20	15:20	0	35	1	0	1	0.0286	2	22
1819	10/8/98	F	H	14:49	W	DN	111	15:20	15:20	15:20	0	35	31	0	31	0.8857	2	22
1820	10/8/98	F	W	14:59	W	DN	111	15:20	15:20	15:20	0	35	21	0	21	0.6	2	22
1821	10/8/98	M	B	15:06	W	T	111	15:20	15:20	15:20	0	35	14	0	14	0.4	2	22
1822	10/8/98	F	B	15:06	W	T	111	15:20	15:20	15:20	0	35	14	0	14	0.4	2	22
1823	10/8/98	F	H	15:20	W	DN	111	15:20	15:20	15:20	0	35	0	0	0	0	2	22
1824	10/16/98	M	H	15:17	W	DN	111	15:24	15:20	15:20	4	35	3	4	7	0.2	2	22
1825	10/16/98	M	H	15:20	W	DN	111	15:24	15:20	15:20	4	35	0	4	4	0.1143	2	22
1826	10/16/98	F	H	15:21	W	DN	111	15:24	15:35	15:20	4	35	3	0	3	0.0857	2	22
1827	10/8/98	M	W	15:26	W	DN	111	15:33	15:35	15:35	-2	15	7	0	7	0.4667	2	22
1828	10/16/98	M	B	15:25	W	T	111	15:37	15:35	15:35	2	15	10	2	12	0.8	2	22
1829	9/24/98	F	B	15:46	W	DN	111	15:59	15:55	15:55	4	20	9	4	13	0.65	2	22
1830	10/16/98	F	B	16:00	W	DN	111	16:04	16:30	15:55	9	20	4	0	4	0.2	2	21



Non-Transfer Passengers Waiting Time Data (cont.)

O.N	DATE	SEX	E.C.	RAT	A.M.	ADW	BLN	BDT	EDT	SDT	SRI	BLH	W.B.	W.A.	WAIT	WTHR	LOC	D.T.
1831	10/16/98	F	W	16:00	W	DN	111	16:04	16:30	15:55	9	20	4	0	4	0.2	2	21
1832	10/2/98	M	H	16:28	W	DN	111	16:36	16:30	16:30	6	35	2	6	8	0.2286	2	21
1833	10/2/98	M	H	16:33	W	DN	111	16:36	17:05	16:30	6	35	3	0	3	0.0857	2	21
1834	10/2/98	M	H	16:33	W	DN	111	16:36	17:05	16:30	6	35	3	0	3	0.0857	2	21
1835	10/16/98	M	H	16:21	W	DN	111	16:33	16:30	16:30	3	35	9	3	12	0.3429	2	21
1836	10/16/98	M	H	16:27	W	DN	111	16:33	16:30	16:30	3	35	3	3	6	0.1714	2	21
1837	10/2/98	F	B	17:19	W	DN	111	17:44	17:40	17:40	4	35	21	4	25	0.7143	2	21
1838	10/2/98	M	H	17:21	W	DN	111	17:44	17:40	17:40	4	35	19	4	23	0.6571	2	21
1839	10/2/98	M	H	17:21	W	DN	111	17:44	17:40	17:40	4	35	19	4	23	0.6571	2	21
1840	10/2/98	F	H	17:21	W	DN	111	17:44	17:40	17:40	4	35	19	4	23	0.6571	2	21
1841	10/2/98	M	H	17:31	W	DN	111	17:44	17:40	17:40	4	35	9	4	13	0.3714	2	21
1842	10/2/98	F	H	17:31	W	DN	111	17:44	17:40	17:40	4	35	9	4	13	0.3714	2	21
1843	10/2/98	F	B	17:40	W	T	111	17:44	17:40	17:40	4	35	0	4	4	0.1143	2	21
1844	10/2/98	F	B	17:40	W	T	111	17:44	17:40	17:40	4	35	0	4	4	0.1143	2	21
1845	10/2/98	M	B	17:40	W	DN	111	17:44	17:40	17:40	4	35	0	4	4	0.1143	2	21
1846	10/2/98	M	B	17:40	W	DN	111	17:44	17:40	17:40	4	35	0	4	4	0.1143	2	21
1847	10/2/98	M	B	17:40	W	DN	111	17:44	17:40	17:40	4	35	0	4	4	0.1143	2	21
1848	10/29/98	F	H	13:56	W	DN	120	13:57	14:35	13:55	2	40	1	0	1	0.025	4	22
1849	10/29/98	M	H	13:56	W	DN	120	13:57	14:35	13:55	2	40	1	0	1	0.025	4	21
1850	7/17/98	M	H	14:12	W	DN	120	14:40	14:35	14:35	5	40	23	5	28	0.7	4	22
1851	7/17/98	M	B	14:13	W	DN	120	14:40	14:35	14:35	5	40	22	5	27	0.675	4	22
1852	7/17/98	M	H	14:18	W	DN	120	14:40	14:35	14:35	5	40	17	5	22	0.55	4	22
1853	7/17/98	F	B	14:24	W	DN	120	14:40	14:35	14:35	5	40	11	5	16	0.4	4	22
1854	7/17/98	F	B	14:24	W	DN	120	14:40	14:35	14:35	5	40	11	5	16	0.4	4	22
1855	7/17/98	F	H	14:27	W	DN	120	14:40	14:35	14:35	5	40	8	5	13	0.325	4	22
1856	7/17/98	F	H	14:30	W	DN	120	14:40	14:35	14:35	5	40	5	5	10	0.25	4	22
1857	7/17/98	F	H	14:30	W	DN	120	14:40	14:35	14:35	5	40	5	5	10	0.25	4	22
1858	7/17/98	F	H	14:30	W	DN	120	14:40	14:35	14:35	5	40	5	5	10	0.25	4	22
1859	10/29/98	F	B	14:25	W	DN	120	14:38	14:35	14:35	3	40	10	3	13	0.325	4	22
1860	12/4/98	F	W	14:27	W	DN	120	14:38	14:35	14:35	3	40	8	3	11	0.275	4	22

Non-Transfer Passengers Waiting Time Data (cont.)

O.N	DATE	SEX	E.C.	RAT	A.M.	ADW	BLN	BDT	EDT	SDT	SRI	BLH	W.B.	W.A.	WAIT	WTHR	LOC	D.T.
1861	12/16/98	F	H	14:25	W	DN	120	14:38	14:35	14:35	3	40	10	3	13	0.325	4	22
1862	12/16/98	F	H	14:37	W	DN	120	14:38	15:30	14:35	3	55	1	0	1	0.0182	4	22
1863	10/29/98	F	H	15:21	W	DN	120	15:30	15:30	15:30	0	55	9	0	9	0.1636	4	22
1864	11/19/98	F	H	15:24	W	DN	120	15:29	15:30	15:30	-1	55	5	0	5	0.0909	4	22
1865	12/4/98	F	H	14:55	W	DN	120	15:30	15:30	15:30	0	55	35	0	35	0.6364	4	22
1866	12/4/98	F	H	15:01	W	DN	120	15:30	15:30	15:30	0	55	29	0	29	0.5273	4	22
1867	12/4/98	F	H	15:12	W	DN	120	15:30	15:30	15:30	0	55	18	0	18	0.3273	4	22
1868	12/16/98	F	B	14:45	W	DN	120	15:30	15:30	15:30	0	55	45	0	45	0.8182	4	22
1869	12/16/98	M	B	14:47	W	T	120	15:30	15:30	15:30	0	55	43	0	43	0.7818	4	22
1870	12/16/98	F	B	14:47	W	T	120	15:30	15:30	15:30	0	55	43	0	43	0.7818	4	22
1871	12/16/98	F	B	14:50	W	DN	120	15:30	15:30	15:30	0	55	40	0	40	0.7273	4	22
1872	12/16/98	F	B	14:51	W	DN	120	15:30	15:30	15:30	0	55	39	0	39	0.7091	4	22
1873	12/16/98	F	H	14:57	W	S	120	15:30	15:30	15:30	0	55	33	0	33	0.6	4	22
1874	12/16/98	F	H	14:57	W	S	120	15:30	15:30	15:30	0	55	33	0	33	0.6	4	22
1875	12/16/98	F	H	14:57	W	S	120	15:30	15:30	15:30	0	55	33	0	33	0.6	4	22
1876	12/16/98	F	H	15:20	W	DN	120	15:30	15:30	15:30	0	55	10	0	10	0.1818	4	22
1877	12/16/98	M	H	15:20	W	DN	120	15:30	15:30	15:30	0	55	10	0	10	0.1818	4	22
1878	12/16/98	F	H	15:21	W	DN	120	15:30	15:30	15:30	0	55	9	0	9	0.1636	4	22
1879	12/16/98	M	B	15:28	W	DN	120	15:30	15:30	15:30	0	55	2	0	2	0.0364	4	22
1880	7/17/98	M	B	13:55	W	DN	120	13:56	13:55	13:55	1	40	0	1	1	0.025	4	22
1881	7/17/98	F	B	13:55	W	DN	120	13:56	13:55	13:55	1	40	0	1	1	0.025	4	22
1882	7/17/98	F	B	15:52	W	DN	120	16:00	16:05	16:05	-5	35	8	0	8	0.2286	4	21
1883	11/19/98	M	H	15:44	U	DN	120	16:06	16:05	16:05	1	35	21	1	22	0.6286	4	21
1884	11/19/98	F	H	15:50	W	DN	120	16:06	16:05	16:05	1	35	15	1	16	0.4571	4	21
1885	11/19/98	F	H	15:50	W	DN	120	16:06	16:05	16:05	1	35	15	1	16	0.4571	4	21
1886	11/19/98	F	O	16:03	W	DN	120	16:06	16:05	16:05	1	35	2	1	3	0.0857	4	21
1887	12/4/98	M	H	15:34	W	DN	120	16:05	16:05	16:05	0	35	31	0	31	0.8857	4	21
1888	12/4/98	F	H	15:34	W	DN	120	16:05	16:05	16:05	0	35	31	0	31	0.8857	4	21
1889	12/4/98	F	H	15:40	W	DN	120	16:05	16:05	16:05	0	35	25	0	25	0.7143	4	21
1890	12/4/98	M	H	15:55	W	DN	120	16:05	16:05	16:05	0	35	10	0	10	0.2857	4	21

Non-Transfer Passengers Waiting Time Data (cont.)

O.N	DATE	SEX	E.C.	RAT	A.M.	ADW	BLN	BDT	EDT	SDT	SRI	BLH	W.B.	W.A.	WAIT	WTHR	LOC	D.T.
1891	12/4/98	M	H	16:00	W	DN	120	16:05	16:05	16:05	0	35	5	0	5	0.1429	4	21
1892	12/4/98	M	B	16:00	W	DN	120	16:05	16:05	16:05	0	35	5	0	5	0.1429	4	21
1893	12/4/98	F	H	16:00	W	DN	120	16:05	16:05	16:05	0	35	5	5	5	0.1429	4	21
1894	7/17/98	F	B	17:11	W	S	120	17:24	17:25	17:25	-1	40	13	0	13	0.325	4	21
1895	7/17/98	F	B	13:44	W	DN	7N	13:48	13:50	13:50	-2	15	4	0	4	0.2667	4	22
1896	7/17/98	M	H	14:03	W	T	7N	14:06	14:05	14:05	1	15	2	1	3	0.2	4	22
1897	7/17/98	M	H	14:03	W	T	7N	14:06	14:05	14:05	1	15	2	1	3	0.2	4	22
1898	7/17/98	M	H	14:03	W	T	7N	14:06	14:05	14:05	1	15	2	1	3	0.2	4	22
1899	10/29/98	F	H	14:12	W	DN	7N	14:27	14:20	14:20	7	15	8	7	15	1	4	22
1900	10/29/98	M	H	14:26	W	DN	7N	14:27	14:35	14:20	7	15	1	0	1	0.0667	4	22
1901	10/29/98	M	H	14:26	W	DN	7N	14:27	14:35	14:20	7	15	1	0	1	0.0667	4	22
1902	7/17/98	M	H	14:19	W	DN	7N	14:34	14:20	14:35	-1	15	1	14	15	1	4	22
1903	7/17/98	F	B	14:22	W	T	7N	14:34	14:35	14:35	-1	15	12	0	12	0.8	4	22
1904	7/17/98	M	B	14:22	W	T	7N	14:34	14:35	14:35	-1	15	12	0	12	0.8	4	22
1905	12/4/98	M	B	14:27	W	DN	7N	14:38	14:35	14:35	3	15	8	3	11	0.7333	4	22
1906	12/4/98	M	B	14:34	W	DN	7N	14:38	14:35	14:35	3	15	1	3	4	0.2667	4	22
1907	12/4/98	F	B	14:37	W	DN	7N	14:38	14:50	14:35	3	15	1	0	1	0.0667	4	22
1908	12/4/98	F	H	14:40	W	T	7N	14:43	14:50	14:35	8	15	3	0	3	0.2	4	22
1909	12/16/98	M	B	14:25	W	DN	7N	14:37	14:35	14:35	2	15	10	2	12	0.8	4	22
1910	12/16/98	F	H	14:26	W	DN	7N	14:37	14:35	14:35	2	15	9	2	11	0.7333	4	22
1911	12/16/98	F	H	14:30	W	DN	7N	14:37	14:35	14:35	2	15	5	2	7	0.4667	4	22
1912	12/16/98	M	H	14:34	W	DN	7N	14:37	14:35	14:35	2	15	1	2	3	0.2	4	22
1913	12/16/98	F	H	14:34	W	DN	7N	14:37	14:35	14:35	2	15	1	2	3	0.2	4	22
1914	12/16/98	M	B	14:35	W	DN	7N	14:37	14:35	14:35	2	15	0	2	2	0.1333	4	22
1915	7/17/98	F	B	14:42	W	R	7N	14:51	14:50	14:50	1	15	8	1	9	0.6	4	22
1916	7/17/98	F	W	14:47	W	DN	7N	14:51	14:50	14:50	1	15	3	1	4	0.2667	4	22
1917	10/29/98	M	B	14:45	W	S	7N	14:52	14:50	14:50	2	15	5	2	7	0.4667	4	22
1918	10/29/98	M	B	14:45	W	DN	7N	14:52	14:50	14:50	2	15	5	2	7	0.4667	4	22
1919	10/29/98	M	B	14:47	W	T	7N	14:52	14:50	14:50	2	15	3	2	5	0.3333	4	22
1920	10/29/98	F	B	14:47	W	T	7N	14:52	14:50	14:50	2	15	3	2	5	0.3333	4	22

Non-Transfer Passengers Waiting Time Data (cont.)

O.N	DATE	SEX	E.C.	RAT	A.M.	ADW	BLN	BDT	EDT	SDT	SRI	BLH	W.B.	W.A.	WAIT	WTHR	LOC	D.T.
1921	11/19/98	F	B	14:46	W	DN	7N	14:51	14:50	14:50	1	15	4	1	5	0.3333	4	22
1922	11/19/98	M	B	14:46	W	DN	7N	14:51	14:50	14:50	1	15	4	1	5	0.3333	4	22
1923	11/19/98	F	B	14:48	W	DN	7N	14:51	14:50	14:50	1	15	2	1	3	0.2	4	22
1924	12/4/98	M	H	14:51	W	DN	7N	14:52	15:03	14:50	2	15	1	0	1	0.0667	4	22
1925	12/16/98	F	B	14:41	W	DN	7N	14:50	14:50	14:50	0	15	9	0	9	0.6	4	22
1926	12/16/98	F	B	14:50	W	DN	7N	14:50	14:50	14:50	0	15	0	0	0	0	4	22
1927	12/4/98	F	B	14:58	W		7N	15:07	15:03	15:03	4	13	5	4	9	0.6923	4	22
1928	12/4/98	F	H	15:05	W	DN	7N	15:07	15:18	15:03	4	13	2	0	2	0.1538	4	22
1929	12/16/98	F	H	14:57	W	DN	7N	15:06	15:03	15:03	3	13	6	3	9	0.6923	4	22
1930	12/16/98	F	B	14:59	W	DN	7N	15:06	15:03	15:03	3	13	4	3	7	0.5385	4	22
1931	12/16/98	F	B	14:59	W	DN	7N	15:06	15:03	15:03	3	13	4	3	7	0.5385	4	22
1932	10/29/98	F	H	15:11	W	DN	7N	15:17	15:18	15:18	-1	15	6	0	6	0.4	4	22
1933	10/29/98	M	H	15:13	W	DN	7N	15:17	15:18	15:18	-1	15	4	0	4	0.2667	4	22
1934	12/4/98	F	H	15:12	W	DN	7N	15:21	15:18	15:18	3	15	6	3	9	0.6	4	22
1935	12/4/98	M	H	15:15	W	DN	7N	15:21	15:18	15:18	3	15	3	3	6	0.4	4	22
1936	12/4/98	M	B	15:17	W	T	7N	15:21	15:18	15:18	3	15	1	3	4	0.2667	4	22
1937	12/4/98	F	H	15:18	W	DN	7N	15:21	15:18	15:18	3	15	0	3	3	0.2	4	22
1938	12/16/98	M	B	15:19	W	T	7N	15:23	15:33	15:18	5	15	4	0	4	0.2667	4	22
1939	12/16/98	M	B	15:19	W	T	7N	15:23	15:33	15:18	5	15	4	0	4	0.2667	4	22
1940	11/19/98	F	H	15:27	W	DN	7N	15:29	15:33	15:18	11	15	2	0	2	0.1333	4	22
1941	10/29/98	F	H	15:26	U		7N	15:41	15:33	15:33	8	15	7	8	15	1	4	22
1942	12/4/98	F	H	15:22	W	T	7N	15:41	15:33	15:33	8	15	11	8	19	1.2667	4	22
1943	12/4/98	M	H	15:22	W	T	7N	15:41	15:33	15:33	8	15	11	8	19	1.2667	4	22
1944	12/4/98	F	H	15:26	W	T	7N	15:41	15:33	15:33	8	15	7	8	15	1	4	22
1945	12/4/98	F	H	15:26	W	T	7N	15:41	15:33	15:33	8	15	7	8	15	1	4	22
1946	7/17/98	F	B	15:47	W	DN	7N	15:53	15:50	15:50	3	17	3	3	6	0.3529	4	22
1947	10/29/98	M	H	15:46	W	DN	7N	15:54	15:50	15:50	4	17	4	4	8	0.4706	4	22
1948	12/16/98	M	B	15:34	W	DN	7N	15:52	15:50	15:50	2	17	16	2	18	1.0588	4	22
1949	12/16/98	F	B	15:39	W	T	7N	15:52	15:50	15:50	2	17	11	2	13	0.7647	4	22
1950	12/16/98	F	B	15:39	W	T	7N	15:52	15:50	15:50	2	17	11	2	13	0.7647	4	22

Non-Transfer Passengers Waiting Time Data (cont.)

O.N	DATE	SEX	E.C.	RAT	A.M.	ADW	BLN	BDT	EDT	SDT	SRI	BLH	W.B.	W.A.	WAIT	WTHR	LOC	D.T.
1951	12/16/98	F	H	15:42	W	DN	7N	15:52	15:50	15:50	2	17	8	2	10	0.5882	4	22
1952	12/16/98	F	H	15:42	W	DN	7N	15:52	15:50	15:50	2	17	8	2	10	0.5882	4	22
1953	12/16/98	F	H	15:42	W	DN	7N	15:52	15:50	15:50	2	17	8	2	10	0.5882	4	22
1954	12/16/98	F	B	15:42	W	DN	7N	15:52	15:50	15:50	2	17	8	2	10	0.5882	4	22
1955	12/16/98	F	B	15:42	W	DN	7N	15:52	15:50	15:50	2	17	8	2	10	0.5882	4	22
1956	12/16/98	F	H	15:42	W	DN	7N	15:52	15:50	15:50	2	17	8	2	10	0.5882	4	22
1957	12/16/98	F	B	15:58	W	T	7N	16:05	16:05	16:05	0	15	7	0	7	0.4667	4	21
1958	12/16/98	F	B	15:58	W	T	7N	16:05	16:05	16:05	0	15	7	0	7	0.4667	4	21
1959	12/16/98	F	B	15:58	W	T	7N	16:05	16:05	16:05	0	15	7	0	7	0.4667	4	21
1960	12/16/98	F	B	15:58	W	T	7N	16:05	16:05	16:05	0	15	7	0	7	0.4667	4	21
1961	12/16/98	F	B	15:58	W	T	7N	16:05	16:05	16:05	0	15	7	0	7	0.4667	4	21
1962	12/16/98	F	B	15:58	W	T	7N	16:05	16:05	16:05	0	15	7	0	7	0.4667	4	21
1963	7/17/98	F	B	15:57	W	DN	7N	16:20	16:05	16:20	0	15	8	15	23	1.5333	4	21
1964	7/17/98	M	H	16:14	W	DN	7N	16:20	16:20	16:20	0	15	4	0	4	0.2667	4	21
1965	11/19/98	M	H	16:15	W	DN	7N	16:20	16:20	16:20	0	15	5	0	5	0.3333	4	21
1966	11/19/98	M	H	16:15	W	DN	7N	16:20	16:20	16:20	0	15	5	0	5	0.3333	4	21
1967	11/19/98	M	B	16:17	W	DN	7N	16:20	16:20	16:20	0	15	3	0	3	0.2	4	21
1968	12/4/98	M	B	16:18	W	DN	7N	16:20	16:20	16:20	0	15	2	0	2	0.1333	4	21
1969	12/4/98	F	B	16:18	W	DN	7N	16:20	16:20	16:20	0	15	2	0	2	0.1333	4	21
1970	12/16/98	M	B	16:16	W	S	7N	16:25	16:20	16:20	5	15	4	5	9	0.6	4	21
1971	12/16/98	M	B	16:16	W	S	7N	16:25	16:20	16:20	5	15	4	5	9	0.6	4	21
1972	11/19/98	F	H	16:23	W	DN	7N	16:37	16:35	16:35	2	15	12	2	14	0.9333	4	21
1973	11/19/98	M	H	16:36	W	DN	7N	16:37	16:50	16:35	2	15	1	0	1	0.0667	4	21
1974	11/19/98	M	H	16:36	W	DN	7N	16:37	16:50	16:35	2	15	1	0	1	0.0667	4	21
1975	12/4/98	F	H	16:23	W		7N	16:40	16:35	16:35	5	15	12	5	17	1.1333	4	21
1976	12/4/98	F	H	16:23	W		7N	16:40	16:35	16:35	5	15	12	5	17	1.1333	4	21
1977	12/4/98	F	H	16:23	W		7N	16:40	16:35	16:35	5	15	12	5	17	1.1333	4	21
1978	12/4/98	F	B	16:26	W		7N	16:40	16:35	16:35	5	15	9	5	14	0.9333	4	21
1979	7/17/98	F	B	16:38	W	DN	7N	16:51	16:50	16:50	1	15	12	1	13	0.8667	4	21
1980	10/29/98	M	H	13:57	W	DN	7S	14:06	14:10	13:55	11	15	9	0	9	0.6	4	22

Non-Transfer Passengers Waiting Time Data (cont.)

O.N	DATE	SEX	E.C.	RAT	A.M.	ADW	BLN	BDT	EDT	SDT	SRI	BLH	W.B.	W.A.	WAIT	WTHR	LOC	D.T.
1981	10/29/98	F	H	14:02	W	DN	7S	14:06	14:10	13:55	11	15	4	0	4	0.2667	4	22
1982	7/17/98	F	B	14:02	W	DN	7S	14:11	14:10	14:10	1	15	8	1	9	0.6	4	22
1983	7/17/98	F	B	14:02	W	DN	7S	14:11	14:10	14:10	1	15	8	1	9	0.6	4	22
1984	7/17/98	M	B	14:02	W	DN	7S	14:11	14:10	14:10	1	15	8	1	9	0.6	4	22
1985	7/17/98	F	H	14:05	W	DN	7S	14:11	14:10	14:10	1	15	5	1	6	0.4	4	22
1986	10/29/98	F	W	14:07	W	DN	7S	14:12	14:10	14:10	2	15	3	2	5	0.3333	4	22
1987	7/17/98	M	H	14:22	W	DN	7S	14:25	14:25	14:25	0	15	3	0	3	0.2	4	22
1988	10/29/98	F	B	14:17	W	DN	7S	14:30	14:25	14:25	5	15	8	5	13	0.8667	4	22
1989	10/29/98	F	H	14:18	R	S	7S	14:30	14:25	14:25	5	15	7	5	12	0.8	4	22
1990	10/29/98	F	H	14:18	R	S	7S	14:30	14:25	14:25	5	15	7	5	12	0.8	4	22
1991	12/4/98	F	A	14:25	W	DN	7S	14:27	14:25	14:25	2	15	0	2	2	0.1333	4	22
1992	12/4/98	F	A	14:25	W	DN	7S	14:27	14:25	14:25	2	15	0	2	2	0.1333	4	22
1993	12/4/98	F	W	14:27	W	DN	7S	14:27	14:40	14:25	2	15	0	0	0	0	4	22
1994	7/17/98	F	B	14:27	W	T	7S	14:40	14:40	14:40	0	15	13	0	13	0.8667	4	22
1995	7/17/98	M	B	14:27	W	S	7S	14:40	14:40	14:40	0	15	13	0	13	0.8667	4	22
1996	7/17/98	M	W	14:35	W	DN	7S	14:40	14:40	14:40	0	15	5	0	5	0.3333	4	22
1997	10/29/98	F	A	14:32	W	T	7S	14:37	14:40	14:40	-3	15	5	0	5	0.3333	4	22
1998	10/29/98	F	A	14:32	W	T	7S	14:37	14:40	14:40	-3	15	5	0	5	0.3333	4	22
1999	10/29/98	M	H	14:34	W	S	7S	14:37	14:40	14:40	-3	15	3	0	3	0.2	4	22
2000	10/29/98	M	H	14:34	W	S	7S	14:37	14:40	14:40	-3	15	3	0	3	0.2	4	22
2001	11/19/98	M	H	14:40	W	DN	7S	14:40	14:40	14:40	0	15	0	0	0	0	4	22
2002	12/4/98	M	H	14:40	W	T	7S	14:43	14:40	14:40	3	15	0	3	3	0.2	4	22
2003	7/17/98	M	A	14:48	W	DN	7S	14:55	14:55	14:55	0	15	7	0	7	0.4667	4	22
2004	7/17/98	M	H	14:49	W	DN	7S	14:55	14:55	14:55	0	15	6	0	6	0.4	4	22
2005	10/29/98	M	H	14:52	W	DN	7S	14:56	14:55	14:55	1	15	3	1	4	0.2667	4	22
2006	11/19/98	M	H	14:43	W	DN	7S	14:56	14:55	14:55	1	15	12	1	13	0.8667	4	22
2007	12/16/98	M	B	14:45	W	DN	7S	14:56	14:55	14:55	1	15	10	1	11	0.7333	4	22
2008	12/16/98	F	B	14:45	W	DN	7S	14:56	14:55	14:55	1	15	10	1	11	0.7333	4	22
2009	12/16/98	M	B	14:47	W	DN	7S	14:56	14:55	14:55	1	15	8	1	9	0.6	4	22
2010	12/16/98	F	H	14:53	W	DN	7S	14:56	14:55	14:55	1	15	2	1	3	0.2	4	22

Non-Transfer Passengers Waiting Time Data (cont.)

O.N	DATE	SEX	E.C.	RAT	A.M.	ADW	BLN	BDT	EDT	SDT	SRI	BLH	W.B.	W.A.	WAIT	WTHR	LOC	D.T.
2011	7/17/98	M	B	14:59	W	T	7S	15:10	15:09	15:09	1	15	10	1	11	0.7333	4	22
2012	7/17/98	M	B	14:59	W	T	7S	15:10	15:09	15:09	1	15	10	1	11	0.7333	4	22
2013	10/29/98	F	O	15:08	W	DN	7S	15:10	15:09	15:09	1	15	1	1	2	0.1333	4	22
2014	10/29/98	F	H	15:10	W	DN	7S	15:10	15:25	15:09	1	15	0	0	0	0	4	22
2015	10/29/98	M	H	15:10	W	DN	7S	15:10	15:25	15:09	1	15	0	0	0	0	4	22
2016	11/19/98	F	B	15:06	W	DN	7S	15:14	15:09	15:09	5	15	3	5	8	0.5333	4	22
2017	11/19/98	M	H	15:11	W	DN	7S	15:14	15:25	15:09	5	15	3	0	3	0.2	4	22
2018	11/19/98	F	H	15:11	W	DN	7S	15:14	15:25	15:09	5	15	3	0	3	0.2	4	22
2019	12/4/98	M	B	15:09	W	T	7S	15:12	15:09	15:09	3	15	0	3	3	0.2	4	22
2020	12/4/98	F	W	15:11	W	DN	7S	15:12	15:25	15:09	3	15	1	0	1	0.0667	4	22
2021	12/4/98	M	B	15:11	W	DN	7S	15:12	15:25	15:09	3	15	1	0	1	0.0667	4	22
2022	12/16/98	F	B	15:01	W	DN	7S	15:10	15:09	15:09	1	15	8	1	9	0.6	4	22
2023	12/16/98	F	B	15:01	W	DN	7S	15:10	15:09	15:09	1	15	8	1	9	0.6	4	22
2024	12/16/98	F	A	15:03	W	DN	7S	15:10	15:09	15:09	1	15	6	1	7	0.4667	4	22
2025	12/16/98	F	H	15:05	U	DN	7S	15:10	15:09	15:09	1	15	4	1	5	0.3333	4	22
2026	12/16/98	F	H	15:05	W	DN	7S	15:10	15:09	15:09	1	15	4	1	5	0.3333	4	22
2027	11/19/98	F	W	15:23	W	DN	7S	15:25	15:25	15:25	0	15	2	0	2	0.1333	4	22
2028	12/4/98	F	B	15:16	W	T	7S	15:28	15:25	15:25	3	15	9	3	12	0.8	4	22
2029	12/4/98	F	W	15:17	W	T	7S	15:28	15:25	15:25	3	15	8	3	11	0.7333	4	22
2030	12/4/98	F	W	15:17	W	T	7S	15:28	15:25	15:25	3	15	8	3	11	0.7333	4	22
2031	12/4/98	M	B	15:17	W	T	7S	15:28	15:25	15:25	3	15	8	3	11	0.7333	4	22
2032	12/4/98	M	B	15:17	W	T	7S	15:28	15:25	15:25	3	15	8	3	11	0.7333	4	22
2033	12/4/98	F	B	15:19	W	DN	7S	15:28	15:25	15:25	3	15	6	3	9	0.6	4	22
2034	12/4/98	M	W	15:24	W	DN	7S	15:28	15:25	15:25	3	15	1	3	4	0.2667	4	22
2035	12/16/98	F	B	15:12	W	DN	7S	15:27	15:25	15:25	2	15	13	2	15	1	4	22
2036	12/16/98	F	B	15:12	W	DN	7S	15:27	15:25	15:25	2	15	13	2	15	1	4	22
2037	12/16/98	F	B	15:14	W	T	7S	15:27	15:25	15:25	2	15	11	2	13	0.8667	4	22
2038	12/16/98	F	B	15:14	W	T	7S	15:27	15:25	15:25	2	15	11	2	13	0.8667	4	22
2039	12/16/98	F	B	15:25	W	DN	7S	15:27	15:25	15:25	2	15	0	2	2	0.1333	4	22
2040	12/16/98	F	B	15:25	W	DN	7S	15:27	15:25	15:25	2	15	0	2	2	0.1333	4	22

Non-Transfer Passengers Waiting Time Data (cont.)

O.N	DATE	SEX	E.C.	RAT	A.M.	ADW	BLN	BDT	EDT	SDT	SRI	BLH	W.B.	W.A.	WAIT	WTHR	LOC	D.T.
2041	12/16/98	F	B	15:25	W	DN	7S	15:27	15:25	15:25	2	15	0	2	2	0.1333	4	22
2042	12/16/98	F	B	15:25	W	DN	7S	15:27	15:25	15:25	2	15	0	2	2	0.1333	4	22
2043	12/16/98	M	H	15:27	W	DN	7S	15:27	15:40	15:25	2	15	0	0	0	0	4	22
2044	12/16/98	F	H	15:27	W	DN	7S	15:27	15:40	15:25	2	15	0	0	0	0	4	22
2045	12/16/98	M	B	15:27	W	DN	7S	15:27	15:40	15:25	2	15	0	0	0	0	4	22
2046	7/17/98	F	B	15:32	W	DN	7S	15:41	15:40	15:40	1	15	8	1	9	0.6	4	22
2047	7/17/98	M	B	15:38	W	DN	7S	15:41	15:40	15:40	1	15	2	1	3	0.2	4	22
2048	7/17/98	F	B	15:38	W	DN	7S	15:41	15:40	15:40	1	15	2	1	3	0.2	4	22
2049	10/29/98	F	A	15:30	W	DN	7S	15:42	15:40	15:40	2	15	10	2	12	0.8	4	22
2050	11/19/98	M	H	15:36	W	DN	7S	15:40	15:40	15:40	0	15	4	0	4	0.2667	4	22
2051	12/4/98	F	H	15:36	W	DN	7S	15:46	15:40	15:40	6	15	4	6	10	0.6667	4	22
2052	12/16/98	F	H	15:33	W	DN	7S	15:42	15:40	15:40	2	15	7	2	9	0.6	4	22
2053	12/16/98	F	H	15:33	W	DN	7S	15:42	15:40	15:40	2	15	7	2	9	0.6	4	22
2054	12/16/98	M	B	15:33	W	DN	7S	15:42	15:40	15:40	2	15	7	2	9	0.6	4	22
2055	12/16/98	F	H	15:33	W	DN	7S	15:42	15:40	15:40	2	15	7	2	9	0.6	4	22
2056	12/16/98	M	W	15:33	W	DN	7S	15:42	15:40	15:40	2	15	7	2	9	0.6	4	22
2057	7/17/98	F	B	15:42	W	DN	7S	15:55	15:55	15:55	0	15	13	0	13	0.8667	4	22
2058	7/17/98	M	H	15:45	W	DN	7S	15:55	15:55	15:55	0	15	10	0	10	0.6667	4	22
2059	10/29/98	M	H	15:54	W	DN	7S	15:56	15:55	15:55	1	15	1	1	2	0.1333	4	22
2060	12/4/98	F	H	15:42	W	DN	7S	15:58	15:55	15:55	3	15	13	3	16	1.0667	4	22
2061	12/4/98	M	H	15:53	W	DN	7S	15:58	15:55	15:55	3	15	5	3	5	0.3333	4	22
2062	12/16/98	F	H	15:54	W	DN	7S	15:55	15:55	15:55	0	15	1	0	1	0.0667	4	22
2063	12/16/98	F	H	15:54	W	DN	7S	15:55	15:55	15:55	0	15	1	0	1	0.0667	4	22
2064	11/19/98	M	H	16:08	W	DN	7S	16:14	16:10	16:10	4	15	2	4	6	0.4	4	21
2065	12/4/98	F	A	16:03	W	DN	7S	16:12	16:10	16:10	2	15	7	2	9	0.6	4	21
2066	12/4/98	M	B	16:08	W	DN	7S	16:12	16:10	16:10	2	15	2	2	4	0.2667	4	21
2067	12/4/98	F	H	16:08	W	DN	7S	16:12	16:10	16:10	2	15	2	2	4	0.2667	4	21
2068	11/19/98	M	H	16:18	W	DN	7S	16:29	16:25	16:25	4	15	7	4	11	0.7333	4	21
2069	12/4/98	F	B	16:13	W		7S	16:28	16:25	16:25	3	15	12	3	15	1	4	21
2070	12/4/98	F	W	16:14	W	T	7S	16:28	16:25	16:25	3	15	11	3	14	0.9333	4	21



Non-Transfer Passengers Waiting Time Data (cont.)

O.N	DATE	SEX	E.C.	RAT	A.M.	ADW	BLN	BDT	EDT	SDT	SRI	BLH	W.B.	W.A.	WAIT	WTHR	LOC	D.T.
2071	12/4/98	F	W	16:14	W	T	7S	16:28	16:25	16:25	3	15	11	3	14	0.9333	4	21
2072	12/4/98	F	H	16:21	W		7S	16:28	16:25	16:25	3	15	4	3	7	0.4667	4	21
2073	12/4/98	F	A	16:24	W		7S	16:28	16:25	16:25	3	15	1	3	4	0.2667	4	21
2074	12/4/98	F	W	16:25	W		7S	16:28	16:25	16:25	3	15	0	3	3	0.2	4	21
2075	12/4/98	F	W	16:25	W		7S	16:28	16:25	16:25	3	15	0	3	3	0.2	4	21
2076	12/4/98	F	W	16:25	W		7S	16:28	16:25	16:25	3	15	0	3	3	0.2	4	21
2077	7/17/98	F	H	16:15	R	T	7S	16:48	16:25	16:40	8	15	10	23	33	2.2	4	21
2078	7/17/98	F	B	16:15	R	T	7S	16:48	16:25	16:40	8	15	10	23	33	2.2	4	21
2079	11/19/98	F	H	16:39	W	DN	7S	16:40	16:40	16:40	0	15	1	0	1	0.0667	4	21
2080	11/19/98	F	H	16:39	W	DN	7S	16:40	16:40	16:40	0	15	1	0	1	0.0667	4	21
2081	12/4/98	F	H	16:40	W		7S	16:45	16:40	16:40	5	15	0	5	5	0.3333	4	21
2082	12/4/98	M	W	16:44	U		7S	16:45	16:55	16:40	5	15	1	0	1	0.0667	4	21
2083	12/4/98	M	H	16:44	U		7S	16:45	16:55	16:40	5	15	1	0	1	0.0667	4	21
2084	12/4/98	F	H	16:44	U		7S	16:45	16:55	16:40	5	15	1	0	1	0.0667	4	21
2085	7/17/98	F	W	17:20	W	T	7S	17:25	17:25	17:25	0	15	5	0	5	0.3333	4	21
2086	7/10/98	F	B	6:45	W	R	LXN	6:57	6:54	6:54	3	13	9	3	12	0.9231	5	11
2087	7/10/98	F	W	6:53	D	DN	LXN	6:57	6:54	6:54	3	13	1	3	4	0.3077	5	11
2088	7/10/98	F	B	6:57	W	DN	LXN	6:57	7:46	6:54	3	13	0	0	0	0	5	11
2089	7/10/98	M	W	7:02	U	DN	LXN	7:49	7:46	7:46	3	52	44	3	47	0.9038	5	11
2090	11/6/98	M	W	8:07	D	R	LXN	8:26	8:16	8:16	10	15	9	10	19	1.2667	5	11
2091	10/30/98	F	W	8:44	R	DN	LXN	8:52	8:51	8:51	1	35	7	1	8	0.2286	5	12
2092	11/6/98	F	B	8:48	W	DN	LXN	8:50	8:51	8:51	-1	35	2	0	2	0.0571	5	12
2093	7/10/98	M	H	6:49	W	DN	LXS	6:55	6:54	6:54	1	10	5	1	6	0.6	5	11
2094	7/10/98	F	W	6:53	D	DN	LXS	6:55	6:54	6:54	1	10	1	1	2	0.2	5	11
2095	7/10/98	M	W	6:53	D	DN	LXS	6:55	6:54	6:54	1	10	1	1	2	0.2	5	11
2096	7/10/98	F	W	6:54	D	DN	LXS	6:55	6:54	6:54	1	10	0	1	1	0.1	5	11
2097	7/10/98	M	W	6:55	D	DN	LXS	6:55	7:04	6:54	1	10	0	0	0	0	5	11
2098	7/10/98	F	H	6:56	D	T	LXS	7:06	7:04	7:04	2	10	8	2	10	1	5	11
2099	7/10/98	M	W	6:58	D	DN	LXS	7:06	7:04	7:04	2	10	6	2	8	0.8	5	11
2100	7/10/98	F	W	6:58	D	T	LXS	7:06	7:04	7:04	2	10	6	2	8	0.8	5	11

Non-Transfer Passengers Waiting Time Data (cont.)

O.N	DATE	SEX	E.C.	RAT	A.M.	ADW	BLN	BDT	EDT	SDT	SRI	BLH	W.B.	W.A.	WAIT	WTHR	LOC	D.T.
2101	7/10/98	M	W	7:00	R	DN	LXS	7:06	7:04	7:04	2	10	4	2	6	0.6	5	11
2102	7/10/98	M	W	7:01	D	DN	LXS	7:06	7:04	7:04	2	10	3	2	5	0.5	5	11
2103	7/10/98	F	W	7:02	D	DN	LXS	7:06	7:04	7:04	2	10	2	2	4	0.4	5	11
2104	7/10/98	M	H	7:04	U	DN	LXS	7:06	7:04	7:04	2	10	0	2	2	0.2	5	11
2105	7/10/98	F	W	7:05	D	DN	LXS	7:06	7:14	7:04	2	10	1	0	1	0.1	5	11
2106	7/10/98	F	O	7:07	U	R	LXS	7:15	7:14	7:14	1	10	7	1	8	0.8	5	11
2107	7/10/98	F	A	7:09	R	R	LXS	7:15	7:14	7:14	1	10	5	1	6	0.6	5	11
2108	7/10/98	F	H	7:10	D	S	LXS	7:15	7:14	7:14	1	10	4	1	5	0.5	5	11
2109	7/10/98	M	W	7:12	D	DN	LXS	7:15	7:14	7:14	1	10	2	1	3	0.3	5	11
2110	7/10/98	M	H	7:12	W	DN	LXS	7:15	7:14	7:14	1	10	2	1	3	0.3	5	11
2111	7/10/98	F	W	7:14	D	DN	LXS	7:15	7:14	7:14	1	10	0	1	1	0.1	5	11
2112	7/10/98	F	A	7:14	R	DN	LXS	7:15	7:14	7:14	1	10	0	1	1	0.1	5	11
2113	7/10/98	M	W	7:15	D	DN	LXS	7:15	7:36	7:14	1	10	0	0	0	0	5	11
2114	7/10/98	F	W	7:15	D	DN	LXS	7:15	7:36	7:14	1	10	0	0	0	0	5	11
2115	10/30/98	F	A	7:05	W	DN	LXS	7:15	7:14	7:14	1	10	9	1	10	1	5	11
2116	10/30/98	M	W	7:05	W	DN	LXS	7:15	7:14	7:14	1	10	9	1	10	1	5	11
2117	10/30/98	F	W	7:05	W	DN	LXS	7:15	7:14	7:14	1	10	9	1	10	1	5	11
2118	10/30/98	F	W	7:05	R	DN	LXS	7:15	7:14	7:14	1	10	9	1	10	1	5	11
2119	10/30/98	M	W	7:05	W	DN	LXS	7:15	7:14	7:14	1	10	9	1	10	1	5	11
2120	10/30/98	M	B	7:06	R	DN	LXS	7:15	7:14	7:14	1	10	8	1	9	0.9	5	11
2121	10/30/98	M	W	7:07	R	DN	LXS	7:15	7:14	7:14	1	10	7	1	8	0.8	5	11
2122	10/30/98	F	W	7:07	W	DN	LXS	7:15	7:14	7:14	1	10	7	1	8	0.8	5	11
2123	10/30/98	M	W	7:09	D	DN	LXS	7:15	7:14	7:14	1	10	5	1	6	0.6	5	11
2124	10/30/98	M	W	7:09	D	DN	LXS	7:15	7:14	7:14	1	10	5	1	6	0.6	5	11
2125	10/30/98	M	W	7:09	D	DN	LXS	7:15	7:14	7:14	1	10	5	1	6	0.6	5	11
2126	10/30/98	F	W	7:09	D	DN	LXS	7:15	7:14	7:14	1	10	5	1	6	0.6	5	11
2127	10/30/98	F	W	7:10	D	DN	LXS	7:15	7:14	7:14	1	10	4	1	5	0.5	5	11
2128	10/30/98	F	A	7:10	R	DN	LXS	7:15	7:14	7:14	1	10	4	1	5	0.5	5	11
2129	10/30/98	M	W	7:10	R	DN	LXS	7:15	7:14	7:14	1	10	4	1	5	0.5	5	11
2130	10/30/98	M	A	7:11	R	DN	LXS	7:15	7:14	7:14	1	10	3	1	4	0.4	5	11

Non-Transfer Passengers Waiting Time Data (cont.)

O.N	DATE	SEX	E.C.	RAT	A.M.	ADW	BLN	BDT	EDT	SDT	SRI	BLH	W.B.	W.A.	WAIT	WTHR	LOC	D.T.
2131	10/30/98	M	W	7:14	D	DN	LXS	7:15	7:14	7:14	1	10	0	1	1	0.1	5	11
2132	11/6/98	F	W	7:08	R	DN	LXS	7:14	7:14	7:14	0	10	6	0	6	0.6	5	11
2133	11/6/98	F	W	7:10	D	DN	LXS	7:14	7:14	7:14	0	10	4	0	4	0.4	5	11
2134	11/6/98	M	W	7:10	D	DN	LXS	7:14	7:14	7:14	0	10	4	0	4	0.4	5	11
2135	11/6/98	M	W	7:10	D	DN	LXS	7:14	7:14	7:14	0	10	4	0	4	0.4	5	11
2136	11/6/98	F	W	7:11	R	DN	LXS	7:14	7:14	7:14	0	10	3	0	3	0.3	5	11
2137	11/6/98	M	W	7:11	D	DN	LXS	7:14	7:14	7:14	0	10	3	0	3	0.3	5	11
2138	11/6/98	M	W	7:12	D	DN	LXS	7:14	7:14	7:14	0	10	2	0	2	0.2	5	11
2139	11/6/98	F	W	7:12	D	DN	LXS	7:14	7:14	7:14	0	10	2	0	2	0.2	5	11
2140	11/6/98	F	W	7:12	D	DN	LXS	7:14	7:14	7:14	0	10	2	0	2	0.2	5	11
2141	11/6/98	F	A	7:12	R	DN	LXS	7:14	7:14	7:14	0	10	2	0	2	0.2	5	11
2142	11/6/98	F	A	7:12	D	DN	LXS	7:14	7:14	7:14	0	10	2	0	2	0.2	5	11
2143	11/6/98	M	W	7:12	R	DN	LXS	7:14	7:14	7:14	0	10	2	0	2	0.2	5	11
2144	11/6/98	M	W	7:12	D	DN	LXS	7:14	7:14	7:14	0	10	2	0	2	0.2	5	11
2145	7/10/98	F	A	7:23	R	R	LXS	7:36	7:36	7:36	0	22	13	0	13	0.5909	5	11
2146	7/10/98	F	W	7:25	D	R	LXS	7:36	7:36	7:36	0	22	11	0	11	0.5	5	11
2147	7/10/98	F	W	7:28	R	DN	LXS	7:36	7:36	7:36	0	22	8	0	8	0.3636	5	11
2148	7/10/98	M	W	7:29	D	DN	LXS	7:36	7:36	7:36	0	22	7	0	7	0.3182	5	11
2149	7/10/98	F	W	7:34	D	DN	LXS	7:36	7:36	7:36	0	22	2	0	2	0.0909	5	11
2150	7/10/98	F	W	7:35	D	DN	LXS	7:36	7:36	7:36	0	22	1	0	1	0.0455	5	11
2151	7/10/98	F	W	7:35	D	DN	LXS	7:36	7:36	7:36	0	22	1	0	1	0.0455	5	11
2152	10/30/98	F	A	7:20	W	DN	LXS	7:36	7:36	7:36	0	22	16	0	16	0.7273	5	11
2153	10/30/98	M	W	7:23	W	DN	LXS	7:36	7:36	7:36	0	22	13	0	13	0.5909	5	11
2154	11/6/98	M	W	7:16	R	DN	LXS	7:36	7:36	7:36	0	22	20	0	20	0.9091	5	11
2155	11/6/98	M	W	7:23	R	DN	LXS	7:36	7:36	7:36	0	22	13	0	13	0.5909	5	11
2156	10/30/98	F	W	7:25	R	DN	LXS	7:36	7:36	7:36	0	22	11	0	11	0.5	5	11
2157	10/30/98	F	H	7:26	D	DN	LXS	7:36	7:36	7:36	0	22	10	0	10	0.4545	5	11
2158	10/30/98	F	H	7:27	D	DN	LXS	7:36	7:36	7:36	0	22	9	0	9	0.4091	5	11
2159	10/30/98	F	W	7:30	D	R	LXS	7:36	7:36	7:36	0	22	6	0	6	0.2727	5	11
2160	10/30/98	F	H	7:30	D	DN	LXS	7:36	7:36	7:36	0	22	6	0	6	0.2727	5	11

Non-Transfer Passengers Waiting Time Data (cont.)

O.N	DATE	SEX	E.C.	RAT	A.M.	ADW	BLN	BDT	EDT	SDT	SRI	BLH	W.B.	W.A.	WAIT	WTHR	LOC	D.T.
2161	10/30/98	M	W	7:31	D	DN	LXS	7:36	7:36	7:36	0	22	5	0	5	0.2273	5	11
2162	10/30/98	M	W	7:31	R	DN	LXS	7:36	7:36	7:36	0	22	5	0	5	0.2273	5	11
2163	10/30/98	M	A	7:32	D	DN	LXS	7:36	7:36	7:36	0	22	4	0	4	0.1818	5	11
2164	10/30/98	F	H	7:32	R	DN	LXS	7:36	7:36	7:36	0	22	4	0	4	0.1818	5	11
2165	10/30/98	M	W	7:32	D	DN	LXS	7:36	7:36	7:36	0	22	4	0	4	0.1818	5	11
2166	10/30/98	F	W	7:35	W	DN	LXS	7:36	7:36	7:36	0	22	1	0	1	0.0455	5	11
2167	10/30/98	F	W	7:35	W	DN	LXS	7:36	7:36	7:36	0	22	1	0	1	0.0455	5	11
2168	10/30/98	F	W	7:36	W	DN	LXS	7:36	7:36	7:36	0	22	0	0	0	0	5	11
2169	10/30/98	M	H	7:36	W	DN	LXS	7:36	7:36	7:36	0	22	0	0	0	0	5	11
2170	11/6/98	F	W	7:23	D	DN	LXS	7:36	7:36	7:36	0	22	13	0	13	0.5909	5	11
2171	11/6/98	F	W	7:26	R	DN	LXS	7:36	7:36	7:36	0	22	10	0	10	0.4545	5	11
2172	11/6/98	F	A	7:27	R	DN	LXS	7:36	7:36	7:36	0	22	9	0	9	0.4091	5	11
2173	11/6/98	F	W	7:29	D	DN	LXS	7:36	7:36	7:36	0	22	7	0	7	0.3182	5	11
2174	11/6/98	F	W	7:30	R	DN	LXS	7:36	7:36	7:36	0	22	6	0	6	0.2727	5	11
2175	11/6/98	M	W	7:31	R	DN	LXS	7:36	7:36	7:36	0	22	5	0	5	0.2273	5	11
2176	11/6/98	F	H	7:31	R	DN	LXS	7:36	7:36	7:36	0	22	5	0	5	0.2273	5	11
2177	11/6/98	F	W	7:33	D	DN	LXS	7:36	7:36	7:36	0	22	3	0	3	0.1364	5	11
2178	11/6/98	M	W	7:33	D	DN	LXS	7:36	7:36	7:36	0	22	3	0	3	0.1364	5	11
2179	11/6/98	F	H	7:35	D	DN	LXS	7:36	7:36	7:36	0	22	1	0	1	0.0455	5	11
2180	11/6/98	M	W	7:36	R	DN	LXS	7:36	7:36	7:36	0	22	0	0	0	0	5	11
2181	7/10/98	M	W	7:42	D	DN	LXS	8:00	7:56	7:56	4	20	14	4	18	0.9	5	11
2182	7/10/98	M	W	7:43	W	DN	LXS	8:00	7:56	7:56	4	20	13	4	17	0.85	5	11
2183	7/10/98	F	W	7:55	R	T	LXS	8:00	7:56	7:56	4	20	1	4	5	0.25	5	11
2184	7/10/98	F	B	7:56	R	DN	LXS	8:00	7:56	7:56	4	20	0	4	4	0.2	5	11
2185	10/30/98	M	W	7:38	B	S	LXS	7:58	7:56	7:56	2	20	18	2	20	1	5	11
2186	10/30/98	M	W	7:42	D	DN	LXS	7:58	7:56	7:56	2	20	14	2	16	0.8	5	11
2187	11/6/98	M	W	7:39	D	R	LXS	7:56	7:56	7:56	0	20	17	0	17	0.85	5	11
2188	11/6/98	M	W	7:42	R	DN	LXS	7:56	7:56	7:56	0	20	14	0	14	0.7	5	11
2189	10/30/98	M	W	7:46	D	DN	LXS	7:58	7:56	7:56	2	20	10	2	12	0.6	5	11
2190	10/30/98	F	W	7:47	D	DN	LXS	7:58	7:56	7:56	2	20	9	2	11	0.55	5	11

Non-Transfer Passengers Waiting Time Data (cont.)

O.N	DATE	SEX	E.C.	RAT	A.M.	ADW	BLN	BDT	EDT	SDT	SRI	BLH	W.B.	W.A.	WAIT	WTHR	LOC	D.T.
2191	10/30/98	F	W	7:49	D	DN	LXS	7:58	7:56	7:56	2	20	7	2	9	0.45	5	11
2192	10/30/98	M	W	7:49	D	DN	LXS	7:58	7:56	7:56	2	20	7	2	9	0.45	5	11
2193	10/30/98	F	A	7:49	D	R	LXS	7:58	7:56	7:56	2	20	7	2	9	0.45	5	11
2194	10/30/98	M	W	7:50	D	DN	LXS	7:58	7:56	7:56	2	20	6	2	8	0.4	5	11
2195	10/30/98	M	W	7:50	R	DN	LXS	7:58	7:56	7:56	2	20	6	2	8	0.4	5	11
2196	10/30/98	F	W	7:51	D	DN	LXS	7:58	7:56	7:56	2	20	5	2	7	0.35	5	11
2197	10/30/98	F	W	7:52	D	DN	LXS	7:58	7:56	7:56	2	20	4	2	6	0.3	5	11
2198	10/30/98	M	W	7:54	D	DN	LXS	7:58	7:56	7:56	2	20	2	2	4	0.2	5	11
2199	10/30/98	F	W	7:55	D	DN	LXS	7:58	7:56	7:56	2	20	1	2	3	0.15	5	11
2200	10/30/98	M	W	7:56	D	DN	LXS	7:58	7:56	7:56	2	20	0	2	2	0.1	5	11
2201	11/6/98	F	W	7:45	D	DN	LXS	7:56	7:56	7:56	0	20	11	0	11	0.55	5	11
2202	11/6/98	M	W	7:45	B	S	LXS	7:56	7:56	7:56	0	20	11	0	11	0.55	5	11
2203	11/6/98	F	W	7:50	D	DN	LXS	7:56	7:56	7:56	0	20	6	0	6	0.3	5	11
2204	11/6/98	F	W	7:53	D	DN	LXS	7:56	7:56	7:56	0	20	3	0	3	0.15	5	11
2205	11/6/98	M	W	7:53	D	DN	LXS	7:56	7:56	7:56	0	20	3	0	3	0.15	5	11
2206	11/6/98	F	W	7:53	D	DN	LXS	7:56	7:56	7:56	0	20	3	0	3	0.15	5	11
2207	11/6/98	F	A	7:54	D	DN	LXS	7:56	7:56	7:56	0	20	2	0	2	0.1	5	11
2208	11/6/98	M	W	7:54	D	DN	LXS	7:56	7:56	7:56	0	20	2	0	2	0.1	5	11
2209	11/6/98	M	W	7:54	D	DN	LXS	7:56	7:56	7:56	0	20	2	0	2	0.1	5	11
2210	11/6/98	F	A	7:54	D	DN	LXS	7:56	7:56	7:56	0	20	2	0	2	0.1	5	11
2211	7/10/98	M	W	8:03	W	R	LXS	8:10	8:09	8:09	1	13	6	1	7	0.5385	5	11
2212	10/30/98	F	W	7:59	D	DN	LXS	8:10	8:09	8:09	1	13	10	1	11	0.8462	5	11
2213	10/30/98	M	W	8:02	D	DN	LXS	8:10	8:09	8:09	1	13	7	1	8	0.6154	5	11
2214	10/30/98	F	A	8:06	D	DN	LXS	8:10	8:09	8:09	1	13	3	1	4	0.3077	5	11
2215	11/6/98	M	W	8:03	B	DN	LXS	8:09	8:09	8:09	0	13	6	0	6	0.4615	5	11
2216	11/6/98	M	W	8:04	D	DN	LXS	8:09	8:09	8:09	0	13	5	0	5	0.3846	5	11
2217	11/6/98	F	A	8:06	R	DN	LXS	8:09	8:09	8:09	0	13	3	0	3	0.2308	5	11
2218	11/6/98	F	W	8:08	D	R	LXS	8:09	8:09	8:09	0	13	1	0	1	0.0769	5	11
2219	11/6/98	M	W	8:08	D	R	LXS	8:09	8:09	8:09	0	13	1	0	1	0.0769	5	11
2220	7/10/98	F	W	8:18	R	DN	LXS	8:25	8:24	8:24	1	15	6	1	7	0.4667	5	11

Non-Transfer Passengers Waiting Time Data (cont.)

O.N	DATE	SEX	E.C.	RAT	A.M.	ADW	BLN	BDT	EDT	SDT	SRI	BLH	W.B.	W.A.	WAIT	WTHR	LOC	D.T.
2221	7/10/98	M	A	8:21	D	DN	LXS	8:25	8:24	8:24	1	15	3	1	4	0.2667	5	11
2222	7/10/98	M	W	8:21	R	S	LXS	8:25	8:24	8:24	1	15	3	1	4	0.2667	5	11
2223	7/10/98	F	W	8:24	D	DN	LXS	8:25	8:24	8:24	1	15	0	1	1	0.0667	5	11
2224	7/10/98	M	W	8:24	D	DN	LXS	8:25	8:24	8:24	1	15	0	1	1	0.0667	5	11
2225	10/30/98	M	A	8:13	R	DN	LXS	8:23	8:24	8:24	-1	15	10	0	10	0.6667	5	11
2226	10/30/98	F	W	8:13	R	DN	LXS	8:23	8:24	8:24	-1	15	10	0	10	0.6667	5	11
2227	10/30/98	M	W	8:17	D	DN	LXS	8:23	8:24	8:24	-1	15	6	0	6	0.4	5	11
2228	10/30/98	M	A	8:18	B	DN	LXS	8:23	8:24	8:24	-1	15	5	0	5	0.3333	5	11
2229	10/30/98	M	W	8:20	D	DN	LXS	8:23	8:24	8:24	-1	15	3	0	3	0.2	5	11
2230	10/30/98	F	W	8:20	D	DN	LXS	8:23	8:24	8:24	-1	15	3	0	3	0.2	5	11
2231	10/30/98	M	W	8:22	D	DN	LXS	8:23	8:24	8:24	-1	15	1	0	1	0.0667	5	11
2232	11/6/98	F	A	8:20	D	DN	LXS	8:23	8:24	8:24	-1	15	3	0	3	0.2	5	11
2233	11/6/98	F	W	8:21	D	DN	LXS	8:23	8:24	8:24	-1	15	2	0	2	0.1333	5	11
2234	10/30/98	M	H	8:55	D	DN	LXS	9:08	9:05	9:05	3	41	10	3	13	0.3171	5	12
2235	10/30/98	F	W	8:55	D	DN	LXS	9:08	9:05	9:05	3	41	10	3	13	0.3171	5	12
2236	10/30/98	F	W	8:56	D	DN	LXS	9:08	9:05	9:05	3	41	9	3	12	0.2927	5	12
2237	10/30/98	M	W	8:56	D	DN	LXS	9:08	9:05	9:05	3	41	9	3	12	0.2927	5	12
2238	10/30/98	M	W	8:56	R	S	LXS	9:08	9:05	9:05	3	41	9	3	12	0.2927	5	12
2239	10/30/98	M	O	8:56	R	S	LXS	9:08	9:05	9:05	3	41	9	3	12	0.2927	5	12
2240	10/30/98	F	W	8:57	D	DN	LXS	9:08	9:05	9:05	3	41	8	3	11	0.2683	5	12
2241	10/30/98	F	A	8:57	R	T	LXS	9:08	9:05	9:05	3	41	8	3	11	0.2683	5	12
2242	10/30/98	F	W	8:58	D	R	LXS	9:08	9:05	9:05	3	41	7	3	10	0.2439	5	12
2243	10/30/98	M	W	9:01	W	DN	LXS	9:08	9:05	9:05	3	41	4	3	7	0.1707	5	12
2244	10/30/98	F	O	9:02	W	DN	LXS	9:08	9:05	9:05	3	41	3	3	6	0.1463	5	12
2245	10/30/98	M	W	9:03	D	DN	LXS	9:08	9:05	9:05	3	41	2	3	5	0.122	5	12
2246	10/30/98	M	W	9:03	R	DN	LXS	9:08	9:05	9:05	3	41	2	3	5	0.122	5	12
2247	10/30/98	M	O	9:03	R	T	LXS	9:08	9:05	9:05	3	41	2	3	5	0.122	5	12
2248	10/30/98	M	O	9:03	R	T	LXS	9:08	9:05	9:05	3	41	2	3	5	0.122	5	12
2249	10/30/98	M	H	9:06	D	DN	LXS	9:08	9:48	9:05	3	41	2	0	2	0.0488	5	12
2250	10/30/98	F	W	9:06	D	DN	LXS	9:08	9:48	9:05	3	41	2	0	2	0.0488	5	12

Non-Transfer Passengers Waiting Time Data (cont.)

O.N	DATE	SEX	E.C.	RAT	A.M.	ADW	BLN	BDT	EDT	SDT	SRI	BLH	W.B.	W.A.	WAIT	WTHR	LOC	D.T.
2251	10/30/98	M	W	9:08	W	DN	LXS	9:08	9:48	9:05	3	41	0	0	0	0	5	12
2252	11/6/98	F	H	8:59	D	DN	LXS	9:12	9:05	9:05	7	41	6	7	13	0.3171	5	12
2253	11/6/98	M	W	8:59	D	DN	LXS	9:12	9:05	9:05	7	41	6	7	13	0.3171	5	12
2254	11/6/98	F	A	9:00	D	DN	LXS	9:12	9:05	9:05	7	41	5	7	12	0.2927	5	12
2255	11/6/98	F	O	9:00	D	R	LXS	9:12	9:05	9:05	7	41	5	7	12	0.2927	5	12
2256	11/6/98	M	A	9:00	D	R	LXS	9:12	9:05	9:05	7	41	5	7	12	0.2927	5	12
2257	11/6/98	F	W	9:00	D	DN	LXS	9:12	9:05	9:05	7	41	5	7	12	0.2927	5	12
2258	11/6/98	M	W	9:02	D	DN	LXS	9:12	9:05	9:05	7	41	3	7	10	0.2439	5	12
2259	11/6/98	F	W	9:02	D	DN	LXS	9:12	9:05	9:05	7	41	3	7	10	0.2439	5	12
2260	11/6/98	M	B	9:02	W	DN	LXS	9:12	9:05	9:05	7	41	3	7	10	0.2439	5	12
2261	11/6/98	M	W	9:02	R	DN	LXS	9:12	9:05	9:05	7	41	3	7	10	0.2439	5	12
2262	11/6/98	M	O	9:04	R	DN	LXS	9:12	9:05	9:05	7	41	1	7	8	0.1951	5	12
2263	11/6/98	F	W	9:05	D	DN	LXS	9:12	9:05	9:05	7	41	0	7	7	0.1707	5	12
2264	11/6/98	M	A	9:05	D	DN	LXS	9:12	9:05	9:05	7	41	0	7	7	0.1707	5	12
2265	11/6/98	M	W	9:07	U	DN	LXS	9:12	9:48	9:05	7	41	5	0	5	0.122	5	12
2266	11/6/98	F	W	9:08	R	DN	LXS	9:12	9:48	9:05	7	41	4	0	4	0.0976	5	12
2267	11/6/98	F	A	9:10	D	DN	LXS	9:12	9:48	9:05	7	41	2	0	2	0.0488	5	12
2268	11/6/98	F	A	9:10	D	DN	LXS	9:12	9:48	9:05	7	41	2	0	2	0.0488	5	12
2269	11/6/98	M	W	8:41	R	S	LXS	9:12	9:05	9:05	7	41	24	7	31	0.7561	5	12
2270	11/6/98	F	A	8:58	D	DN	LXS	9:12	9:05	9:05	7	41	7	7	14	0.3415	5	12
2271	10/30/98	M	H	8:52	R	DN	LXS	9:08	9:05	9:05	3	41	13	3	16	0.3902	5	12
2272	10/30/98	M	W	8:54	D	DN	LXS	9:08	9:05	9:05	3	41	11	3	14	0.3415	5	12
2273	11/6/98	F	O	8:58	D	DN	LXS	9:12	9:05	9:05	7	41	7	7	14	0.3415	5	12
2274	11/6/98	F	A	8:58	R	T	LXS	9:12	9:05	9:05	7	41	7	7	14	0.3415	5	12
2275	11/6/98	F	W	8:58	D	DN	LXS	9:12	9:05	9:05	7	41	7	7	14	0.3415	5	12
2276	10/22/98	M	A	14:13	W	T	RR	14:27				9.5			14	1.4737	6	22
2277	10/22/98	F	W	14:14	W	R	RR	14:27				9.5			13	1.3684	6	22
2278	10/22/98	F	W	14:15	W	DN	RR	14:27				9.5			12	1.2632	6	22
2279	10/22/98	F	A	14:17	W	DN	RR	14:27				9.5			10	1.0526	6	22
2280	10/22/98	M	W	14:18	W	DN	RR	14:27				9.5			9	0.9474	6	22

Non-Transfer Passengers Waiting Time Data (cont.)

O.N	DATE	SEX	E.C.	RAT	A.M.	ADW	BLN	BDT	EDT	SDT	SRI	BLH	W.B.	W.A.	WAIT	WTHR	LOC	D.T.
2281	10/22/98	F	A	14:20	W	DN	RR	14:27				9.5			7	0.7368	6	22
2282	10/22/98	F	W	14:20	W	DN	RR	14:27				9.5			7	0.7368	6	22
2283	10/22/98	M	W	14:21	W	DN	RR	14:27				9.5			6	0.6316	6	22
2284	10/22/98	M	A	14:21	W	T	RR	14:27				9.5			6	0.6316	6	22
2285	10/22/98	M	W	14:22	W	DN	RR	14:27				9.5			5	0.5263	6	22
2286	10/22/98	M	A	14:27	W	DN	RR	14:27				9.5			0	0	6	22
2287	10/22/98	M	A	14:37	W	DN	RR	14:37				9.5			0	0	6	22
2288	10/22/98	F	W	14:40	W	R	RR	14:49				9.5			9	0.9474	6	22
2289	10/22/98	F	W	14:44	W	DN	RR	14:49				9.5			5	0.5263	6	22
2290	10/22/98	F	A	14:49	W	DN	RR	14:49				9.5			0	0	6	22
2291	10/22/98	F	W	14:49	W	DN	RR	14:49				9.5			0	0	6	22
2292	10/22/98	M	A	14:50	W	DN	RR	14:55				9.5			5	0.5263	6	22
2293	10/22/98	M	A	14:50	W	DN	RR	14:55				9.5			5	0.5263	6	22
2294	10/22/98	M	W	14:53	W	DN	RR	14:55				9.5			2	0.2105	6	22
2295	10/22/98	F	H	14:53	W	DN	RR	14:55				9.5			2	0.2105	6	22
2296	10/22/98	F	W	14:57	W	R	RR	15:02				9.5			5	0.5263	6	22
2297	10/22/98	M	W	15:02	W	DN	RR	15:02				9.5			0	0	6	22
2298	10/22/98	M	W	15:02	W	DN	RR	15:02				9.5			0	0	6	22
2299	10/22/98	M	H	15:05	W	DN	RR	15:13				9.5			8	0.8421	6	22
2300	10/22/98	F	A	15:09	W	R	RR	15:13				9.5			4	0.4211	6	22
2301	10/22/98	F	H	15:10	W	DN	RR	15:13				9.5			3	0.3158	6	22
2302	10/22/98	M	A	15:12	W	DN	RR	15:13				9.5			1	0.1053	6	22
2303	10/22/98	M	W	15:12	W	DN	RR	15:13				9.5			1	0.1053	6	22
2304	10/22/98	M	W	15:15	W	S	RR	15:22				9.5			7	0.7368	6	22
2305	10/22/98	F	W	15:15	W	DN	RR	15:22				9.5			7	0.7368	6	22
2306	10/22/98	F	W	15:15	W	DN	RR	15:22				9.5			7	0.7368	6	22
2307	10/22/98	M	A	15:15	W	R	RR	15:22				9.5			7	0.7368	6	22
2308	10/22/98	M	A	15:19	W	DN	RR	15:22				9.5			3	0.3158	6	22
2309	10/22/98	F	W	15:20	W	DN	RR	15:22				9.5			2	0.2105	6	22
2310	10/22/98	F	W	15:22	W	DN	RR	15:22				9.5			0	0	6	22



Non-Transfer Passengers Waiting Time Data (cont.)

O.N	DATE	SEX	E.C.	RAT	A.M.	ADW	BLN	BDT	EDT	SDT	SRI	BLH	W.B.	W.A.	WAIT	WTHR	LOC	D.T.
2311	10/22/98	F	W	15:22	W	DN	RR	15:22				9.5			0	0	6	22
2312	10/22/98	F	W	15:23	W	DN	RR	15:29				9.5			6	0.6316	6	22
2313	10/22/98	F	W	15:25	W	DN	RR	15:29				9.5			4	0.4211	6	22
2314	10/22/98	F	W	15:26	W	T	RR	15:29				9.5			3	0.3158	6	22
2315	10/22/98	M	A	15:27	W	DN	RR	15:29				9.5			2	0.2105	6	22
2316	10/22/98	F	A	15:27	W	DN	RR	15:29				9.5			2	0.2105	6	22
2317	10/22/98	M	W	15:28	W	DN	RR	15:29				9.5			1	0.1053	6	22
2318	10/22/98	M	A	15:29	W	DN	RR	15:29				9.5			0	0	6	22
2319	10/22/98	F	H	15:31	W	DN	RR	15:37				9.5			6	0.6316	6	22
2320	10/22/98	F	H	15:31	W	DN	RR	15:37				9.5			6	0.6316	6	22
2321	10/22/98	F	W	15:33	W	DN	RR	15:37				9.5			4	0.4211	6	22
2322	10/22/98	F	H	15:35	W	DN	RR	15:37				9.5			2	0.2105	6	22
2323	10/22/98	M	W	15:37	W	DN	RR	15:37				9.5			0	0	6	22
2324	10/22/98	F	B	15:38	W	DN	RR	15:46				9.5			8	0.8421	6	22
2325	10/22/98	M	A	15:42	W	T	RR	15:46				9.5			4	0.4211	6	22
2326	10/22/98	M	A	15:42	W	T	RR	15:46				9.5			4	0.4211	6	22
2327	10/22/98	M	A	15:42	W	T	RR	15:46				9.5			4	0.4211	6	22
2328	10/22/98	F	W	15:44	W	DN	RR	15:46				9.5			2	0.2105	6	22
2329	10/22/98	F	W	15:44	W	DN	RR	15:46				9.5			2	0.2105	6	22
2330	10/22/98	M	A	15:46	W	DN	RR	15:46				9.5			0	0	6	22
2331	10/22/98	M	W	15:48	W	DN	RR	16:02				9.5			14	1.4737	6	21
2332	10/22/98	M	W	15:49	W	DN	RR	16:02				9.5			13	1.3684	6	21
2333	10/22/98	F	W	15:56	W	DN	RR	16:02				9.5			6	0.6316	6	21
2334	10/22/98	M	A	15:56	W	DN	RR	16:02				9.5			6	0.6316	6	21
2335	10/22/98	M	W	15:56	W	R	RR	16:02				9.5			4	0.4211	6	21
2336	10/22/98	M	W	15:58	W	DN	RR	16:02				9.5			2	0.2105	6	21
2337	10/22/98	M	W	16:00	W	DN	RR	16:02				9.5			1	0.1053	6	21
2338	10/22/98	M	A	16:01	W	DN	RR	16:02				9.5			1	0.1053	6	21
2339	10/22/98	M	W	16:01	W	DN	RR	16:02				9.5			1	0.1053	6	21
2340	10/22/98	F	W	16:02	W	DN	RR	16:02				9.5			0	0	6	21

Non-Transfer Passengers Waiting Time Data (cont.)

O.N	DATE	SEX	E.C.	RAT	A.M.	ADW	BLN	BDT	EDT	SDT	SRI	BLH	W.B.	W.A.	WAIT	WTHR	LOC	D.T.
2341	10/22/98	F	W	16:02	W	DN	RR	16:02				9.5			0	0	6	21
2342	10/23/98	F	W	14:51	W	DN	RR	14:56				8.6			5	0.5814	6	22
2343	10/23/98	F	A	14:52	W	DN	RR	14:56				8.6			4	0.4651	6	22
2344	10/23/98	M	W	14:55	W	DN	RR	14:56				8.6			1	0.1163	6	22
2345	10/23/98	M	W	14:57	W	DN	RR	15:09				8.6			12	1.3953	6	22
2346	10/23/98	M	W	14:58	W	DN	RR	15:09				8.6			11	1.2791	6	22
2347	10/23/98	M	A	14:59	W	DN	RR	15:09				8.6			10	1.1628	6	22
2348	10/23/98	F	A	15:00	W	T	RR	15:09				8.6			9	1.0465	6	22
2349	10/23/98	M	A	15:00	W	T	RR	15:09				8.6			9	1.0465	6	22
2350	10/23/98	M	W	15:03	W	DN	RR	15:09				8.6			6	0.6977	6	22
2351	10/23/98	M	W	15:03	W	T	RR	15:09				8.6			6	0.6977	6	22
2352	10/23/98	M	W	15:04	W	DN	RR	15:09				8.6			5	0.5814	6	22
2353	10/23/98	F	W	15:04	W	DN	RR	15:09				8.6			5	0.5814	6	22
2354	10/23/98	M	W	15:04	W	DN	RR	15:09				8.6			5	0.5814	6	22
2355	10/23/98	M	W	15:05	W	DN	RR	15:09				8.6			4	0.4651	6	22
2356	10/23/98	M	W	15:08	W	DN	RR	15:09				8.6			1	0.1163	6	22
2357	10/23/98	M	A	15:09	W	DN	RR	15:09				8.6			0	0	6	22
2358	10/23/98	F	A	15:09	W	DN	RR	15:09				8.6			0	0	6	22
2359	10/23/98	F	A	15:12	W	DN	RR	15:13				8.6			1	0.1163	6	22
2360	10/23/98	F	W	15:13	W	DN	RR	15:13				8.6			0	0	6	22
2361	10/23/98	M	A	15:13	W	DN	RR	15:13				8.6			0	0	6	22
2362	10/23/98	F	A	15:15	W	DN	RR	15:21				8.6			6	0.6977	6	22
2363	10/23/98	M	A	15:15	W	DN	RR	15:21				8.6			6	0.6977	6	22
2364	10/23/98	F	W	15:15	W	DN	RR	15:21				8.6			6	0.6977	6	22
2365	10/23/98	M	W	15:20	W	DN	RR	15:21				8.6			1	0.1163	6	22
2366	10/23/98	M	A	15:20	W	DN	RR	15:21				8.6			1	0.1163	6	22
2367	10/23/98	M	W	15:22	W	DN	RR	15:38				8.6			16	1.8605	6	22
2368	10/23/98	F	W	15:23	W	T	RR	15:38				8.6			15	1.7442	6	22
2369	10/23/98	M	A	15:26	W	DN	RR	15:38				8.6			12	1.3953	6	22
2370	10/23/98	F	A	15:27	W	R	RR	15:38				8.6			11	1.2791	6	22

Non-Transfer Passengers Waiting Time Data (cont.)

O.N	DATE	SEX	E.C.	RAT	A.M.	ADW	BLN	BDT	EDT	SDT	SRI	BLH	W.B.	W.A.	WAIT	WTHR	LOC	D.T.
2371	10/23/98	M	A	15:30	W	DN	RR	15:38				8.6			8	0.9302	6	22
2372	10/23/98	M	W	15:32	W	DN	RR	15:38				8.6			6	0.6977	6	22
2373	10/23/98	M	A	15:32	W	T	RR	15:38				8.6			6	0.6977	6	22
2374	10/23/98	M	A	15:32	W	T	RR	15:38				8.6			6	0.6977	6	22
2375	10/23/98	F	A	15:32	W	T	RR	15:38				8.6			6	0.6977	6	22
2376	10/23/98	F	W	15:34	W	DN	RR	15:38				8.6			4	0.4651	6	22
2377	10/23/98	F	W	15:35	W	DN	RR	15:38				8.6			3	0.3488	6	22
2378	10/23/98	F	A	15:36	W	DN	RR	15:38				8.6			2	0.2326	6	22
2379	10/23/98	M	A	15:42	W	DN	RR	15:42				8.6			0	0	6	22
2380	10/23/98	M	A	15:42	W	DN	RR	15:42				8.6			0	0	6	22
2381	10/23/98	M	A	15:48	W	DN	RR	15:50				8.6			2	0.2326	6	22
2382	10/23/98	M	W	15:51	W	S	RR	16:02				8.6			11	1.2791	6	21
2383	10/23/98	M	A	15:54	W	DN	RR	16:02				8.6			8	0.9302	6	21
2384	10/23/98	F	W	15:56	W	DN	RR	16:02				8.6			6	0.6977	6	21
2385	10/23/98	F	H	15:56	W	DN	RR	16:02				8.6			6	0.6977	6	21
2386	10/23/98	F	A	15:56	W	DN	RR	16:02				8.6			6	0.6977	6	21
2387	10/23/98	M	A	15:58	W	DN	RR	16:02				8.6			4	0.4651	6	21
2388	10/23/98	M	O	16:01	W	DN	RR	16:02				8.6			1	0.1163	6	21
2389	10/23/98	M	O	16:01	W	DN	RR	16:02				8.6			1	0.1163	6	21
2390	10/23/98	M	W	16:05	W	DN	RR	16:05				8.6			0	0	6	21
2391	10/23/98	M	W	16:07	W	T	RR	16:14				8.6			7	0.814	6	21
2392	10/23/98	F	W	16:07	W	T	RR	16:14				8.6			7	0.814	6	21
2393	10/23/98	M	W	16:12	W	DN	RR	16:14				8.6			2	0.2326	6	21
2394	10/23/98	F	H	16:12	W	DN	RR	16:14				8.6			2	0.2326	6	21
2395	10/23/98	F	B	16:15	W	DN	RR	16:26				8.6			11	1.2791	6	21
2396	10/23/98	M	A	16:17	W	DN	RR	16:26				8.6			9	1.0465	6	21
2397	10/23/98	F	W	16:17	W	DN	RR	16:26				8.6			9	1.0465	6	21
2398	10/23/98	F	W	16:17	W	DN	RR	16:26				8.6			9	1.0465	6	21
2399	10/23/98	M	O	16:18	W	DN	RR	16:26				8.6			8	0.9302	6	21
2400	10/23/98	M	O	16:18	W	DN	RR	16:26				8.6			8	0.9302	6	21

Non-Transfer Passengers Waiting Time Data (cont.)

O.N	DATE	SEX	E.C.	RAT	A.M.	ADW	BLN	BDT	EDT	SDT	SRI	BLH	W.B.	W.A.	WAIT	WTHR	LOC	D.T.
2401	10/23/98	M	W	16:19	W	DN	RR	16:26				8.6			7	0.814	6	21
2402	10/23/98	M	O	16:20	W	DN	RR	16:26				8.6			6	0.6977	6	21
2403	10/23/98	F	W	16:21	W	DN	RR	16:26				8.6			5	0.5814	6	21
2404	10/23/98	F	A	16:24	W	DN	RR	16:26				8.6			2	0.2326	6	21
2405	10/23/98	M	O	16:25	W	DN	RR	16:26				8.6			1	0.1163	6	21
2406	10/23/98	F	A	16:27	W	DN	RR	16:30				8.6			3	0.3488	6	21
2407	10/23/98	M	A	16:28	W	DN	RR	16:30				8.6			2	0.2326	6	21
2408	10/23/98	F	O	16:31	W	DN	RR	16:38				8.6			7	0.814	6	21
2409	10/23/98	M	O	16:32	W	DN	RR	16:38				8.6			6	0.6977	6	21
2410	10/23/98	F	W	16:34	W	T	RR	16:38				8.6			4	0.4651	6	21
2411	10/23/98	M	W	16:35	W	DN	RR	16:38				8.6			3	0.3488	6	21
2412	10/23/98	M	W	16:36	W	DN	RR	16:38				8.6			2	0.2326	6	21
2413	10/23/98	M	W	16:38	W	DN	RR	16:38				8.6			0	0	6	21
2414	10/23/98	M	A	16:38	W	DN	RR	16:38				8.6			0	0	6	21
2415	10/23/98	M	A	16:40	W	DN	RR	16:51				8.6			11	1.2791	6	21
2416	10/23/98	M	O	16:42	W	T	RR	16:51				8.6			9	1.0465	6	21
2417	10/23/98	F	O	16:42	W	T	RR	16:51				8.6			9	1.0465	6	21
2418	10/23/98	F	B	16:42	W	DN	RR	16:51				8.6			9	1.0465	6	21
2419	10/23/98	F	W	16:42	W	DN	RR	16:51				8.6			9	1.0465	6	21
2420	10/23/98	M	W	16:45	W	DN	RR	16:51				8.6			6	0.6977	6	21
2421	10/23/98	F	W	16:51	W	DN	RR	16:51				8.6			0	0	6	21
2422	10/23/98	M	W	16:54	W	R	RR	17:01				8.6			7	0.814	6	21
2423	10/23/98	F	A	16:59	W	DN	RR	17:01				8.6			2	0.2326	6	21
2424	10/23/98	F	W	17:01	W	DN	RR	17:01				8.6			0	0	6	21
2425	10/23/98	M	W	17:04	W	DN	RR	17:05				8.6			1	0.1163	6	21
2426	10/23/98	M	O	17:04	W	DN	RR	17:05				8.6			1	0.1163	6	21
2427	11/5/98	F	W	14:00	W	DN	RR	14:00				8.9			0	0	6	22
2428	11/5/98	F	W	14:04	W	DN	RR	14:06				8.9			2	0.2247	6	22
2429	11/5/98	M	W	14:06	W	DN	RR	14:06				8.9			0	0	6	22
2430	11/5/98	M	O	14:07	W	DN	RR	14:11				8.9			4	0.4494	6	22

Non-Transfer Passengers Waiting Time Data (cont.)

O.N	DATE	SEX	E.C.	RAT	A.M.	ADW	BLN	BDT	EDT	SDT	SRI	BLH	W.B.	W.A.	WAIT	WTHR	LOC	D.T.
2431	11/5/98	M	W	14:08	W	DN	RR	14:11				8.9			3	0.3371	6	22
2432	11/5/98	M	W	14:08	W	DN	RR	14:11				8.9			3	0.3371	6	22
2433	11/5/98	M	A	14:08	W	DN	RR	14:11				8.9			3	0.3371	6	22
2434	11/5/98	F	W	14:09	W	DN	RR	14:11				8.9			2	0.2247	6	22
2435	11/5/98	M	O	14:22	W	T	RR	14:28				8.9			6	0.6742	6	22
2436	11/5/98	M	O	14:26	W	T	RR	14:28				8.9			2	0.2247	6	22
2437	11/5/98	M	A	14:29	W	DN	RR	14:35				8.9			6	0.6742	6	22
2438	11/5/98	F	W	14:30	W	DN	RR	14:35				8.9			5	0.5618	6	22
2439	11/5/98	M	W	14:31	W	DN	RR	14:35				8.9			4	0.4494	6	22
2440	11/5/98	F	A	14:32	W	DN	RR	14:35				8.9			3	0.3371	6	22
2441	11/5/98	F	O	14:33	W	T	RR	14:35				8.9			2	0.2247	6	22
2442	11/5/98	M	O	14:34	W	DN	RR	14:35				8.9			1	0.1124	6	22
2443	11/5/98	M	A	14:35	W	DN	RR	14:35				8.9			0	0	6	22
2444	11/5/98	M	A	14:44	W	DN	RR	14:47				8.9			3	0.3371	6	22
2445	11/5/98	M	W	14:49	W	DN	RR	14:54				8.9			5	0.5618	6	22
2446	11/5/98	M	A	14:54	W	DN	RR	14:54				8.9			0	0	6	22
2447	11/5/98	F	O	14:54	W	DN	RR	14:54				8.9			0	0	6	22
2448	11/5/98	F	W	14:59	W	DN	RR	15:02				8.9			3	0.3371	6	22
2449	11/5/98	M	W	14:59	W	DN	RR	15:02				8.9			3	0.3371	6	22
2450	11/5/98	F	W	15:06	W	DN	RR	15:13				8.9			7	0.7865	6	22
2451	11/5/98	F	H	15:06	W	DN	RR	15:13				8.9			7	0.7865	6	22
2452	11/5/98	M	O	15:08	W	DN	RR	15:13				8.9			5	0.5618	6	22
2453	11/5/98	M	A	15:08	W	T	RR	15:13				8.9			5	0.5618	6	22
2454	11/5/98	M	A	15:09	W	T	RR	15:13				8.9			4	0.4494	6	22
2455	11/5/98	M	W	15:11	W	DN	RR	15:13				8.9			2	0.2247	6	22
2456	11/5/98	F	W	15:12	W	DN	RR	15:13				8.9			1	0.1124	6	22
2457	11/5/98	M	A	15:18	W	T	RR	15:21				8.9			3	0.3371	6	22
2458	11/5/98	M	A	15:18	W	T	RR	15:21				8.9			3	0.3371	6	22
2459	11/5/98	M	W	15:20	W	DN	RR	15:21				8.9			1	0.1124	6	22
2460	11/5/98	M	W	15:20	W	DN	RR	15:21				8.9			1	0.1124	6	22

Non-Transfer Passengers Waiting Time Data (cont.)

O.N	DATE	SEX	E.C.	RAT	A.M.	ADW	BLN	BDT	EDT	SDT	SRI	BLH	W.B.	W.A.	WAIT	WTHR	LOC	D.T.
2461	11/5/98	F	H	15:20	W	DN	RR	15:21				8.9			1	0.1124	6	22
2462	11/5/98	F	W	15:21	W	DN	RR	15:21				8.9			0	0	6	22
2463	11/5/98	M	A	15:22	W	DN	RR	15:27				8.9			5	0.5618	6	22
2464	11/5/98	F	W	15:24	W	DN	RR	15:27				8.9			3	0.3371	6	22
2465	11/5/98	M	O	15:24	W	DN	RR	15:27				8.9			3	0.3371	6	22
2466	11/5/98	M	W	15:24	W	DN	RR	15:27				8.9			3	0.3371	6	22
2467	11/5/98	F	W	15:25	W	DN	RR	15:27				8.9			2	0.2247	6	22
2468	11/5/98	F	W	15:27	W	DN	RR	15:27				8.9			0	0	6	22
2469	11/5/98	M	W	15:30	W	DN	RR	15:39				8.9			9	1.0112	6	22
2470	11/5/98	M	O	15:30	W	DN	RR	15:39				8.9			9	1.0112	6	22
2471	11/5/98	M	O	15:32	W	DN	RR	15:39				8.9			7	0.7865	6	22
2472	11/5/98	M	W	15:32	W	S	RR	15:39				8.9			7	0.7865	6	22
2473	11/5/98	M	O	15:33	W	DN	RR	15:39				8.9			6	0.6742	6	22
2474	11/5/98	M	W	15:33	W	DN	RR	15:39				8.9			6	0.6742	6	22
2475	11/5/98	F	W	15:35	W	DN	RR	15:39				8.9			4	0.4494	6	22
2476	11/5/98	F	W	15:35	W	DN	RR	15:39				8.9			4	0.4494	6	22
2477	11/5/98	M	A	15:38	W	DN	RR	15:39				8.9			1	0.1124	6	22
2478	11/5/98	M	A	15:38	W	DN	RR	15:39				8.9			1	0.1124	6	22
2479	11/5/98	M	A	15:39	W	DN	RR	15:39				8.9			0	0	6	22
2480	11/5/98	F	B	15:41	W	DN	RR	15:47				8.9			6	0.6742	6	22
2481	11/5/98	F	H	15:42	W	DN	RR	15:47				8.9			5	0.5618	6	22
2482	11/5/98	M	A	15:47	W	DN	RR	15:47				8.9			0	0	6	22
2483	11/5/98	M	A	15:52	W	DN	RR	15:53				8.9			1	0.1124	6	22
2484	11/5/98	M	A	15:53	W	DN	RR	15:53				8.9			0	0	6	22
2485	11/5/98	M	A	15:53	W	DN	RR	15:53				8.9			0	0	6	22
2486	11/5/98	M	W	15:54	W	R	RR	16:05				8.9			11	1.236	6	21
2487	11/5/98	F	H	15:57	W	DN	RR	16:05				8.9			8	0.8989	6	21
2488	11/5/98	M	W	15:57	W	DN	RR	16:05				8.9			8	0.8989	6	21
2489	11/5/98	M	A	15:58	W	DN	RR	16:05				8.9			7	0.7865	6	21
2490	11/5/98	F	W	16:03	W	DN	RR	16:05				8.9			2	0.2247	6	21

Non-Transfer Passengers Waiting Time Data (cont.)

O.N	DATE	SEX	E.C.	RAT	A.M.	ADW	BLN	BDT	EDT	SDT	SRI	BLH	W.B.	W.A.	WAIT	WTHR	LOC	D.T.	
2491	11/5/98	F	W	16:03	W	DN	RR	16:05				8.9			2	0.2247	6	21	

## **APPENDIX II**

### **Bus Schedule Reliability Data**



Bus Schedule Reliability Data

O.N.	DATE	LOCATION	BLN	BDT	SDT	BLH	SRI
1	7/13/98	Capitol Center	1	16:42	16:38	10	4
2	7/13/98	"	1	16:48	16:48	10	0
3	7/13/98	"	1	17:02	16:58	10	4
4	7/13/98	"	1	17:08	17:08	10	0
5	7/13/98	"	1	17:25	17:18	10	7
6	7/13/98	"	3	16:30	16:27	15	3
7	7/13/98	"	3	16:43	16:42	15	1
8	7/13/98	"	3	16:56	16:57	15	-1
9	7/13/98	"	3	17:21	17:12	15	9
10	7/13/98	"	4	14:11	14:08	30	3
11	7/13/98	"	4	14:31	14:38	30	-7
12	7/13/98	"	4	15:26	15:26	16	0
13	7/13/98	"	4	15:44	15:42	16	2
14	7/13/98	"	4	16:40	16:41	16	-1
15	7/13/98	"	4	16:58	16:57	16	1
16	7/13/98	"	4	17:18	17:13	16	5
17	7/13/98	"	5	16:36	16:36	31	0
18	7/13/98	"	5	16:52	16:50	14	2
19	7/13/98	"	5	17:09	17:08	18	1
20	7/13/98	"	6	16:49	16:45	40	4
21	7/13/98	"	6	17:06	17:05	20	1
22	7/13/98	"	9	16:38	16:33	38	5
23	7/13/98	"	10	16:49	16:46	23	3
24	7/13/98	"	10	17:07	17:03	17	4
25	7/13/98	"	12	16:50	16:45	18	5
26	7/13/98	"	12	17:04	16:59	14	5
27	7/13/98	"	12	17:24	17:16	17	8
28	7/13/98	"	29	cancel	17:01	30	
29	7/13/98	"	30	16:38	16:30	30	8
30	7/13/98	"	30	17:01	17:00	30	1
31	7/13/98	"	38	17:03	16:58	36	5
32	7/13/98	"	63	16:46	16:49	32	-3
33	7/13/98	"	63	17:18	17:21	32	-3
34	7/13/98	"	86	16:39	16:33	11	6
35	7/13/98	"	86	16:43	16:44	11	-1
36	7/13/98	"	86	17:03	16:55	11	8
37	7/13/98	"	86	cancel	17:06	11	
38	7/15/98	"	1	13:41	13:39	10	2
39	7/15/98	"	1	14:13	14:08	10	5
40	7/15/98	"	1	14:20	14:18	10	2
41	7/15/98	"	1	14:42	14:37	10	5
42	7/15/98	"	1	14:57	14:57	10	0

Bus Schedule Reliability Data (cont.)

O.N.	DATE	LOCATION	BLN	BDT	SDT	BLH	SRI
43	7/15/98	Capitol Center	1	15:07	15:07	10	0
44	7/15/98	"	1	15:23	15:17	10	6
45	7/15/98	"	1	15:27	15:27	10	0
46	7/15/98	"	1	15:36	15:37	10	-1
47	7/15/98	"	1	15:54	15:48	10	6
48	7/15/98	"	1	16:01	15:58	10	3
49	7/15/98	"	1	16:20	16:18	10	2
50	7/15/98	"	1	16:35	16:28	10	7
51	7/15/98	"	1	16:40	16:38	10	2
52	7/15/98	"	1	16:47	16:48	10	-1
53	7/15/98	"	1	17:00	16:58	10	2
54	7/15/98	"	1	17:06	17:08	10	-2
55	7/15/98	"	1	17:24	17:18	10	6
56	7/15/98	"	3	13:21	13:29	15	-8
57	7/15/98	"	3	13:46	13:44	15	2
58	7/15/98	"	3	14:00	13:59	15	1
59	7/15/98	"	3	14:21	14:14	15	7
60	7/15/98	"	3	15:41	15:42	15	-1
61	7/15/98	"	3	16:15	16:12	15	3
62	7/15/98	"	3	16:27	16:27	15	0
63	7/15/98	"	3	16:46	16:42	15	4
64	7/15/98	"	3	16:57	16:57	15	0
65	7/15/98	"	3	17:14	17:12	15	2
66	7/15/98	"	4	14:59	14:55	17	4
67	7/15/98	"	4	15:15	15:10	15	5
68	7/15/98	"	4	15:42	15:42	16	0
69	7/15/98	"	4	16:14	16:09	27	5
70	7/15/98	"	4	16:28	16:25	16	3
71	7/15/98	"	4	16:40	16:41	16	-1
72	7/15/98	"	4	16:59	16:57	16	2
73	7/15/98	"	4	17:13	17:13	16	0
74	7/15/98	"	5	13:37	13:35	31	2
75	7/15/98	"	5	14:10	14:06	31	4
76	7/15/98	"	5	15:08	15:08	31	0
77	7/15/98	"	5	15:33	15:32	24	1
78	7/15/98	"	5	16:10	16:05	33	5
79	7/15/98	"	5	16:35	16:36	31	-1
80	7/15/98	"	5	16:50	16:50	14	0
81	7/15/98	"	5	17:05	17:08	18	-3
82	7/15/98	"	6	16:10	16:05	40	5
83	7/15/98	"	6	16:47	16:45	40	2
84	7/15/98	"	6	17:05	17:05	20	0

Bus Schedule Reliability Data (cont.)

O.N.	DATE	LOCATION	BLN	BDT	SDT	BLH	SRI
85	7/15/98	Capitol Center	10	13:51	13:43	30	8
86	7/15/98	"	10	14:21	14:17	34	4
87	7/15/98	"	10	14:51	14:45	28	6
88	7/15/98	"	10	15:07	15:05	20	2
89	7/15/98	"	10	15:47	15:43	20	4
90	7/15/98	"	10	16:48	16:46	23	2
91	7/15/98	"	10	17:04	17:03	17	1
92	7/15/98	"	12	14:43	14:39	21	4
93	7/15/98	"	12	15:45	15:40	23	5
94	7/15/98	"	12	15:55	15:51	11	4
95	7/15/98	"	12	16:13	16:08	17	5
96	7/15/98	"	12	16:30	16:27	19	3
97	7/15/98	"	12	16:49	16:45	18	4
98	7/15/98	"	12	17:20	17:16	17	4
99	7/15/98	"	19	13:48	13:48	40	0
100	7/15/98	"	19	15:01	15:08	40	-7
101	7/15/98	"	19	15:52	15:50	42	2
102	7/15/98	"	19	16:22	16:24	34	-2
103	7/15/98	"	30	14:08	14:00	30	8
104	7/15/98	"	30	15:32	15:30	30	2
105	7/15/98	"	30	16:02	16:00	30	2
106	7/15/98	"	30	16:37	16:30	30	7
107	7/15/98	"	30	17:02	17:00	30	2
108	7/15/98	"	38	14:46	14:41	32	5
109	7/15/98	"	38	15:25	15:14	33	11
110	7/15/98	"	38	15:55	15:49	35	6
111	7/15/98	"	38	16:25	16:22	33	3
112	7/15/98	"	38	17:04	16:58	36	6
113	7/15/98	"	63	17:16	17:21	32	-5
114	7/15/98	"	86	15:54	15:54	9	0
115	7/15/98	"	86	16:11	16:08	14	3
116	7/15/98	"	86	16:32	16:33	11	-1
117	7/15/98	"	86	17:03	17:06	11	-3
118	7/15/98	"	86	17:13	17:17	11	-4
119	7/20/98	"	1	7:15	7:15	10	0
120	7/20/98	"	1	7:30	7:25	10	5
121	7/20/98	"	1	7:36	7:35	10	1
122	7/20/98	"	1	7:53	7:45	10	8
123	7/20/98	"	1	8:01	7:54	10	7
124	7/20/98	"	1	8:10	8:04	10	6
125	7/20/98	"	1	8:19	8:14	10	5
126	7/20/98	"	1	8:23	8:24	10	-1

Bus Schedule Reliability Data (cont.)

O.N.	DATE	LOCATION	BLN	BDT	SDT	BLH	SRI
127	7/20/98	Capitol Center	1	8:36	8:34	10	2
128	7/20/98	"	1	8:46	8:44	10	2
129	7/20/98	"	1	9:04	9:03	10	1
130	7/20/98	"	1	9:15	9:13	10	2
131	7/20/98	"	1	9:41	9:43	10	-2
132	7/20/98	"	1	10:00	9:53	10	7
133	7/20/98	"	1	10:10	10:03	10	7
134	7/20/98	"	1	10:18	10:13	10	5
135	7/20/98	"	1	10:22	10:21	10	1
136	7/20/98	"	1	10:34	10:31	10	3
137	7/20/98	"	1	10:50	10:41	10	9
138	7/20/98	"	3	7:18	7:15	15	3
139	7/20/98	"	3	7:32	7:30	15	2
140	7/20/98	"	3	7:45	7:45	15	0
141	7/20/98	"	3	8:02	8:00	15	2
142	7/20/98	"	3	8:14	8:13	15	1
143	7/20/98	"	3	8:33	8:28	15	5
144	7/20/98	"	3	8:43	8:43	15	0
145	7/20/98	"	3	8:59	8:58	15	1
146	7/20/98	"	3	9:14	9:13	15	1
147	7/20/98	"	3	9:54	9:45	15	9
148	7/20/98	"	3	10:00	10:00	15	0
149	7/20/98	"	3	10:16	10:15	15	1
150	7/20/98	"	3	10:34	10:30	15	4
151	7/20/98	"	3	10:47	10:45	15	2
152	7/20/98	"	4	7:16	7:16	17	0
153	7/20/98	"	4	7:37	7:33	17	4
154	7/20/98	"	4	7:53	7:50	17	3
155	7/20/98	"	4	8:13	8:07	17	6
156	7/20/98	"	4	8:25	8:24	17	1
157	7/20/98	"	4	8:43	8:41	17	2
158	7/20/98	"	4	9:15	9:15	17	0
159	7/20/98	"	4	9:39	9:38	23	1
160	7/20/98	"	4	10:08	10:08	30	0
161	7/20/98	"	4	10:38	10:38	30	0
162	7/20/98	"	4	cancel	8:58	17	
163	7/20/98	"	5	7:24	7:23	19	1
164	7/20/98	"	5	7:56	7:54	31	2
165	7/20/98	"	5	8:28	8:25	31	3
166	7/20/98	"	5	9:35	9:34	18	1
167	7/20/98	"	5	10:06	9:59	25	7
168	7/20/98	"	5	10:35	10:29	31	6

Bus Schedule Reliability Data (cont.)

O.N.	DATE	LOCATION	BLN	BDT	SDT	BLH	SRI
169	7/20/98	Capitol Center	6	8:11	8:10	20	1
170	7/20/98	"	6	8:34	8:30	20	4
171	7/20/98	"	6	9:57	9:50	35	7
172	7/20/98	"	6	10:30	10:25	35	5
173	7/20/98	"	9	8:07	8:04	38	3
174	7/20/98	"	9	8:42	8:42	38	0
175	7/20/98	"	9	9:28	9:23	41	5
176	7/20/98	"	9	9:57	9:56	33	1
177	7/20/98	"	9	10:33	10:32	36	1
178	7/20/98	"	10	7:51	7:47	21	4
179	7/20/98	"	10	8:25	8:24	18	1
180	7/20/98	"	10	8:45	8:42	18	3
181	7/20/98	"	10	9:46	9:43	18	3
182	7/20/98	"	10	10:18	10:13	30	5
183	7/20/98	"	10	10:48	10:43	30	5
184	7/20/98	"	12	7:33	7:29	16	4
185	7/20/98	"	12	7:52	7:46	16	6
186	7/20/98	"	12	8:06	8:02	16	4
187	7/20/98	"	12	8:21	8:18	16	3
188	7/20/98	"	12	8:37	8:32	14	5
189	7/20/98	"	12	8:50	8:49	17	1
190	7/20/98	"	12	9:28	9:22	19	6
191	7/20/98	"	12	9:45	9:39	17	6
192	7/20/98	"	12	10:05	9:59	20	6
193	7/20/98	"	12	10:24	10:19	20	5
194	7/20/98	"	12	10:44	10:39	20	5
195	7/20/98	"	19	7:58	7:53	30	5
196	7/20/98	"	19	8:31	8:27	34	4
197	7/20/98	"	19	8:57	8:53	26	4
198	7/20/98	"	19	9:55	9:54	30	1
199	7/20/98	"	19	10:29	10:28	34	1
200	7/20/98	"	29	8:51	8:50	32	1
201	7/20/98	"	29	9:56	9:50	30	6
202	7/20/98	"	29	10:47	10:50	30	-3
203	7/20/98	"	30	7:29	7:30	30	-1
204	7/20/98	"	30	8:01	8:00	30	1
205	7/20/98	"	30	8:30	8:30	30	0
206	7/20/98	"	30	9:00	9:00	30	0
207	7/20/98	"	30	9:30	9:30	30	0
208	7/20/98	"	30	10:01	10:00	30	1
209	7/20/98	"	30	10:31	10:30	30	1
210	7/20/98	"	38	7:28	7:31	18	-3

Bus Schedule Reliability Data (cont.)

O.N.	DATE	LOCATION	BLN	BDT	SDT	BLH	SRI
211	7/20/98	Capitol Center	38	7:50	7:45	14	5
212	7/20/98	"	38	8:20	8:17	16	3
213	7/20/98	"	38	9:26	9:22	21	4
214	7/20/98	"	38	10:10	9:54	32	16
215	7/20/98	"	38	10:31	10:26	32	5
216	7/20/98	"	86	7:19	7:20	11	-1
217	7/20/98	"	86	7:33	7:31	11	2
218	7/20/98	"	86	7:55	7:53	11	2
219	7/20/98	"	86	8:07	8:04	11	3
220	7/20/98	"	86	8:17	8:15	11	2
221	7/20/98	"	86	8:29	8:26	11	3
222	7/20/98	"	86	8:39	8:37	11	2
223	7/20/98	"	86	9:36	9:35	14	1
224	7/20/98	"	86	9:52	9:49	14	3
225	7/20/98	"	86	10:07	10:03	14	4
226	7/20/98	"	86	10:19	10:17	14	2
227	7/20/98	"	86	10:31	10:31	14	0
228	7/20/98	"	86	10:52	10:45	14	7
229	7/22/98	"	1	7:42	7:35	10	7
230	7/22/98	"	1	7:47	7:45	10	2
231	7/22/98	"	1	7:58	7:54	10	4
232	7/22/98	"	1	8:06	8:04	10	2
233	7/22/98	"	1	8:16	8:14	10	2
234	7/22/98	"	1	8:25	8:24	10	1
235	7/22/98	"	1	8:34	8:34	10	0
236	7/22/98	"	1	8:49	8:44	10	5
237	7/22/98	"	1	8:54	8:54	10	0
238	7/22/98	"	1	9:05	9:03	10	2
239	7/22/98	"	1	9:15	9:13	10	2
240	7/22/98	"	1	9:28	9:23	10	5
241	7/22/98	"	1	9:34	9:32	10	2
242	7/22/98	"	1	9:45	9:43	10	2
243	7/22/98	"	1	9:56	9:53	10	3
244	7/22/98	"	1	10:05	10:03	10	2
245	7/22/98	"	1	10:16	10:13	10	3
246	7/22/98	"	1	10:21	10:21	10	0
247	7/22/98	"	1	10:36	10:31	10	5
248	7/22/98	"	1	10:44	10:41	10	3
249	7/22/98	"	3	7:30	7:30	15	0
250	7/22/98	"	3	7:45	7:45	15	0
251	7/22/98	"	3	8:01	8:00	15	1
252	7/22/98	"	3	8:19	8:13	15	6

Bus Schedule Reliability Data (cont.)

O.N.	DATE	LOCATION	BLN	BDT	SDT	BLH	SRI
253	7/22/98	Capitol Center	3	8:27	8:28	15	-1
254	7/22/98	"	3	8:44	8:43	15	1
255	7/22/98	"	3	8:57	8:58	15	-1
256	7/22/98	"	3	9:19	9:13	15	6
257	7/22/98	"	3	9:31	9:29	15	2
258	7/22/98	"	3	9:47	9:45	15	2
259	7/22/98	"	3	10:02	10:00	15	2
260	7/22/98	"	3	10:15	10:15	15	0
261	7/22/98	"	3	10:33	10:30	15	3
262	7/22/98	"	3	10:51	10:45	15	6
263	7/22/98	"	4	7:36	7:33	17	3
264	7/22/98	"	4	8:01	7:50	17	11
265	7/22/98	"	4	8:14	8:07	17	7
266	7/22/98	"	4	8:22	8:24	17	-2
267	7/22/98	"	4	8:39	8:41	17	-2
268	7/22/98	"	4	9:03	8:58	17	5
269	7/22/98	"	4	9:15	9:15	17	0
270	7/22/98	"	4	9:38	9:38	23	0
271	7/22/98	"	4	10:08	10:08	30	0
272	7/22/98	"	5	7:55	7:54	31	1
273	7/22/98	"	5	8:29	8:25	31	4
274	7/22/98	"	5	8:58	8:56	31	2
275	7/22/98	"	5	9:36	9:34	18	2
276	7/22/98	"	5	10:06	9:59	25	7
277	7/22/98	"	5	10:33	10:29	31	4
278	7/22/98	"	6	7:33	7:30	20	3
279	7/22/98	"	6	7:55	7:50	20	5
280	7/22/98	"	6	8:31	8:30	20	1
281	7/22/98	"	6	8:47	8:50	20	-3
282	7/22/98	"	6	9:20	9:15	25	5
283	7/22/98	"	9	7:29	7:26	38	3
284	7/22/98	"	9	8:08	8:04	38	4
285	7/22/98	"	9	8:44	8:42	38	2
286	7/22/98	"	9	9:28	9:23	41	5
287	7/22/98	"	9	9:59	9:56	33	3
288	7/22/98	"	9	10:34	10:32	36	2
289	7/22/98	"	10	7:28	7:26	20	2
290	7/22/98	"	10	7:52	7:47	21	5
291	7/22/98	"	10	8:10	8:06	19	4
292	7/22/98	"	10	8:45	8:42	18	3
293	7/22/98	"	10	9:46	9:43	18	3
294	7/22/98	"	10	10:17	10:13	30	4

Bus Schedule Reliability Data (cont.)

O.N.	DATE	LOCATION	BLN	BDT	SDT	BLH	SRI
295	7/22/98	Capitol Center	10	10:43	10:43	30	0
296	7/22/98	"	12	7:34	7:29	16	5
297	7/22/98	"	12	7:51	7:46	16	5
298	7/22/98	"	12	8:05	8:02	16	3
299	7/22/98	"	12	8:20	8:18	16	2
300	7/22/98	"	12	8:34	8:32	14	2
301	7/22/98	"	12	8:50	8:49	17	1
302	7/22/98	"	12	9:29	9:22	19	7
303	7/22/98	"	12	9:43	9:39	17	4
304	7/22/98	"	12	10:02	9:59	20	3
305	7/22/98	"	12	10:23	10:19	20	4
306	7/22/98	"	12	10:43	10:39	20	4
307	7/22/98	"	19	7:59	7:53	30	6
308	7/22/98	"	19	8:35	8:27	34	8
309	7/22/98	"	19	8:58	8:53	26	5
310	7/22/98	"	19	9:24	9:24	31	0
311	7/22/98	"	19	9:58	9:54	30	4
312	7/22/98	"	19	10:31	10:28	34	3
313	7/22/98	"	29	7:50	7:46	30	4
314	7/22/98	"	29	8:25	8:18	32	7
315	7/22/98	"	29	8:52	8:50	32	2
316	7/22/98	"	29	9:56	9:50	30	6
317	7/22/98	"	29	10:56	10:50	30	6
318	7/22/98	"	30	7:29	7:30	30	-1
319	7/22/98	"	30	8:02	8:00	30	2
320	7/22/98	"	30	8:30	8:30	30	0
321	7/22/98	"	30	9:02	9:00	30	2
322	7/22/98	"	30	9:30	9:30	30	0
323	7/22/98	"	30	9:58	10:00	30	-2
324	7/22/98	"	30	10:32	10:30	30	2
325	7/22/98	"	38	7:39	7:31	18	8
326	7/22/98	"	38	7:49	7:45	14	4
327	7/22/98	"	38	8:20	8:17	16	3
328	7/22/98	"	38	8:37	8:31	14	6
329	7/22/98	"	38	8:52	8:49	18	3
330	7/22/98	"	38	9:24	9:22	21	2
331	7/22/98	"	38	9:59	9:54	32	5
332	7/22/98	"	38	10:31	10:26	32	5
333	7/22/98	"	38	cancel	8:01	16	
334	7/22/98	"	86	7:30	7:31	11	-1
335	7/22/98	"	86	7:43	7:42	11	1
336	7/22/98	"	86	8:06	8:04	11	2



Bus Schedule Reliability Data (cont.)

O.N.	DATE	LOCATION	BLN	BDT	SDT	BLH	SRI
337	7/22/98	Capitol Center	86	8:15	8:15	11	0
338	7/22/98	"	86	8:26	8:26	11	0
339	7/22/98	"	86	8:49	8:37	11	12
340	7/22/98	"	86	9:14	9:10	11	4
341	7/22/98	"	86	9:23	9:21	11	2
342	7/22/98	"	86	9:50	9:49	14	1
343	7/22/98	"	86	10:05	10:03	14	2
344	7/22/98	"	86	10:22	10:17	14	5
345	7/22/98	"	86	10:33	10:31	14	2
346	7/22/98	"	86	10:46	10:45	14	1
347	7/22/98	"	86	cancel	7:53	11	
348	7/22/98	"	PX	7:36	7:46	25	-10
349	7/22/98	"	PX	8:20	8:21	35	-1
350	7/27/98	"	1	7:17	7:15	10	2
351	7/27/98	"	1	7:27	7:25	10	2
352	7/27/98	"	1	7:34	7:35	10	-1
353	7/27/98	"	1	7:47	7:45	10	2
354	7/27/98	"	1	8:03	7:54	10	9
355	7/27/98	"	1	8:05	8:04	10	1
356	7/27/98	"	1	8:17	8:14	10	3
357	7/27/98	"	1	8:27	8:24	10	3
358	7/27/98	"	1	8:35	8:34	10	1
359	7/27/98	"	1	8:45	8:44	10	1
360	7/27/98	"	1	8:52	8:54	10	-2
361	7/27/98	"	1	9:04	9:03	10	1
362	7/27/98	"	1	9:17	9:13	10	4
363	7/27/98	"	1	9:33	9:23	10	10
364	7/27/98	"	1	9:38	9:32	10	6
365	7/27/98	"	1	9:41	9:43	10	-2
366	7/27/98	"	1	9:55	9:53	10	2
367	7/27/98	"	1	10:05	10:03	10	2
368	7/27/98	"	1	10:17	10:13	10	4
369	7/27/98	"	1	10:20	10:21	10	-1
370	7/27/98	"	1	10:33	10:31	10	2
371	7/27/98	"	1	10:42	10:41	10	1
372	7/27/98	"	3	7:15	7:15	15	0
373	7/27/98	"	3	7:30	7:30	15	0
374	7/27/98	"	3	7:45	7:45	15	0
375	7/27/98	"	3	8:02	8:00	15	2
376	7/27/98	"	3	8:13	8:13	15	0
377	7/27/98	"	3	8:27	8:28	15	-1
378	7/27/98	"	3	8:43	8:43	15	0

Bus Schedule Reliability Data (cont.)

O.N.	DATE	LOCATION	BLN	BDT	SDT	BLH	SRI
379	7/27/98	Capitol Center	3	8:57	8:58	15	-1
380	7/27/98	"	3	9:14	9:13	15	1
381	7/27/98	"	3	9:30	9:29	15	1
382	7/27/98	"	3	9:47	9:45	15	2
383	7/27/98	"	3	9:59	10:00	15	-1
384	7/27/98	"	3	10:32	10:30	15	2
385	7/27/98	"	3	10:50	10:45	15	5
386	7/27/98	"	3	cancel	10:15	15	
387	7/27/98	"	4	7:38	7:33	17	5
388	7/27/98	"	4	7:53	7:50	17	3
389	7/27/98	"	4	8:19	8:24	17	-5
390	7/27/98	"	4	8:43	8:41	17	2
391	7/27/98	"	4	9:06	8:58	17	8
392	7/27/98	"	4	9:14	9:15	17	-1
393	7/27/98	"	4	9:48	9:38	23	10
394	7/27/98	"	4	10:08	10:08	30	0
395	7/27/98	"	4	10:41	10:38	30	3
396	7/27/98	"	4	cancel	8:07	17	
397	7/27/98	"	5	7:27	7:23	19	4
398	7/27/98	"	5	7:54	7:54	31	0
399	7/27/98	"	5	8:30	8:25	31	5
400	7/27/98	"	5	8:58	8:56	31	2
401	7/27/98	"	5	9:25	9:16	20	9
402	7/27/98	"	5	9:34	9:34	18	0
403	7/27/98	"	5	10:03	9:59	25	4
404	7/27/98	"	5	10:31	10:29	31	2
405	7/27/98	"	6	7:36	7:30	20	6
406	7/27/98	"	6	7:53	7:50	20	3
407	7/27/98	"	6	8:12	8:10	20	2
408	7/27/98	"	6	8:39	8:30	20	9
409	7/27/98	"	6	8:52	8:50	20	2
410	7/27/98	"	6	9:19	9:15	25	4
411	7/27/98	"	6	9:58	9:50	35	8
412	7/27/98	"	6	10:30	10:25	35	5
413	7/27/98	"	9	7:29	7:26	38	3
414	7/27/98	"	9	8:08	8:04	38	4
415	7/27/98	"	9	8:45	8:42	38	3
416	7/27/98	"	9	9:25	9:23	41	2
417	7/27/98	"	9	9:57	9:56	33	1
418	7/27/98	"	9	10:34	10:32	36	2
419	7/27/98	"	10	7:28	7:26	20	2
420	7/27/98	"	10	7:47	7:47	21	0

Bus Schedule Reliability Data (cont.)

O.N.	DATE	LOCATION	BLN	BDT	SDT	BLH	SRI
421	7/27/98	Capitol Center	10	8:25	8:24	18	1
422	7/27/98	"	10	8:46	8:42	18	4
423	7/27/98	"	10	9:05	9:02	20	3
424	7/27/98	"	10	9:51	9:43	18	8
425	7/27/98	"	10	10:20	10:13	30	7
426	7/27/98	"	10	10:47	10:43	30	4
427	7/27/98	"	10	cancel	8:06	19	
428	7/27/98	"	10	cancel	9:25	23	
429	7/27/98	"	12	7:35	7:29	16	6
430	7/27/98	"	12	7:53	7:46	16	7
431	7/27/98	"	12	8:04	8:02	16	2
432	7/27/98	"	12	8:21	8:18	16	3
433	7/27/98	"	12	8:33	8:32	14	1
434	7/27/98	"	12	8:51	8:49	17	2
435	7/27/98	"	12	9:11	9:03	14	8
436	7/27/98	"	12	9:26	9:22	19	4
437	7/27/98	"	12	9:46	9:39	17	7
438	7/27/98	"	12	10:02	9:59	20	3
439	7/27/98	"	12	10:23	10:19	20	4
440	7/27/98	"	19	7:27	7:23	30	4
441	7/27/98	"	19	7:55	7:53	30	2
442	7/27/98	"	19	8:29	8:27	34	2
443	7/27/98	"	19	8:58	8:53	26	5
444	7/27/98	"	19	9:25	9:24	31	1
445	7/27/98	"	19	9:57	9:54	30	3
446	7/27/98	"	19	10:28	10:28	34	0
447	7/27/98	"	29	7:47	7:46	30	1
448	7/27/98	"	29	8:18	8:18	32	0
449	7/27/98	"	29	8:57	8:50	32	7
450	7/27/98	"	29	9:22	9:20	30	2
451	7/27/98	"	29	9:54	9:50	30	4
452	7/27/98	"	29	10:51	10:50	30	1
453	7/27/98	"	30	7:30	7:30	30	0
454	7/27/98	"	30	8:02	8:00	30	2
455	7/27/98	"	30	8:32	8:30	30	2
456	7/27/98	"	30	9:02	9:00	30	2
457	7/27/98	"	30	9:31	9:30	30	1
458	7/27/98	"	30	9:59	10:00	30	-1
459	7/27/98	"	30	10:31	10:30	30	1
460	7/27/98	"	38	7:35	7:31	18	4
461	7/27/98	"	38	7:47	7:45	14	2
462	7/27/98	"	38	8:08	8:01	16	7

Bus Schedule Reliability Data (cont.)

O.N.	DATE	LOCATION	BLN	BDT	SDT	BLH	SRI
463	7/27/98	Capitol Center	38	8:17	8:17	16	0
464	7/27/98	"	38	8:39	8:31	14	8
465	7/27/98	"	38	8:51	8:49	18	2
466	7/27/98	"	38	9:04	9:01	12	3
467	7/27/98	"	38	9:26	9:22	21	4
468	7/27/98	"	38	10:02	9:54	32	8
469	7/27/98	"	38	10:29	10:26	32	3
470	7/27/98	"	86	7:30	7:31	11	-1
471	7/27/98	"	86	7:42	7:42	11	0
472	7/27/98	"	86	7:51	7:53	11	-2
473	7/27/98	"	86	8:05	8:04	11	1
474	7/27/98	"	86	8:13	8:15	11	-2
475	7/27/98	"	86	8:29	8:26	11	3
476	7/27/98	"	86	8:38	8:37	11	1
477	7/27/98	"	86	9:02	8:59	11	3
478	7/27/98	"	86	9:15	9:10	11	5
479	7/27/98	"	86	9:23	9:21	11	2
480	7/27/98	"	86	9:34	9:35	14	-1
481	7/27/98	"	86	9:51	9:49	14	2
482	7/27/98	"	86	10:05	10:03	14	2
483	7/27/98	"	86	10:19	10:17	14	2
484	7/27/98	"	86	10:36	10:31	14	5
485	7/27/98	"	86	delete	10:45	14	
486	7/27/98	"	PX	7:16	7:21	35	-5
487	7/27/98	"	PX	7:35	7:46	25	-11
488	7/27/98	"	PX	8:15	8:21	35	-6
489	7/23/98	South T. C.	13	7:51	7:48	20	3
490	7/23/98	"	13	8:09	8:08	20	1
491	7/23/98	"	13	8:31	8:27	19	4
492	7/23/98	"	13	8:38	8:38	10	0
493	7/23/98	"	13	8:53	8:48	10	5
494	7/23/98	"	13	9:00	8:57	10	3
495	7/23/98	"	13	9:09	9:07	10	2
496	7/23/98	"	13	9:23	9:17	10	6
497	7/23/98	"	13	9:30	9:27	10	3
498	7/23/98	"	13	9:38	9:37	10	1
499	7/23/98	"	13	9:48	9:45	8	3
500	7/23/98	"	13	9:55	9:55	10	0
501	7/23/98	"	13	10:07	10:05	10	2
502	7/23/98	"	13	10:29	10:25	10	4
503	7/23/98	"	13	10:30	10:15	10	15
504	7/23/98	"	27	7:51	7:48	15	3

Bus Schedule Reliability Data (cont.)

O.N.	DATE	LOCATION	BLN	BDT	SDT	BLH	SRI
505	7/23/98	South T. C.	27	8:07	8:03	15	4
506	7/23/98	"	27	8:26	8:19	16	7
507	7/23/98	"	27	8:37	8:34	15	3
508	7/23/98	"	27	8:54	8:54	20	0
509	7/23/98	"	27	9:10	9:09	15	1
510	7/23/98	"	27	9:27	9:24	15	3
511	7/23/98	"	27	9:38	9:39	15	-1
512	7/23/98	"	27	9:57	9:54	15	3
513	7/23/98	"	27	10:10	10:09	15	1
514	7/23/98	"	27	10:29	10:24	15	5
515	7/23/98	"	27	10:38	10:39	15	-1
516	7/23/98	"	33	7:37	7:37	31	0
517	7/23/98	"	33	8:06	8:05	20	1
518	7/23/98	"	33	8:34	8:33	29	1
519	7/23/98	"	33	9:00	9:01	28	-1
520	7/23/98	"	33	9:31	9:29	28	2
521	7/23/98	"	33	9:57	9:57	28	0
522	7/23/98	"	33	10:25	10:25	28	0
523	7/23/98	"	33	cancel	7:45	8	
524	7/23/98	"	111	7:50	7:46	25	4
525	7/23/98	"	111	8:27	8:21	10	6
526	7/23/98	"	111	9:01	8:56	35	5
527	7/23/98	"	111	9:35	9:33	37	2
528	7/23/98	"	111	10:12	10:08	35	4
529	7/23/98	"	111	cancel	8:11	25	
530	8/5/98	"	13	7:27	7:28	20	-1
531	8/5/98	"	13	7:50	7:48	20	2
532	8/5/98	"	13	8:09	8:08	20	1
533	8/5/98	"	13	8:31	8:27	19	4
534	8/5/98	"	13	8:38	8:38	10	0
535	8/5/98	"	13	8:50	8:48	10	2
536	8/5/98	"	13	9:00	8:57	10	3
537	8/5/98	"	13	9:14	9:07	10	7
538	8/5/98	"	13	9:21	9:17	10	4
539	8/5/98	"	13	9:30	9:27	10	3
540	8/5/98	"	13	9:44	9:37	10	7
541	8/5/98	"	13	9:46	9:45	8	1
542	8/5/98	"	13	9:58	9:55	10	3
543	8/5/98	"	13	10:10	10:05	10	5
544	8/5/98	"	13	10:15	10:15	10	0
545	8/5/98	"	13	10:30	10:25	10	5
546	8/5/98	"	13	10:38	10:35	10	3

Bus Schedule Reliability Data (cont.)

O.N.	DATE	LOCATION	BLN	BDT	SDT	BLH	SRI
547	8/5/98	South T. C.	13	10:44	10:45	10	-1
548	8/5/98	"	13	10:54	10:55	10	-1
549	8/5/98	"	27	7:20	7:18	15	2
550	8/5/98	"	27	7:36	7:33	15	3
551	8/5/98	"	27	7:52	7:48	15	4
552	8/5/98	"	27	8:06	8:03	15	3
553	8/5/98	"	27	8:27	8:19	16	8
554	8/5/98	"	27	8:35	8:34	15	1
555	8/5/98	"	27	8:55	8:54	20	1
556	8/5/98	"	27	9:14	9:09	15	5
557	8/5/98	"	27	9:25	9:24	15	1
558	8/5/98	"	27	9:43	9:39	15	4
559	8/5/98	"	27	9:58	9:54	15	4
560	8/5/98	"	27	10:09	10:09	15	0
561	8/5/98	"	27	10:28	10:24	15	4
562	8/5/98	"	27	10:43	10:39	15	4
563	8/5/98	"	27	10:55	10:54	15	1
564	8/5/98	"	33	7:38	7:37	31	1
565	8/5/98	"	33	8:08	8:05	20	3
566	8/5/98	"	33	8:33	8:33	29	0
567	8/5/98	"	33	9:01	9:01	28	0
568	8/5/98	"	33	9:30	9:29	28	1
569	8/5/98	"	33	9:58	9:57	28	1
570	8/5/98	"	33	10:28	10:25	28	3
571	8/5/98	"	33	10:54	10:53	28	1
572	8/5/98	"	33	cancel	7:45	8	
573	8/5/98	"	111	7:48	7:46	25	2
574	8/5/98	"	111	8:22	8:21	10	1
575	8/5/98	"	111	9:00	8:56	35	4
576	8/5/98	"	111	9:31	9:33	37	-2
577	8/5/98	"	111	10:12	10:08	35	4
578	8/5/98	"	111	10:43	10:43	35	0
579	8/5/98	"	111	cancel	8:11	25	
580	8/10/98	"	13	7:28	7:28	20	0
581	8/10/98	"	13	7:48	7:48	20	0
582	8/10/98	"	13	8:10	8:08	20	2
583	8/10/98	"	13	8:27	8:27	19	0
584	8/10/98	"	13	8:40	8:38	10	2
585	8/10/98	"	13	8:50	8:48	10	2
586	8/10/98	"	13	8:57	8:57	10	0
587	8/10/98	"	13	9:04	9:07	10	-3
588	8/10/98	"	13	9:21	9:17	10	4

Bus Schedule Reliability Data (cont.)

O.N.	DATE	LOCATION	BLN	BDT	SDT	BLH	SRI
589	8/10/98	South T. C.	13	9:28	9:27	10	1
590	8/10/98	"	13	9:41	9:37	10	4
591	8/10/98	"	13	9:50	9:45	8	5
592	8/10/98	"	13	9:58	9:55	10	3
593	8/10/98	"	13	10:10	10:05	10	5
594	8/10/98	"	13	10:16	10:15	10	1
595	8/10/98	"	13	10:25	10:25	10	0
596	8/10/98	"	13	10:34	10:35	10	-1
597	8/10/98	"	13	10:44	10:45	10	-1
598	8/10/98	"	13	11:01	10:55	10	6
599	8/10/98	"	27	7:33	7:33	15	0
600	8/10/98	"	27	7:49	7:48	15	1
601	8/10/98	"	27	8:06	8:03	15	3
602	8/10/98	"	27	8:21	8:19	16	2
603	8/10/98	"	27	8:37	8:34	15	3
604	8/10/98	"	27	8:55	8:54	20	1
605	8/10/98	"	27	9:04	9:09	15	-5
606	8/10/98	"	27	9:27	9:24	15	3
607	8/10/98	"	27	9:37	9:39	15	-2
608	8/10/98	"	27	9:55	9:54	15	1
609	8/10/98	"	27	10:16	10:09	15	7
610	8/10/98	"	27	10:25	10:24	15	1
611	8/10/98	"	27	10:44	10:39	15	5
612	8/10/98	"	27	11:02	10:54	15	8
613	8/10/98	"	33	7:37	7:37	31	0
614	8/10/98	"	33	7:51	7:45	8	6
615	8/10/98	"	33	8:05	8:05	20	0
616	8/10/98	"	33	8:33	8:32	28	1
617	8/10/98	"	33	9:00	9:00	27	0
618	8/10/98	"	33	9:30	9:29	28	1
619	8/10/98	"	33	9:56	9:56	28	0
620	8/10/98	"	33	10:25	10:24	28	1
621	8/10/98	"	33	10:54	10:52	28	2
622	8/10/98	"	111	9:36	9:33	37	3
623	8/10/98	"	111	10:52	10:43	35	9
624	9/24/98	"	13	14:11	14:11	10	0
625	9/24/98	"	13	14:23	14:21	10	2
626	9/24/98	"	13	14:32	14:31	10	1
627	9/24/98	"	13	14:42	14:41	10	1
628	9/24/98	"	13	14:54	14:51	10	3
629	9/24/98	"	13	15:04	14:59	8	5
630	9/24/98	"	13	15:09	15:10	11	-1

Bus Schedule Reliability Data (cont.)

O.N.	DATE	LOCATION	BLN	BDT	SDT	BLH	SRI
631	9/24/98	South T. C.	13	15:21	15:20	10	1
632	9/24/98	"	13	15:31	15:30	10	1
633	9/24/98	"	13	15:41	15:40	10	1
634	9/24/98	"	27	14:07	14:05	15	2
635	9/24/98	"	27	14:21	14:20	15	1
636	9/24/98	"	27	14:38	14:35	15	3
637	9/24/98	"	27	14:53	14:50	15	3
638	9/24/98	"	27	15:02	14:59	9	3
639	9/24/98	"	27	15:16	15:14	15	2
640	9/24/98	"	27	15:32	15:29	15	3
641	9/24/98	"	27	15:43	15:43	14	0
642	9/24/98	"	27	cancel	15:08	9	
643	9/24/98	"	33	14:33	14:33	28	0
644	9/24/98	"	33	15:02	15:01	28	1
645	9/24/98	"	33	15:24	15:25	24	-1
646	9/24/98	"	33	15:31	15:31	19	0
647	9/24/98	"	111	14:16	14:13	35	3
648	9/24/98	"	111	14:44	14:45	32	-1
649	9/24/98	"	111	15:20	15:20	35	0
650	9/24/98	"	111	15:35	15:35	15	0
651	10/1/98	"	13	13:53	13:50	8	3
652	10/1/98	"	13	14:02	14:01	11	1
653	10/1/98	"	13	14:12	14:11	10	1
654	10/1/98	"	13	14:23	14:21	10	2
655	10/1/98	"	13	14:35	14:31	10	4
656	10/1/98	"	13	14:40	14:41	10	-1
657	10/1/98	"	13	14:51	14:51	10	0
658	10/1/98	"	13	15:11	15:10	11	1
659	10/1/98	"	13	15:26	15:20	10	6
660	10/1/98	"	13	15:40	15:30	10	10
661	10/1/98	"	13	cancel	14:59	8	
662	10/1/98	"	27	13:49	13:50	13	-1
663	10/1/98	"	27	14:06	14:05	15	1
664	10/1/98	"	27	14:18	14:20	15	-2
665	10/1/98	"	27	14:38	14:35	15	3
666	10/1/98	"	27	14:52	14:50	15	2
667	10/1/98	"	27	14:59	14:59	9	0
668	10/1/98	"	27	15:11	15:14	15	-3
669	10/1/98	"	27	15:13	15:08	9	5
670	10/1/98	"	27	15:35	15:29	15	6
671	10/1/98	"	33	14:06	14:05	25	1
672	10/1/98	"	33	14:34	14:33	28	1



Bus Schedule Reliability Data (cont.)

O.N.	DATE	LOCATION	BLN	BDT	SDT	BLH	SRI
673	10/1/98	South T. C.	33	15:20	15:01	28	19
674	10/1/98	"	33	15:26	15:25	24	1
675	10/1/98	"	33	15:31	15:31	19	0
676	10/1/98	"	111	14:18	14:13	35	5
677	10/1/98	"	111	14:44	14:45	32	-1
678	10/1/98	"	111	15:21	15:20	35	1
679	10/2/98	"	13	15:52	15:50	10	2
680	10/2/98	"	13	16:14	16:09	19	5
681	10/2/98	"	13	16:30	16:29	20	1
682	10/2/98	"	13	16:55	16:50	21	5
683	10/2/98	"	13	17:15	17:10	20	5
684	10/2/98	"	13	17:38	17:33	23	5
685	10/2/98	"	27	16:05	15:58	15	7
686	10/2/98	"	27	16:20	16:18	20	2
687	10/2/98	"	27	16:44	16:33	15	11
688	10/2/98	"	27	16:50	16:48	15	2
689	10/2/98	"	33	15:57	15:57	26	0
690	10/2/98	"	33	16:23	16:25	28	-2
691	10/2/98	"	33	16:54	16:55	30	-1
692	10/2/98	"	33	17:26	17:21	26	5
693	10/2/98	"	111	15:59	15:55	20	4
694	10/2/98	"	111	16:34	16:30	35	4
695	10/2/98	"	111	17:10	17:05	35	5
696	10/2/98	"	111	17:43	17:40	35	3
697	10/8/98	"	13	13:48	13:42	8	6
698	10/8/98	"	13	13:53	13:50	8	3
699	10/8/98	"	13	14:02	14:01	11	1
700	10/8/98	"	13	14:11	14:11	10	0
701	10/8/98	"	13	14:24	14:21	10	3
702	10/8/98	"	13	14:39	14:31	10	8
703	10/8/98	"	13	14:41	14:41	10	0
704	10/8/98	"	13	14:54	14:51	10	3
705	10/8/98	"	13	15:05	14:59	8	6
706	10/8/98	"	13	15:13	15:10	11	3
707	10/8/98	"	13	15:21	15:20	10	1
708	10/8/98	"	13	15:31	15:30	10	1
709	10/8/98	"	27	13:50	13:50	13	0
710	10/8/98	"	27	14:11	14:05	15	6
711	10/8/98	"	27	14:22	14:20	15	2
712	10/8/98	"	27	14:38	14:35	15	3
713	10/8/98	"	27	14:55	14:50	15	5
714	10/8/98	"	27	14:59	14:59	9	0

Bus Schedule Reliability Data (cont.)

O.N.	DATE	LOCATION	BLN	BDT	SDT	BLH	SRI
715	10/8/98	South T. C.	27	15:16	15:14	15	2
716	10/8/98	"	27	15:36	15:29	15	7
717	10/8/98	"	27	cancel	15:08	9	
718	10/8/98	"	33	14:05	14:05	25	0
719	10/8/98	"	33	14:33	14:33	28	0
720	10/8/98	"	33	15:00	15:01	28	-1
721	10/8/98	"	33	15:25	15:25	24	0
722	10/8/98	"	33	15:30	15:31	19	-1
723	10/8/98	"	111	14:16	14:13	35	3
724	10/8/98	"	111	14:46	14:45	32	1
725	10/8/98	"	111	15:20	15:20	35	0
726	10/16/98	"	13	15:13	15:10	11	3
727	10/16/98	"	13	15:25	15:20	10	5
728	10/16/98	"	13	15:40	15:30	10	10
729	10/16/98	"	13	15:51	15:50	10	1
730	10/16/98	"	13	16:09	16:09	19	0
731	10/16/98	"	13	16:30	16:29	20	1
732	10/16/98	"	13	16:53	16:50	21	3
733	10/16/98	"	13	cancel	15:40	10	
734	10/16/98	"	27	15:16	15:14	15	2
735	10/16/98	"	27	15:36	15:29	15	7
736	10/16/98	"	27	15:45	15:43	14	2
737	10/16/98	"	27	16:15	15:58	15	17
738	10/16/98	"	27	16:21	16:18	20	3
739	10/16/98	"	27	16:37	16:33	15	4
740	10/16/98	"	27	16:51	16:48	15	3
741	10/16/98	"	27	cancel	15:49	6	
742	10/16/98	"	33	15:01	15:01	28	0
743	10/16/98	"	33	15:24	15:25	24	-1
744	10/16/98	"	33	15:40	15:31	19	9
745	10/16/98	"	33	15:59	15:57	26	2
746	10/16/98	"	33	16:25	16:25	28	0
747	10/16/98	"	33	16:57	16:55	30	2
748	10/16/98	"	111	15:24	15:20	35	4
749	10/16/98	"	111	15:37	15:35	15	2
750	10/16/98	"	111	16:04	15:55	20	9
751	10/16/98	"	111	16:34	16:30	35	4
752	12/17/98	"	13	7:27	7:28	20	-1
753	12/17/98	"	13	7:48	7:48	20	0
754	12/17/98	"	13	8:10	8:08	20	2
755	12/17/98	"	13	8:32	8:27	19	5
756	12/17/98	"	13	8:41	8:38	10	3

Bus Schedule Reliability Data (cont.)

O.N.	DATE	LOCATION	BLN	BDT	SDT	BLH	SRI
757	12/17/98	Northcross T.C.	13	8:52	8:48	10	4
758	12/17/98	"	13	8:58	8:57	10	1
759	12/17/98	"	13	9:10	9:07	10	3
760	12/17/98	"	27	7:37	7:33	15	4
761	12/17/98	"	27	7:55	7:48	15	7
762	12/17/98	"	27	8:06	8:03	15	3
763	12/17/98	"	27	8:25	8:19	16	6
764	12/17/98	"	27	8:56	8:54	20	2
765	12/17/98	"	27	9:11	9:09	15	2
766	12/17/98	"	33	7:37	7:37	31	0
767	12/17/98	"	33	7:53	7:45	8	8
768	12/17/98	"	33	8:05	8:04	19	1
769	12/17/98	"	33	8:33	8:32	28	1
770	12/17/98	"	33	8:58	9:00	27	-2
771	7/29/98	"	3	8:10	8:10	15	0
772	7/29/98	"	3	8:24	8:25	15	-1
773	7/29/98	"	3	8:41	8:40	15	1
774	7/29/98	"	3	9:00	8:55	15	5
775	7/29/98	"	3	9:41	9:40	15	1
776	7/29/98	"	3	10:12	10:10	15	2
777	7/29/98	"	3	10:29	10:25	15	4
778	7/29/98	"	3	10:41	10:40	15	1
779	7/29/98	"	5	8:42	8:39	31	3
780	7/29/98	"	5	9:10	9:10	31	0
781	7/29/98	"	5	9:41	9:41	31	0
782	7/29/98	"	5	10:14	10:12	31	2
783	7/29/98	"	5	10:45	10:43	31	2
784	7/29/98	"	8	8:17	8:15	16	2
785	7/29/98	"	8	8:31	8:31	16	0
786	7/29/98	"	8	8:47	8:47	16	0
787	7/29/98	"	8	9:04	9:03	16	1
788	7/29/98	"	8	9:21	9:19	16	2
789	7/29/98	"	8	9:38	9:35	16	3
790	7/29/98	"	8	9:52	9:51	16	1
791	7/29/98	"	8	10:14	10:11	20	3
792	7/29/98	"	8	10:32	10:31	20	1
793	7/29/98	"	8	10:55	10:51	20	4
794	7/29/98	"	19	8:20	8:19	28	1
795	7/29/98	"	19	8:52	8:53	34	-1
796	7/29/98	"	19	9:30	9:27	34	3
797	7/29/98	"	19	10:10	10:07	40	3
798	7/29/98	"	19	10:49	10:47	40	2

Bus Schedule Reliability Data (cont.)

O.N.	DATE	LOCATION	BLN	BDT	SDT	BLH	SRI
799	7/29/98	Northcross T.C.	25	8:10	8:10	30	0
800	7/29/98	"	25	8:42	8:40	30	2
801	7/29/98	"	25	9:10	9:10	30	0
802	7/29/98	"	25	9:41	9:40	30	1
803	7/29/98	"	25	10:15	10:10	30	5
804	7/29/98	"	25	10:41	10:40	30	1
805	7/29/98	"	39	8:34	8:21	33	13
806	7/29/98	"	39	9:03	8:54	33	9
807	7/29/98	"	39	9:31	9:24	30	7
808	7/29/98	"	39	10:11	10:03	39	8
809	7/29/98	"	39	10:49	10:43	40	6
810	7/31/98	"	3	7:40	7:40	15	0
811	7/31/98	"	3	9:28	8:55	15	33
812	7/31/98	"	3	9:43	9:40	15	3
813	7/31/98	"	5	7:51	7:48	20	3
814	7/31/98	"	5	8:14	8:08	20	6
815	7/31/98	"	5	8:44	8:39	31	5
816	7/31/98	"	5	9:12	9:10	31	2
817	7/31/98	"	5	9:41	9:41	31	0
818	7/31/98	"	5	10:12	10:12	31	0
819	7/31/98	"	8	7:49	7:43	16	6
820	7/31/98	"	8	8:00	7:59	16	1
821	7/31/98	"	8	8:16	8:15	16	1
822	7/31/98	"	8	8:31	8:31	16	0
823	7/31/98	"	8	8:44	8:47	16	-3
824	7/31/98	"	8	9:05	9:03	16	2
825	7/31/98	"	8	9:21	9:19	16	2
826	7/31/98	"	8	9:41	9:35	16	6
827	7/31/98	"	8	9:56	9:51	16	5
828	7/31/98	"	8	10:12	10:11	20	1
829	7/31/98	"	8	10:34	10:31	20	3
830	7/31/98	"	19	7:56	7:51	28	5
831	7/31/98	"	19	9:30	9:27	34	3
832	7/31/98	"	25	7:41	7:40	30	1
833	7/31/98	"	25	8:12	8:10	30	2
834	7/31/98	"	25	8:44	8:40	30	4
835	7/31/98	"	25	9:11	9:10	30	1
836	7/31/98	"	25	9:41	9:40	30	1
837	7/31/98	"	25	10:12	10:10	30	2
838	7/31/98	"	39	9:31	9:24	30	7
839	8/3/98	"	3	7:40	7:40	15	0
840	8/3/98	"	3	7:56	7:55	15	1

Bus Schedule Reliability Data (cont.)

O.N.	DATE	LOCATION	BLN	BDT	SDT	BLH	SRI
841	8/3/98	Northcross T.C.	3	8:11	8:10	15	1
842	8/3/98	"	3	8:25	8:25	15	0
843	8/3/98	"	3	8:43	8:40	15	3
844	8/3/98	"	3	8:55	8:55	15	0
845	8/3/98	"	3	9:43	9:40	15	3
846	8/3/98	"	3	10:10	10:10	15	0
847	8/3/98	"	3	10:30	10:25	15	5
848	8/3/98	"	3	10:40	10:40	15	0
849	8/3/98	"	3	10:54	10:55	15	-1
850	8/3/98	"	5	7:32	7:28	20	4
851	8/3/98	"	5	7:51	7:48	20	3
852	8/3/98	"	5	8:11	8:08	20	3
853	8/3/98	"	5	8:43	8:39	31	4
854	8/3/98	"	5	9:16	9:10	31	6
855	8/3/98	"	5	9:42	9:41	31	1
856	8/3/98	"	5	10:15	10:12	31	3
857	8/3/98	"	5	10:46	10:43	31	3
858	8/3/98	"	8	7:32	7:27	16	5
859	8/3/98	"	8	7:46	7:43	16	3
860	8/3/98	"	8	8:01	7:59	16	2
861	8/3/98	"	8	8:15	8:15	16	0
862	8/3/98	"	8	8:33	8:31	16	2
863	8/3/98	"	8	8:47	8:47	16	0
864	8/3/98	"	8	9:06	9:03	16	3
865	8/3/98	"	8	9:17	9:19	16	-2
866	8/3/98	"	8	9:42	9:35	16	7
867	8/3/98	"	8	9:51	9:51	16	0
868	8/3/98	"	8	10:15	10:11	20	4
869	8/3/98	"	8	10:35	10:31	20	4
870	8/3/98	"	8	10:53	10:51	20	2
871	8/3/98	"	19	7:52	7:51	28	1
872	8/3/98	"	19	8:21	8:19	28	2
873	8/3/98	"	19	8:53	8:53	34	0
874	8/3/98	"	19	9:28	9:27	34	1
875	8/3/98	"	19	10:07	10:07	40	0
876	8/3/98	"	19	10:51	10:47	40	4
877	8/3/98	"	25	7:43	7:40	30	3
878	8/3/98	"	25	8:11	8:10	30	1
879	8/3/98	"	25	8:43	8:40	30	3
880	8/3/98	"	25	9:13	9:10	30	3
881	8/3/98	"	25	9:43	9:40	30	3
882	8/3/98	"	25	10:15	10:10	30	5

Bus Schedule Reliability Data (cont.)

O.N.	DATE	LOCATION	BLN	BDT	SDT	BLH	SRI
883	8/3/98	Northcross T.C.	25	10:42	10:40	30	2
884	8/3/98	"	39	7:56	7:48	30	8
885	8/3/98	"	39	8:31	8:21	33	10
886	8/3/98	"	39	9:03	8:54	33	9
887	8/3/98	"	39	9:32	9:24	30	8
888	8/3/98	"	39	10:10	10:03	39	7
889	8/3/98	"	39	10:53	10:43	40	10
890	8/13/98	"	3	8:13	8:10	15	3
891	8/13/98	"	3	8:25	8:25	15	0
892	8/13/98	"	3	8:41	8:40	15	1
893	8/13/98	"	3	8:57	8:55	15	2
894	8/13/98	"	3	9:41	9:40	15	1
895	8/13/98	"	3	10:12	10:10	15	2
896	8/13/98	"	3	cancel	10:25	15	
897	8/13/98	"	5	8:13	8:08	20	5
898	8/13/98	"	5	8:39	8:39	31	0
899	8/13/98	"	5	9:09	9:10	31	-1
900	8/13/98	"	5	9:42	9:41	31	1
901	8/13/98	"	5	10:12	10:12	31	0
902	8/13/98	"	5	10:46	10:43	31	3
903	8/13/98	"	8	8:04	7:59	16	5
904	8/13/98	"	8	8:17	8:15	16	2
905	8/13/98	"	8	8:52	8:47	16	5
906	8/13/98	"	8	9:04	9:03	16	1
907	8/13/98	"	8	9:20	9:19	16	1
908	8/13/98	"	8	9:40	9:35	16	5
909	8/13/98	"	8	9:56	9:51	16	5
910	8/13/98	"	8	10:12	10:11	20	1
911	8/13/98	"	8	10:32	10:31	20	1
912	8/13/98	"	8	10:42	10:51	20	-9
913	8/13/98	"	19	8:23	8:19	28	4
914	8/13/98	"	19	8:53	8:53	34	0
915	8/13/98	"	19	9:27	9:27	34	0
916	8/13/98	"	19	10:06	10:07	40	-1
917	8/13/98	"	25	8:10	8:10	30	0
918	8/13/98	"	25	8:43	8:40	30	3
919	8/13/98	"	25	9:11	9:10	30	1
920	8/13/98	"	25	9:40	9:40	30	0
921	8/13/98	"	25	10:14	10:10	30	4
922	8/13/98	"	25	10:44	10:40	30	4
923	8/13/98	"	39	7:57	7:48	30	9
924	8/13/98	"	39	8:24	8:21	33	3

Bus Schedule Reliability Data (cont.)

O.N.	DATE	LOCATION	BLN	BDT	SDT	BLH	SRI
925	8/13/98	Northcross T.C.	39	9:01	8:54	33	7
926	8/13/98	"	39	9:27	9:24	30	3
927	8/13/98	"	39	10:12	10:03	39	9
928	9/14/98	"	3	8:00	7:55	15	5
929	9/14/98	"	3	8:21	8:10	15	11
930	9/14/98	"	3	8:31	8:25	15	6
931	9/14/98	"	3	8:51	8:40	15	11
932	9/14/98	"	3	9:04	8:55	15	9
933	9/14/98	"	5	7:44	7:48	20	-4
934	9/14/98	"	5	8:03	8:08	20	-5
935	9/14/98	"	5	8:38	8:39	31	-1
936	9/14/98	"	5	9:06	9:10	31	-4
937	9/14/98	"	8	7:58	7:59	16	-1
938	9/14/98	"	8	8:11	8:15	16	-4
939	9/14/98	"	8	8:30	8:31	16	-1
940	9/14/98	"	8	8:39	8:47	16	-8
941	9/14/98	"	8	9:13	9:03	16	10
942	9/14/98	"	19	7:49	7:51	28	-2
943	9/14/98	"	19	8:15	8:19	28	-4
944	9/14/98	"	19	8:47	8:53	34	-6
945	9/14/98	"	25	7:46	7:40	30	6
946	9/14/98	"	25	8:24	8:10	30	14
947	9/14/98	"	25	8:35	8:40	30	-5
948	9/14/98	"	25	9:05	9:10	30	-5
949	9/14/98	"	39	7:50	7:48	30	2
950	9/14/98	"	39	8:25	8:21	33	4
951	9/14/98	"	39	8:55	8:54	33	1
952	9/14/98	"	44	7:41	7:44	27	-3
953	9/14/98	"	44	8:07	8:09	25	-2
954	9/14/98	"	44	8:33	8:35	26	-2
955	9/17/98	"	3	14:18	14:25	15	-7
956	9/17/98	"	3	14:41	14:40	15	1
957	9/17/98	"	3	14:54	14:55	15	-1
958	9/17/98	"	3	15:06	15:10	15	-4
959	9/17/98	"	3	15:21	15:25	15	-4
960	9/17/98	"	3	15:36	15:40	15	-4
961	9/17/98	"	3	15:57	15:55	15	2
962	9/17/98	"	5	14:13	14:20	31	-7
963	9/17/98	"	5	14:53	14:51	31	2
964	9/17/98	"	5	15:22	15:19	28	3
965	9/17/98	"	5	15:32	15:37	18	-5
966	9/17/98	"	5	15:50	15:50	13	0

Bus Schedule Reliability Data (cont.)

O.N.	DATE	LOCATION	BLN	BDT	SDT	BLH	SRI
967	9/17/98	Northcross T.C.	8	14:22	14:23	17	-1
968	9/17/98	"	8	14:38	14:33	10	5
969	9/17/98	"	8	15:01	14:50	17	11
970	9/17/98	"	8	15:21	15:24	17	-3
971	9/17/98	"	8	15:49	15:48	24	1
972	9/17/98	"	8	cancel	15:07	17	
973	9/17/98	"	19	14:39	14:47	40	-8
974	9/17/98	"	19	15:15	15:21	34	-6
975	9/17/98	"	19	15:58	15:51	30	7
976	9/17/98	"	25	14:34	14:40	30	-6
977	9/17/98	"	25	15:05	15:10	30	-5
978	9/17/98	"	25	15:38	15:40	15	-2
979	9/17/98	"	39	14:30	14:31	30	-1
980	9/17/98	"	39	14:58	15:00	29	-2
981	9/17/98	"	39	15:35	15:33	33	2
982	9/17/98	"	44	14:23	14:32	32	-9
983	9/17/98	"	44	15:09	15:06	34	3
984	9/17/98	"	44	15:25	15:38	32	-13
985	9/25/98	"	3	15:07	15:10	15	-3
986	9/25/98	"	3	15:29	15:25	15	4
987	9/25/98	"	3	15:37	15:40	15	-3
988	9/25/98	"	3	16:02	15:55	15	7
989	9/25/98	"	3	16:16	16:10	15	6
990	9/25/98	"	3	16:23	16:25	15	-2
991	9/25/98	"	3	16:49	16:40	15	9
992	9/25/98	"	3	16:54	16:55	15	-1
993	9/25/98	"	5	15:27	15:37	18	-10
994	9/25/98	"	5	15:28	15:19	28	9
995	9/25/98	"	5	15:56	15:50	13	6
996	9/25/98	"	5	16:01	16:07	17	-6
997	9/25/98	"	5	16:16	16:24	17	-8
998	9/25/98	"	5	16:48	16:55	31	-7
999	9/25/98	"	8	15:18	15:07	17	11
1000	9/25/98	"	8	15:43	15:48	24	-5
1001	9/25/98	"	8	16:06	16:05	17	1
1002	9/25/98	"	8	16:20	16:22	17	-2
1003	9/25/98	"	8	16:33	16:39	17	-6
1004	9/25/98	"	8	17:09	16:56	17	13
1005	9/25/98	"	8	cancel	15:24	17	
1006	9/25/98	"	19	15:41	15:21	34	20
1007	9/25/98	"	19	16:02	15:51	30	11
1008	9/25/98	"	19	16:40	16:51	30	-11



Bus Schedule Reliability Data (cont.)

O.N.	DATE	LOCATION	BLN	BDT	SDT	BLH	SRI
1009	9/25/98	Northcross T.C.	19	16:41	16:21	30	20
1010	9/25/98	"	25	15:28	15:10	30	18
1011	9/25/98	"	25	15:35	15:35	15	0
1012	9/25/98	"	25	16:14	16:10	15	4
1013	9/25/98	"	25	16:37	16:40	30	-3
1014	9/25/98	"	25	17:05	17:10	30	-5
1015	9/25/98	"	39	15:33	15:33	33	0
1016	9/25/98	"	39	16:09	16:06	33	3
1017	9/25/98	"	39	16:41	16:39	33	2
1018	9/25/98	"	44	15:10	15:06	34	4
1019	9/25/98	"	44	15:58	15:38	32	20
1020	9/25/98	"	44	16:30	16:08	30	22
1021	9/25/98	"	44	16:58	16:38	30	20
1022	10/9/98	"	3	15:02	14:55	15	7
1023	10/9/98	"	3	15:12	15:10	15	2
1024	10/9/98	"	3	15:22	15:25	15	-3
1025	10/9/98	"	3	15:41	15:40	15	1
1026	10/9/98	"	3	15:51	15:55	15	-4
1027	10/9/98	"	3	16:10	16:10	15	0
1028	10/9/98	"	3	16:20	16:25	15	-5
1029	10/9/98	"	3	16:42	16:40	15	2
1030	10/9/98	"	5	14:50	14:51	31	-1
1031	10/9/98	"	5	15:20	15:19	28	1
1032	10/9/98	"	5	15:35	15:37	18	-2
1033	10/9/98	"	5	16:03	15:50	13	13
1034	10/9/98	"	5	16:14	16:07	17	7
1035	10/9/98	"	5	16:51	16:55	31	-4
1036	10/9/98	"	5	cancel	16:24	17	
1037	10/9/98	"	8	14:57	14:50	17	7
1038	10/9/98	"	8	15:18	15:07	17	11
1039	10/9/98	"	8	15:40	15:24	17	16
1040	10/9/98	"	8	16:10	16:05	17	5
1041	10/9/98	"	8	16:15	16:22	17	-7
1042	10/9/98	"	8	16:34	16:39	17	-5
1043	10/9/98	"	8	cancel	15:48	24	
1044	10/9/98	"	19	15:34	15:21	34	13
1045	10/9/98	"	19	16:03	15:51	30	12
1046	10/9/98	"	19	16:46	16:21	30	25
1047	10/9/98	"	19	cancel	16:51	30	
1048	10/9/98	"	25	15:24	15:10	30	14
1049	10/9/98	"	25	15:38	15:35	15	3
1050	10/9/98	"	25	15:56	16:10	15	-14

Bus Schedule Reliability Data (cont.)

O.N.	DATE	LOCATION	BLN	BDT	SDT	BLH	SRI
1051	10/9/98	Northcross T.C.	25	16:38	16:40	30	-2
1052	10/9/98	"	39	15:00	15:00	29	0
1053	10/9/98	"	39	15:38	15:33	33	5
1054	10/9/98	"	39	16:08	16:06	33	2
1055	10/9/98	"	39	16:44	16:39	33	5
1056	10/9/98	"	44	15:04	15:06	34	-2
1057	10/9/98	"	44	16:01	15:38	32	23
1058	10/9/98	"	44	16:37	16:38	30	-1
1059	10/9/98	"	44	cancel	16:08	30	
1060	10/15/98	"	3	14:24	14:25	15	-1
1061	10/15/98	"	3	14:37	14:40	15	-3
1062	10/15/98	"	3	15:11	15:10	15	1
1063	10/15/98	"	3	15:25	15:25	15	0
1064	10/15/98	"	3	15:44	15:40	15	4
1065	10/15/98	"	3	15:55	15:55	15	0
1066	10/15/98	"	3	cancel	14:55	15	
1067	10/15/98	"	5	14:21	14:20	31	1
1068	10/15/98	"	5	14:52	14:51	31	1
1069	10/15/98	"	5	15:21	15:19	28	2
1070	10/15/98	"	5	15:40	15:37	18	3
1071	10/15/98	"	5	15:51	15:50	13	1
1072	10/15/98	"	8	14:27	14:23	17	4
1073	10/15/98	"	8	14:52	14:50	17	2
1074	10/15/98	"	8	15:09	15:07	17	2
1075	10/15/98	"	8	15:57	15:48	24	9
1076	10/15/98	"	8	cancel	14:33	17	
1077	10/15/98	"	8	cancel	15:24	17	
1078	10/15/98	"	19	14:48	14:47	40	1
1079	10/15/98	"	19	15:20	15:21	34	-1
1080	10/15/98	"	19	15:52	15:51	30	1
1081	10/15/98	"	25	14:41	14:40	30	1
1082	10/15/98	"	25	15:12	15:10	30	2
1083	10/15/98	"	25	15:35	15:35	15	0
1084	10/15/98	"	39	14:39	14:31	30	8
1085	10/15/98	"	39	15:12	15:00	29	12
1086	10/15/98	"	39	15:45	15:33	33	12
1087	10/15/98	"	44	14:35	14:32	32	3
1088	10/15/98	"	44	15:11	15:06	34	5
1089	10/15/98	"	44	15:40	15:38	32	2
1090	7/17/98	Highland Mall	8	14:09	14:09	18	0
1091	7/17/98	"	8	15:46	15:45	17	1
1092	7/17/98	"	8	16:07	16:06	12	1

Bus Schedule Reliability Data (cont.)

O.N.	DATE	LOCATION	BLN	BDT	SDT	BLH	SRI
1093	7/17/98	Highland Mall	8	16:44	16:43	17	1
1094	7/17/98	"	8	17:01	17:00	17	1
1095	7/17/98	"	15	13:45	13:45	26	0
1096	7/17/98	"	15	14:14	14:11	26	3
1097	7/17/98	"	15	14:40	14:37	26	3
1098	7/17/98	"	15	15:30	15:29	26	1
1099	7/17/98	"	15	15:55	15:55	26	0
1100	7/17/98	"	15	16:21	16:21	26	0
1101	7/17/98	"	15	16:52	16:50	29	2
1102	7/17/98	"	15	17:21	17:18	28	3
1103	7/17/98	"	32	13:58	13:56	45	2
1104	7/17/98	"	32	14:47	14:41	45	6
1105	7/17/98	"	32	17:00	16:58	44	2
1106	7/17/98	"	39	13:59	13:55	40	4
1107	7/17/98	"	39	15:41	15:38	33	3
1108	7/17/98	"	120	13:56	13:55	40	1
1109	7/17/98	"	120	14:40	14:35	40	5
1110	7/17/98	"	120	15:31	15:30	55	1
1111	7/17/98	"	120	16:07	16:05	35	2
1112	7/17/98	"	120	16:48	16:45	40	3
1113	7/17/98	"	7N	13:51	13:50	15	1
1114	7/17/98	"	7N	14:05	14:05	15	0
1115	7/17/98	"	7N	14:51	14:50	15	1
1116	7/17/98	"	7N	16:36	16:35	15	1
1117	7/17/98	"	7N	17:05	17:04	15	1
1118	7/17/98	"	7S	13:56	13:55	15	1
1119	7/17/98	"	7S	14:10	14:10	15	0
1120	7/17/98	"	7S	14:53	14:55	15	-2
1121	7/17/98	"	7S	15:40	15:40	15	0
1122	7/17/98	"	7S	16:31	16:25	15	6
1123	10/29/98	"	8	14:11	14:09	18	2
1124	10/29/98	"	8	14:26	14:26	17	0
1125	10/29/98	"	8	14:47	14:43	17	4
1126	10/29/98	"	8	14:57	14:54	11	3
1127	10/29/98	"	8	15:11	15:11	17	0
1128	10/29/98	"	8	15:28	15:28	17	0
1129	10/29/98	"	8	15:48	15:45	17	3
1130	10/29/98	"	15	14:37	14:37	26	0
1131	10/29/98	"	15	15:02	15:03	26	-1
1132	10/29/98	"	15	15:29	15:29	26	0
1133	10/29/98	"	32	15:30	15:29	46	1
1134	10/29/98	"	39	14:41	14:35	40	6

Bus Schedule Reliability Data (cont.)

O.N.	DATE	LOCATION	BLN	BDT	SDT	BLH	SRI
1135	10/29/98	Highland Mall	39	15:13	15:05	30	8
1136	10/29/98	"	120	14:37	14:35	40	2
1137	10/29/98	"	120	15:29	15:30	55	-1
1138	10/29/98	"	7N	14:24	14:20	15	4
1139	10/29/98	"	7N	14:36	14:35	15	1
1140	10/29/98	"	7N	14:50	14:50	15	0
1141	10/29/98	"	7N	15:03	15:03	15	0
1142	10/29/98	"	7N	15:18	15:23	15	-5
1143	10/29/98	"	7N	15:39	15:33	15	6
1144	10/29/98	"	7N	15:54	15:50	17	4
1145	10/29/98	"	7S	14:11	14:10	15	1
1146	10/29/98	"	7S	14:30	14:25	15	5
1147	10/29/98	"	7S	14:39	14:40	15	-1
1148	10/29/98	"	7S	14:55	14:55	15	0
1149	10/29/98	"	7S	15:09	15:09	15	0
1150	10/29/98	"	7S	15:25	15:25	15	0
1151	10/29/98	"	7S	15:40	15:40	15	0
1152	11/19/98	"	8	14:54	14:54	11	0
1153	11/19/98	"	8	15:12	15:11	17	1
1154	11/19/98	"	8	15:32	15:28	17	4
1155	11/19/98	"	8	15:45	15:45	17	0
1156	11/19/98	"	8	16:06	16:06	12	0
1157	11/19/98	"	8	16:09	16:09	12	0
1158	11/19/98	"	8	16:27	16:26	17	1
1159	11/19/98	"	15	15:04	15:03	26	1
1160	11/19/98	"	15	15:28	15:29	26	-1
1161	11/19/98	"	15	15:57	15:55	26	2
1162	11/19/98	"	15	16:20	16:21	26	-1
1163	11/19/98	"	32	15:32	15:29	46	3
1164	11/19/98	"	32	16:17	16:14	45	3
1165	11/19/98	"	39	15:10	15:05	30	5
1166	11/19/98	"	39	15:41	15:38	33	3
1167	11/19/98	"	39	16:15	16:11	33	4
1168	11/19/98	"	120	15:29	15:30	55	-1
1169	11/19/98	"	120	16:05	16:05	35	0
1170	11/19/98	"	7N	14:51	14:50	15	1
1171	11/19/98	"	7N	15:05	15:03	15	2
1172	11/19/98	"	7N	15:29	15:23	15	6
1173	11/19/98	"	7N	15:50	15:50	17	0
1174	11/19/98	"	7N	16:01	16:05	15	-4
1175	11/19/98	"	7N	16:20	16:20	15	0
1176	11/19/98	"	7N	16:36	16:35	15	1

Bus Schedule Reliability Data (cont.)

O.N.	DATE	LOCATION	BLN	BDT	SDT	BLH	SRI
1177	11/19/98	Highland Mall	7S	14:56	14:55	15	1
1178	11/19/98	"	7S	15:14	15:09	15	5
1179	11/19/98	"	7S	15:27	15:25	15	2
1180	11/19/98	"	7S	15:40	15:40	15	0
1181	11/19/98	"	7S	15:57	15:55	15	2
1182	11/19/98	"	7S	16:13	16:10	15	3
1183	11/19/98	"	7S	16:28	16:25	15	3
1184	12/4/98	"	8	15:01	14:54	11	7
1185	12/4/98	"	8	15:11	15:11	17	0
1186	12/4/98	"	8	15:40	15:28	17	12
1187	12/4/98	"	8	15:45	15:45	17	0
1188	12/4/98	"	8	16:13	16:09	12	4
1189	12/4/98	"	8	cancel	16:06	12	
1190	12/4/98	"	15	15:02	15:03	26	-1
1191	12/4/98	"	15	15:29	15:29	26	0
1192	12/4/98	"	15	15:57	15:55	26	2
1193	12/4/98	"	15	16:21	16:21	26	0
1194	12/4/98	"	32	15:30	15:29	46	1
1195	12/4/98	"	32	16:20	16:14	45	6
1196	12/4/98	"	39	15:13	15:05	30	8
1197	12/4/98	"	39	15:42	15:38	33	4
1198	12/4/98	"	39	16:16	16:11	33	5
1199	12/4/98	"	120	15:30	15:30	55	0
1200	12/4/98	"	120	16:05	16:05	35	0
1201	12/4/98	"	7N	14:51	14:50	15	1
1202	12/4/98	"	7N	15:06	15:03	15	3
1203	12/4/98	"	7N	15:20	15:23	15	-3
1204	12/4/98	"	7N	16:01	15:50	17	11
1205	12/4/98	"	7N	16:12	16:05	15	7
1206	12/4/98	"	7N	16:20	16:20	15	0
1207	12/4/98	"	7N	16:40	16:35	15	5
1208	12/4/98	"	7N	cancel	15:33	15	
1209	12/4/98	"	7S	14:57	14:55	15	2
1210	12/4/98	"	7S	15:11	15:09	15	2
1211	12/4/98	"	7S	15:27	15:25	15	2
1212	12/4/98	"	7S	15:40	15:40	15	0
1213	12/4/98	"	7S	15:57	15:55	15	2
1214	12/4/98	"	7S	16:13	16:10	15	3
1215	12/4/98	"	7S	16:28	16:25	15	3
1216	12/16/98	"	8	14:43	14:43	17	0
1217	12/16/98	"	8	14:54	14:54	11	0
1218	12/16/98	"	8	15:12	15:11	17	1

Bus Schedule Reliability Data (cont.)

O.N.	DATE	LOCATION	BLN	BDT	SDT	BLH	SRI
1219	12/16/98	Highland Mall	8	15:32	15:28	17	4
1220	12/16/98	"	8	15:46	15:45	17	1
1221	12/16/98	"	8	16:07	16:06	12	1
1222	12/16/98	"	8	16:27	16:26	17	1
1223	12/16/98	"	8	cancel	16:09	12	
1224	12/16/98	"	15	15:10	15:03	26	7
1225	12/16/98	"	15	15:29	15:29	26	0
1226	12/16/98	"	15	16:02	15:55	26	7
1227	12/16/98	"	15	16:22	16:21	26	1
1228	12/16/98	"	32	15:31	15:29	46	2
1229	12/16/98	"	32	16:15	16:14	45	1
1230	12/16/98	"	39	15:11	15:05	30	6
1231	12/16/98	"	39	15:43	15:38	33	5
1232	12/16/98	"	39	16:19	16:11	33	8
1233	12/16/98	"	120	15:30	15:30	55	0
1234	12/16/98	"	120	16:05	16:05	35	0
1235	12/16/98	"	7N	14:50	14:50	15	0
1236	12/16/98	"	7N	15:06	15:03	15	3
1237	12/16/98	"	7N	15:23	15:23	15	0
1238	12/16/98	"	7N	15:54	15:50	17	4
1239	12/16/98	"	7N	16:05	16:05	15	0
1240	12/16/98	"	7N	16:22	16:20	15	2
1241	12/16/98	"	7N	cancel	15:33	15	
1242	12/16/98	"	7S	14:56	14:55	15	1
1243	12/16/98	"	7S	15:10	15:09	15	1
1244	12/16/98	"	7S	15:27	15:25	15	2
1245	12/16/98	"	7S	15:35	15:40	15	-5
1246	12/16/98	"	7S	15:55	15:55	15	0
1247	12/16/98	"	7S	16:10	16:10	15	0
1248	12/16/98	"	7S	16:25	16:25	15	0
1249	10/30/98	Pavillion P & R	40	7:20	7:22	40	-2
1250	10/30/98	"	40	8:10	8:04	42	6
1251	10/30/98	"	40	8:52	8:44	40	8
1252	10/30/98	"	LXN	7:47	7:46	52	1
1253	10/30/98	"	LXN	8:03	8:01	15	2
1254	10/30/98	"	LXN	8:23	8:16	15	7
1255	10/30/98	"	LXN	9:07	8:51	35	16
1256	10/30/98	"	LXS	7:14	7:14	10	0
1257	10/30/98	"	LXS	7:36	7:36	22	0
1258	10/30/98	"	LXS	7:57	7:56	20	1
1259	10/30/98	"	LXS	8:19	8:09	13	10
1260	10/30/98	"	LXS	8:43	8:24	15	19

Bus Schedule Reliability Data (cont.)

O.N.	DATE	LOCATION	BLN	BDT	SDT	BLH	SRI
1261	11/6/98	Pavillion P & R	40	7:22	7:22	40	0
1262	11/6/98	"	40	8:08	8:04	42	4
1263	11/6/98	"	40	8:44	8:44	40	0
1264	11/6/98	"	LXN	7:46	7:46	52	0
1265	11/6/98	"	LXN	8:01	8:01	15	0
1266	11/6/98	"	LXN	8:26	8:16	15	10
1267	11/6/98	"	LXN	8:50	8:51	35	-1
1268	11/6/98	"	LXS	7:14	7:14	10	0
1269	11/6/98	"	LXS	7:36	7:36	22	0
1270	11/6/98	"	LXS	7:56	7:56	20	0
1271	11/6/98	"	LXS	8:09	8:09	13	0
1272	11/6/98	"	LXS	8:23	8:24	15	-1
1273	11/6/98	"	LXS	9:12	9:05	41	7
1274	10/22/98	"	7	14:18	14:19	15	-1
1275	10/22/98	"	7	14:34	14:34	15	0
1276	10/22/98	"	7	14:45	14:47	15	-2
1277	10/22/98	"	7	15:05	15:02	15	3
1278	10/22/98	"	7	15:18	15:17	15	1
1279	10/22/98	"	7	15:38	15:32	15	6
1280	10/22/98	"	7	15:45	15:47	15	-2
1281	10/22/98	"	7	16:02	16:02	15	0
1282	10/22/98	"	74	14:18	14:23	38	-5
1283	10/22/98	"	74	15:06	15:03	40	3
1284	10/22/98	"	74	15:43	15:41	38	2
1285	10/22/98	"	74	16:17	16:19	38	-2
1286	10/23/98	"	7	15:12	15:02	15	10
1287	10/23/98	"	7	15:19	15:17	15	2
1288	10/23/98	"	7	15:36	15:32	15	4
1289	10/23/98	"	7	15:52	15:47	15	5
1290	10/23/98	"	7	16:00	16:02	15	-2
1291	10/23/98	"	7	16:16	16:17	15	-1
1292	10/23/98	"	7	16:31	16:32	15	-1
1293	10/23/98	"	7	16:45	16:47	15	-2
1294	10/23/98	"	74	15:09	15:03	40	6
1295	10/23/98	"	74	15:51	15:41	38	10
1296	10/23/98	"	74	16:21	16:19	38	2
1297	11/5/98	"	7	14:18	14:19	15	-1
1298	11/5/98	"	7	14:38	14:34	15	4
1299	11/5/98	"	7	14:43	14:47	15	-4
1300	11/5/98	"	7	15:02	15:02	15	0
1301	11/5/98	"	7	15:18	15:17	15	1
1302	11/5/98	"	7	15:37	15:32	15	5





**APPENDIX III**

**Transfer Passengers Waiting Time Data**

Transfer Passengers Waiting Time Data

O.N.	DATE	SEX	RAT	ADW	BLN	BDT	SDT	BLH	WAIT	LOC
1	7/8/98	M	15:31	T	1	15:48	15:48	10	17	1
2	7/8/98	M	15:31	T	1	15:48	15:48	10	17	1
3	7/8/98	F	15:54	DN	1	16:01	15:58	10	7	1
4	7/8/98	M	15:55	DN	1	16:01	15:58	10	6	1
5	7/8/98	F	15:57	DN	1	16:01	15:58	10	4	1
6	7/8/98	M	16:01	DN	1	16:07	15:58	10	6	1
7	7/8/98	F	16:06	DN	1	16:07	15:58	10	1	1
8	7/8/98	M	16:07	DN	1	16:07	15:58	10	0	1
9	7/8/98	M	16:07	DN	1	16:07	15:58	10	0	1
10	7/8/98	M	16:11	T	1	16:17	16:08	10	6	1
11	7/8/98	M	16:11	T	1	16:17	16:08	10	6	1
12	7/8/98	F	16:43	DN	1	16:49	16:48	10	6	1
13	7/8/98	F	16:44	DN	1	16:49	16:48	10	5	1
14	7/8/98	M	16:47	DN	1	16:49	16:48	10	2	1
15	7/8/98	M	16:47	DN	1	16:49	16:48	10	2	1
16	7/8/98	M	16:47	DN	1	16:49	16:48	10	2	1
17	7/8/98	M	16:47	DN	1	16:49	16:48	10	2	1
18	7/8/98	F	16:47	DN	1	17:07	16:58	10	20	1
19	7/8/98	F	16:52	DN	1	16:57	16:48	10	5	1
20	7/8/98	F	17:01	DN	1	17:07	16:58	10	6	1
21	7/8/98	M	17:01	DN	1	17:07	16:58	10	6	1
22	7/8/98	M	17:07	R	1	17:23	17:18	10	16	1
23	7/8/98	F	17:23	DN	1	17:23	17:18	10	0	1
24	7/8/98	M	17:23	DN	1	17:23	17:18	10	0	1
25	7/9/98	F	13:41	T	1	13:43	10:41	10	2	1
26	7/9/98	M	13:42	DN	1	13:48	10:41	10	6	1
27	7/9/98	M	13:44	DN	1	13:48	10:41	10	4	1
28	7/9/98	F	13:44	DN	1	13:48	10:41	10	4	1
29	7/9/98	M	14:22	T	1	14:32	14:26	10	10	1
30	7/9/98	M	14:22	T	1	14:32	14:26	10	10	1
31	7/9/98	F	14:33	DN	1	14:57	14:57	10	24	1
32	7/9/98	M	14:38	DN	1	14:57	14:57	10	19	1
33	7/9/98	F	14:40	DN	1	14:57	14:57	10	17	1
34	7/9/98	M	15:04	DN	1	15:09	15:07	10	5	1
35	7/9/98	M	15:04	DN	1	15:09	15:07	10	5	1
36	7/9/98	M	15:10	DN	1	15:19	15:17	10	9	1
37	7/9/98	F	15:10	DN	1	15:19	15:17	10	9	1
38	7/9/98	F	15:10	DN	1	15:19	15:17	10	9	1
39	7/9/98	F	15:15	DN	1	15:19	15:17	10	4	1
40	7/13/98	F	13:42	DN	1	13:43	10:41	10	1	1
41	7/13/98	M	13:42	DN	1	13:43	10:41	10	1	1
42	7/13/98	M	14:00	DN	1	14:10	14:08	10	10	1

Transfer Passengers Waiting Time Data (cont.)

O.N.	DATE	SEX	RAT	ADW	BLN	BDT	SDT	BLH	WAIT	LOC
43	7/13/98	M	14:01	DN	1	14:10	14:08	10	9	1
44	7/13/98	M	14:15	DN	1	14:47	14:47	10	32	1
45	7/13/98	F	15:21	DN	1	15:23	15:17	10	2	1
46	7/13/98	M	15:28	DN	1	15:44	15:37	10	16	1
47	7/13/98	F	15:28	DN	1	15:44	15:37	10	16	1
48	7/13/98	F	15:44	DN	1	15:52	15:48	10	8	1
49	7/13/98	M	15:47	R	1	15:52	15:48	10	5	1
50	7/13/98	M	16:25	DN	1	16:36	16:28	10	11	1
51	7/13/98	F	16:26	DN	1	16:36	16:28	10	10	1
52	7/13/98	F	16:48	DN	1	17:01	16:58	10	13	1
53	7/13/98	F	17:01	DN	1	17:01	16:58	10	0	1
54	7/15/98	M	13:40	DN	1	13:40	10:41	10	0	1
55	7/15/98	F	13:40	DN	1	13:40	10:41	10	0	1
56	7/15/98	M	13:49	DN	1	14:12	14:08	10	23	1
57	7/15/98	F	14:05	DN	1	14:12	14:08	10	7	1
58	7/15/98	M	14:05	DN	1	14:12	14:08	10	7	1
59	7/15/98	M	14:05	DN	1	14:12	14:08	10	7	1
60	7/15/98	M	14:10	DN	1	14:12	14:08	10	2	1
61	7/15/98	F	14:10	DN	1	14:12	14:08	10	2	1
62	7/15/98	M	14:10	DN	1	14:12	14:08	10	2	1
63	7/15/98	M	14:10	DN	1	14:12	14:08	10	2	1
64	7/15/98	M	14:10	DN	1	14:12	14:08	10	2	1
65	7/15/98	F	14:12	DN	1	14:20	14:18	10	8	1
66	7/15/98	M	14:13	DN	1	14:20	14:18	10	7	1
67	7/15/98	M	14:38	DN	1	14:48	14:47	10	10	1
68	7/15/98	M	14:48	DN	1	14:56	14:47	10	8	1
69	7/15/98	M	14:48	DN	1	14:56	14:47	10	8	1
70	7/15/98	M	14:51	DN	1	14:56	14:47	10	5	1
71	7/15/98	F	14:51	DN	1	15:01	15:07	10	10	1
72	7/15/98	F	14:59	DN	1	15:07	15:07	10	8	1
73	7/15/98	M	15:02	DN	1	15:07	15:07	10	5	1
74	7/15/98	F	15:03	DN	1	15:07	15:07	10	4	1
75	7/15/98	F	15:08	DN	1	15:17	15:17	10	9	1
76	7/15/98	F	15:08	DN	1	15:17	15:17	10	9	1
77	7/15/98	M	15:41	DN	1	15:54	15:48	10	13	1
78	7/15/98	F	16:15	DN	1	16:19	16:18	10	4	1
79	7/15/98	M	17:05	DN	1	17:06	16:58	10	1	1
80	07/20/98	M	7:01	DN	1	7:04	7:05	10	3	1
81	07/20/98	M	7:14	DN	1	7:15	7:15	10	1	1
82	07/20/98	F	7:27	DN	1	7:29	7:25	10	2	1
83	07/20/98	M	7:32	DN	1	7:35	7:35	10	3	1
84	07/20/98	F	7:32	DN	1	7:35	7:35	10	3	1

Transfer Passengers Waiting Time Data (cont.)

O.N.	DATE	SEX	RAT	ADW	BLN	BDT	SDT	BLH	WAIT	LOC
85	07/20/98	M	7:33	DN	1	7:35	7:35	10	2	1
86	07/20/98	F	7:33	DN	1	7:35	7:35	10	2	1
87	07/20/98	M	7:34	DN	1	7:35	7:35	10	1	1
88	07/20/98	F	7:36	DN	1	7:51	7:45	10	15	1
89	07/20/98	M	7:50	DN	1	7:51	7:45	10	1	1
90	07/20/98	M	7:50	DN	1	7:51	7:45	10	1	1
91	07/20/98	F	8:19	DN	1	8:19	8:24	10	0	1
92	07/20/98	F	8:20	DN	1	8:23	8:24	10	3	1
93	07/20/98	F	8:25	DN	1	8:33	8:34	10	8	1
94	07/20/98	M	8:25	DN	1	8:33	8:34	10	8	1
95	07/20/98	F	8:41	DN	1	8:46	8:44	10	5	1
96	07/20/98	F	8:41	DN	1	8:46	8:44	10	5	1
97	07/20/98	F	10:07	DN	1	10:10	10:03	10	3	1
98	07/20/98	F	10:07	DN	1	10:10	10:03	10	3	1
99	07/20/98	M	10:10	DN	1	10:16	10:13	10	6	1
100	07/20/98	F	10:16	DN	1	10:17	10:13	10	1	1
101	07/20/98	F	10:28	DN	1	10:34	10:31	10	6	1
102	7/22/98	F	7:28	S	1	7:42	7:45	10	14	1
103	7/22/98	M	7:35	DN	1	7:42	7:45	10	7	1
104	7/22/98	F	7:38	DN	1	7:42	7:45	10	4	1
105	7/22/98	M	7:42	DN	1	7:58	7:54	10	16	1
106	7/22/98	M	7:49	DN	1	7:58	7:54	10	9	1
107	7/22/98	F	7:50	DN	1	7:58	7:54	10	8	1
108	7/22/98	M	7:51	DN	1	7:58	7:54	10	7	1
109	7/22/98	M	7:51	DN	1	7:58	7:54	10	7	1
110	7/22/98	F	8:27	DN	1	8:48	8:44	10	21	1
111	7/22/98	F	8:27	DN	1	8:48	8:44	10	21	1
112	7/22/98	F	8:29	DN	1	8:48	8:44	10	19	1
113	7/22/98	F	8:31	DN	1	8:48	8:44	10	17	1
114	7/22/98	M	8:52	DN	1	8:54	8:54	10	2	1
115	7/22/98	M	9:42	DN	1	9:45	9:43	10	3	1
116	7/22/98	F	9:42	DN	1	9:45	9:43	10	3	1
117	7/22/98	F	10:42	DN	1	10:44	10:41	10	2	1
118	7/22/98	M	10:42	DN	1	10:44	10:41	10	2	1
119	7/22/98	M	10:42	DN	1	10:44	10:41	10	2	1
120	7/27/98	F	7:16	DN	1	7:17	7:15	10	1	1
121	7/27/98	M	7:16	DN	1	7:17	7:15	10	1	1
122	7/27/98	F	7:21	DN	1	7:27	7:25	10	6	1
123	7/27/98	F	7:32	DN	1	7:34	7:35	10	2	1
124	7/27/98	M	7:32	DN	1	7:34	7:35	10	2	1
125	7/27/98	F	7:38	DN	1	7:46	7:45	10	8	1
126	7/27/98	F	8:07	DN	1	8:17	8:14	10	10	1

Transfer Passengers Waiting Time Data (cont.)

O.N.	DATE	SEX	RAT	ADW	BLN	BDT	SDT	BLH	WAIT	LOC
127	7/27/98	M	8:11	DN	1	8:17	8:14	10	6	1
128	7/27/98	M	8:11	DN	1	8:17	8:14	10	6	1
129	7/27/98	F	8:20	DN	1	8:27	8:24	10	7	1
130	7/27/98	F	8:20	DN	1	8:27	8:24	10	7	1
131	7/27/98	M	8:30	DN	1	8:33	8:34	10	3	1
132	7/27/98	M	8:52	DN	1	8:53	8:54	10	1	1
133	7/27/98	F	9:03	DN	1	9:03	9:03	10	0	1
134	7/27/98	F	9:14	DN	1	9:16	9:23	10	2	1
135	7/27/98	M	9:38	DN	1	9:42	9:43	10	4	1
136	7/27/98	F	9:47	DN	1	9:54	9:53	10	7	1
137	7/8/98	M	15:27	DN	3	15:29	15:27	15	2	1
138	7/8/98	F	15:27	DN	3	15:29	15:27	15	2	1
139	7/8/98	M	15:43	DN	3	15:55	15:42	15	12	1
140	7/8/98	F	15:55	DN	3	16:12	16:12	15	17	1
141	7/8/98	F	16:01	DN	3	16:12	16:12	15	11	1
142	7/8/98	M	16:15	DN	3	16:25	16:12	15	10	1
143	7/8/98	M	16:50	DN	3	16:55	16:42	15	5	1
144	7/8/98	M	17:09	DN	3	17:12	17:12	15	3	1
145	7/8/98	F	17:09	T	3	17:12	17:12	15	3	1
146	7/8/98	M	17:09	T	3	17:12	17:12	15	3	1
147	7/8/98	F	17:09	T	3	17:12	17:12	15	3	1
148	7/8/98	M	17:12	T	3	17:12	17:12	15	0	1
149	7/9/98	F	13:57	DN	3	14:19	14:14	15	22	1
150	7/9/98	M	14:22	T	3	14:29	14:29	15	7	1
151	7/9/98	M	15:09	DN	3	15:15	15:13	15	6	1
152	7/9/98	M	15:10	DN	3	15:15	15:13	15	5	1
153	7/13/98	M	14:10	R	3	14:22	14:14	15	12	1
154	7/13/98	M	14:13	T	3	14:22	14:14	15	9	1
155	7/13/98	M	14:19	DN	3	14:22	14:14	15	3	1
156	7/13/98	M	15:51	DN	3	15:55	15:42	15	4	1
157	7/13/98	F	16:38	DN	3	16:43	16:42	15	5	1
158	7/13/98	M	16:38	DN	3	16:43	16:42	15	5	1
159	7/13/98	M	16:47	DN	3	16:56	16:42	15	9	1
160	7/13/98	F	17:01	DN	3	17:21	17:12	15	20	1
161	7/13/98	M	17:07	DN	3	17:21	17:12	15	14	1
162	07/20/98	M	7:06	DN	3	7:32	7:30	15	26	1
163	07/20/98	F	7:27	DN	3	7:32	7:30	15	5	1
164	07/20/98	M	7:27	DN	3	7:32	7:30	15	5	1
165	07/20/98	M	7:32	DN	3	7:45	7:45	15	13	1
166	07/20/98	F	7:36	DN	3	7:45	7:45	15	9	1
167	07/20/98	F	7:50	DN	3	8:02	8:00	15	12	1
168	07/20/98	M	7:55	DN	3	8:01	8:00	15	6	1

Transfer Passengers Waiting Time Data (cont.)

O.N.	DATE	SEX	RAT	ADW	BLN	BDT	SDT	BLH	WAIT	LOC
169	07/20/98	M	8:00	DN	3	8:02	8:00	15	2	1
170	07/20/98	F	8:01	T	3	8:02	8:00	15	1	1
171	07/20/98	F	8:01	T	3	8:02	8:00	15	1	1
172	07/20/98	F	8:01	T	3	8:02	8:00	15	1	1
173	07/20/98	M	8:01	T	3	8:02	8:00	15	1	1
174	07/20/98	F	8:41	DN	3	8:43	8:43	15	2	1
175	07/20/98	F	9:45	DN	3	9:48	9:45	15	3	1
176	7/22/98	F	7:33	DN	3	7:45	7:45	15	12	1
177	7/22/98	M	7:38	DN	3	7:45	7:45	15	7	1
178	7/22/98	F	7:38	DN	3	7:45	7:45	15	7	1
179	7/22/98	F	7:51	T	3	8:01	8:00	15	10	1
180	7/22/98	F	7:51	T	3	8:01	8:00	15	10	1
181	7/22/98	F	7:51	T	3	8:01	8:00	15	10	1
182	7/22/98	M	8:00	DN	3	8:01	8:00	15	1	1
183	7/22/98	M	8:12	DN	3	8:18	8:13	15	6	1
184	7/22/98	F	9:29	DN	3	9:30	9:29	15	1	1
185	7/22/98	F	9:29	DN	3	9:30	9:29	15	1	1
186	7/22/98	F	9:29	DN	3	9:30	9:29	15	1	1
187	7/22/98	F	9:29	DN	3	9:30	9:29	15	1	1
188	7/22/98	F	9:36	DN	3	9:46	9:45	15	10	1
189	7/22/98	F	9:36	DN	3	9:46	9:45	15	10	1
190	7/22/98	F	10:05	S	3	10:14	10:00	15	9	1
191	7/22/98	M	10:35	T	3	10:50	10:45	15	15	1
192	7/22/98	M	10:35	T	3	10:50	10:45	15	15	1
193	7/22/98	M	10:35	T	3	10:50	10:45	15	15	1
194	7/22/98	M	10:35	T	3	10:50	10:45	15	15	1
195	7/22/98	M	10:35	T	3	10:50	10:45	15	15	1
196	7/22/98	F	10:35	T	3	10:50	10:45	15	15	1
197	7/22/98	F	10:35	T	3	10:50	10:45	15	15	1
198	7/27/98	F	7:19	DN	3	7:30	7:30	15	11	1
199	7/27/98	M	7:38	DN	3	7:44	7:30	15	6	1
200	7/27/98	M	7:38	DN	3	7:44	7:30	15	6	1
201	7/27/98	M	7:41	DN	3	7:44	7:30	15	3	1
202	7/27/98	F	8:04	T	3	8:13	8:13	15	9	1
203	7/27/98	F	8:04	T	3	8:13	8:13	15	9	1
204	7/27/98	F	8:04	T	3	8:13	8:13	15	9	1
205	7/27/98	F	8:07	DN	3	8:27	8:13	15	20	1
206	7/27/98	M	8:30	DN	3	8:43	8:43	15	13	1
207	7/27/98	F	8:32	DN	3	8:43	8:43	15	11	1
208	7/27/98	F	8:52	DN	3	8:58	8:58	15	6	1
209	7/27/98	M	9:23	DN	3	9:31	9:29	15	8	1
210	7/27/98	F	9:29	DN	3	9:30	9:29	15	1	1

Transfer Passengers Waiting Time Data (cont.)

O.N.	DATE	SEX	RAT	ADW	BLN	BDT	SDT	BLH	WAIT	LOC
211	7/27/98	F	9:38	DN	3	9:47	9:45	15	9	1
212	7/27/98	F	10:17	DN	3	10:32	10:30	15	15	1
213	7/8/98	F	15:43	DN	4	15:45	15:42	16	2	1
214	7/8/98	M	15:45	DN	4	16:08	16:09	27	23	1
215	7/8/98	F	15:57	DN	4	16:08	16:09	27	11	1
216	7/8/98	F	16:47	DN	4	16:58	16:57	16	11	1
217	7/13/98	M	13:48	DN	4	14:10	14:08	30	22	1
218	7/13/98	M	14:01	DN	4	14:10	14:08	30	9	1
219	7/13/98	M	14:01	S	4	14:10	14:08	30	9	1
220	7/13/98	M	15:59	T,S	4	16:11	16:09	27	12	1
221	7/13/98	F	17:07	DN	4	17:18	17:13	16	11	1
222	7/15/98	M	16:01	DN	4	16:14	16:09	27	13	1
223	7/15/98	F	16:22	DN	4	16:28	16:25	16	6	1
224	7/15/98	F	16:22	DN	4	16:28	16:25	16	6	1
225	7/15/98	F	16:39	DN	4	16:40	16:41	16	1	1
226	07/20/98	M	8:09	R	4	8:13	8:07	17	4	1
227	07/20/98	M	8:41	DN	4	8:43	8:41	17	2	1
228	7/22/98	F	7:34	DN	4	7:36	7:33	17	2	1
229	7/22/98	F	8:14	DN	4	8:22	8:07	17	8	1
230	7/22/98	F	8:38	DN	4	8:39	8:24	17	1	1
231	7/22/98	F	9:24	DN	4	9:37	9:38	17	13	1
232	7/22/98	F	9:24	DN	4	9:37	9:38	17	13	1
233	7/8/98	F	15:31	DN	5	15:32	15:32	24	1	1
234	7/8/98	M	15:36	T	5	16:06	16:05	33	30	1
235	7/8/98	M	16:00	R	5	16:06	16:05	33	6	1
236	7/8/98	F	16:22	DN	5	16:36	16:36	31	14	1
237	7/8/98	F	16:36	DN	5	16:36	16:36	31	0	1
238	7/8/98	F	16:50	T	5	17:12	17:08	18	22	1
239	7/8/98	F	16:50	T	5	17:12	17:08	18	22	1
240	7/8/98	F	16:50	T	5	17:12	17:08	18	22	1
241	7/8/98	M	16:56	T	5	17:12	17:08	18	16	1
242	7/8/98	F	16:56	T	5	17:12	17:08	18	16	1
243	7/8/98	F	16:56	T	5	17:12	17:08	18	16	1
244	7/8/98	F	16:56	T	5	17:12	17:08	18	16	1
245	7/9/98	F	14:01	DN	5	14:09	14:06	31	8	1
246	7/13/98	M	15:21	T	5	15:35	15:32	24	14	1
247	7/13/98	F	16:48	DN	5	16:52	16:50	14	4	1
248	7/13/98	F	16:54	DN	5	17:09	17:08	18	15	1
249	7/13/98	M	17:02	DN	5	17:09	17:08	18	7	1
250	7/13/98	M	17:07	DN	5	17:09	17:08	18	2	1
251	7/15/98	M	13:40	DN	5	13:55	13:35	31	15	1
252	7/15/98	F	13:41	DN	5	13:55	13:35	31	14	1

Transfer Passengers Waiting Time Data (cont.)

O.N.	DATE	SEX	RAT	ADW	BLN	BDT	SDT	BLH	WAIT	LOC
253	7/15/98	M	15:44	T	5	15:59	15:32	24	15	1
254	7/15/98	F	15:44	T	5	15:59	15:32	24	15	1
255	07/20/98	F	8:11	DN	5	8:28	8:25	31	17	1
256	7/22/98	M	7:51	DN	5	7:55	7:54	31	4	1
257	7/27/98	M	7:41	DN	5	7:54	7:54	31	13	1
258	7/27/98	F	9:11	DN	5	9:17	9:16	20	6	1
259	7/27/98	F	10:02	DN	5	10:03	9:59	25	1	1
260	7/27/98	F	10:02	DN	5	10:03	9:59	25	1	1
261	7/27/98	M	10:02	DN	5	10:03	9:59	25	1	1
262	7/27/98	F	10:02	DN	5	10:03	9:59	25	1	1
263	7/8/98	M	16:24	DN	6	16:27	16:05	40	3	1
264	7/9/98	M	13:41	T	6	13:57	13:55	35	16	1
265	7/9/98	M	15:19	DN	6	15:28	15:25	35	9	1
266	7/9/98	M	15:27	DN	6	15:28	15:25	35	1	1
267	7/9/98	M	15:27	DN	6	15:28	15:25	35	1	1
268	7/13/98	M	14:30	DN	6	14:49	14:30	35	19	1
269	7/13/98	F	14:40	DN	6	14:49	14:30	35	9	1
270	7/13/98	F	14:41	DN	6	14:49	14:30	35	8	1
271	7/13/98	F	17:24	DN	6	17:25	17:25	20	1	1
272	7/27/98	M	8:32	DN	6	8:39	8:30	20	7	1
273	7/8/98	F	16:01	T	9	16:52	16:33	38	51	1
274	7/9/98	M	13:38	DN	9	13:55	13:55	35	17	1
275	7/9/98	M	15:02	DN	9	15:09	14:43	38	7	1
276	7/9/98	M	15:02	DN	9	15:09	14:43	38	7	1
277	07/20/98	F	8:11	DN	9	8:41	8:42	38	30	1
278	7/22/98	M	7:49	DN	9	8:08	8:04	38	19	1
279	7/22/98	M	7:53	DN	9	8:08	8:04	38	15	1
280	7/22/98	F	7:54	DN	9	8:08	8:04	38	14	1
281	7/22/98	M	8:00	DN	9	8:08	8:04	38	8	1
282	7/22/98	F	8:12	DN	9	8:24	8:04	38	12	1
283	7/22/98	F	8:31	DN	9	8:44	8:42	38	13	1
284	7/22/98	M	9:57	DN	9	9:59	9:56	33	2	1
285	7/27/98	F	7:47	DN	9	8:08	8:04	38	21	1
286	7/27/98	M	9:55	DN	9	9:56	9:56	33	1	1
287	7/27/98	F	9:55	DN	9	9:56	9:56	33	1	1
288	7/8/98	M	15:45	DN	10	15:46	15:43	20	1	1
289	7/8/98	M	15:45	DN	10	15:46	15:43	20	1	1
290	7/8/98	F	15:54	T	10	16:07	16:03	20	13	1
291	7/8/98	F	15:54	T	10	16:07	16:03	20	13	1
292	7/8/98	F	15:54	T	10	16:07	16:03	20	13	1
293	7/8/98	F	15:55	DN	10	16:07	16:03	20	12	1
294	7/8/98	F	16:06	DN	10	16:07	16:03	20	1	1



Transfer Passengers Waiting Time Data (cont.)

O.N.	DATE	SEX	RAT	ADW	BLN	BDT	SDT	BLH	WAIT	LOC
295	7/8/98	F	16:44	T	10	16:49	16:46	23	5	1
296	7/8/98	M	16:50	DN	10	17:04	17:03	17	14	1
297	7/8/98	M	17:03	DN	10	17:04	17:03	17	1	1
298	7/9/98	F	13:48	DN	10	14:22	14:17	34	34	1
299	7/9/98	M	14:01	DN	10	14:22	14:17	34	21	1
300	7/9/98	M	14:15	T	10	14:22	14:17	34	7	1
301	7/9/98	F	14:15	T	10	14:22	14:17	34	7	1
302	7/9/98	F	15:15	DN	10	15:20	15:12	20	5	1
303	7/13/98	M	16:04	DN	10	16:06	16:03	20	2	1
304	7/13/98	F	17:02	DN	10	17:07	17:03	17	5	1
305	7/13/98	F	17:06	DN	10	17:07	17:03	17	1	1
306	7/15/98	M	15:41	DN	10	15:47	15:43	20	6	1
307	7/15/98	M	16:46	T	10	16:47	16:46	23	1	1
308	07/20/98	F	8:33	T	10	8:45	8:42	18	12	1
309	7/22/98	F	7:27	DN	10	7:28	7:26	20	1	1
310	7/27/98	M	9:31	DN	10	9:50	9:43	18	19	1
311	7/8/98	M	16:05	DN	12	16:12	16:08	17	7	1
312	7/8/98	M	16:12	DN	12	16:28	16:27	19	16	1
313	7/8/98	M	16:46	DN	12	16:51	16:45	18	5	1
314	7/8/98	F	17:08	DN	12	17:23	17:16	17	15	1
315	7/9/98	F	14:19	DN	12	14:22	14:18	20	3	1
316	7/13/98	F	14:22	DN	12	14:30	14:18	20	8	1
317	7/13/98	M	14:47	DN	12	14:50	14:39	21	3	1
318	7/13/98	M	14:47	DN	12	14:50	14:39	21	3	1
319	7/13/98	M	17:02	DN	12	17:04	16:59	14	2	1
320	7/15/98	M	17:16	DN	12	17:20	17:16	17	4	1
321	7/15/98	F	17:16	DN	12	17:20	17:16	17	4	1
322	07/20/98	F	7:27	DN	12	7:33	7:29	16	6	1
323	07/20/98	F	8:03	T	12	8:06	8:02	16	3	1
324	07/20/98	M	9:18	DN	12	9:28	9:22	19	10	1
325	07/20/98	F	9:29	DN	12	9:45	9:39	17	16	1
326	7/22/98	M	7:42	DN	12	7:50	7:46	16	8	1
327	7/22/98	M	8:27	DN	12	8:33	8:32	14	6	1
328	7/22/98	M	8:27	DN	12	8:33	8:32	14	6	1
329	7/22/98	M	8:28	DN	12	8:33	8:32	14	5	1
330	7/22/98	M	9:18	T	12	9:43	9:39	17	25	1
331	7/22/98	F	9:18	T	12	9:43	9:39	17	25	1
332	7/22/98	F	9:57	DN	12	10:01	9:59	20	4	1
333	7/22/98	M	9:57	DN	12	10:01	9:59	20	4	1
334	7/22/98	M	10:37	DN	12	10:43	10:39	20	6	1
335	7/27/98	M	9:55	DN	12	10:02	9:59	20	7	1
336	7/27/98	F	10:33	DN	12	10:43	10:39	20	10	1

Transfer Passengers Waiting Time Data (cont.)

O.N.	DATE	SEX	RAT	ADW	BLN	BDT	SDT	BLH	WAIT	LOC
337	7/8/98	M	16:22	DN	19	16:25	16:24	34	3	1
338	7/8/98	M	16:27	T	19	16:55	16:54	30	28	1
339	7/8/98	F	16:46	DN	19	16:55	16:54	30	9	1
340	7/9/98	M	13:43	DN	19	13:48	13:48	40	5	1
341	7/9/98	F	14:57	DN	19	15:08	15:08	40	11	1
342	7/9/98	M	14:57	DN	19	15:08	15:08	40	11	1
343	7/9/98	M	15:07	DN	19	15:08	15:08	40	1	1
344	7/9/98	M	15:07	DN	19	15:08	15:08	40	1	1
345	7/13/98	F	14:04	DN	19	14:26	14:28	40	22	1
346	7/15/98	M	15:48	T	19	15:52	15:50	42	4	1
347	07/20/98	F	7:34	DN	19	7:57	7:53	30	23	1
348	07/20/98	F	7:36	DN	19	7:57	7:53	30	21	1
349	07/20/98	F	7:42	DN	19	7:57	7:53	30	15	1
350	07/20/98	M	7:51	S	19	7:57	7:53	30	6	1
351	07/20/98	F	7:51	DN	19	7:57	7:53	30	6	1
352	07/20/98	F	7:51	DN	19	7:57	7:53	30	6	1
353	07/20/98	F	10:28		19	10:28	10:28	34	0	1
354	7/22/98	F	7:50	DN	19	7:58	7:53	30	8	1
355	7/22/98	F	7:53	DN	19	7:58	7:53	30	5	1
356	7/27/98	F	10:17	DN	19	10:27	10:28	34	10	1
357	7/13/98	M	15:08	DN	29	15:09	15:01	30	1	1
358	7/9/98	M	15:27	DN	30	15:30	15:30	30	3	1
359	7/9/98	M	15:27	DN	30	15:30	15:30	30	3	1
360	7/9/98	F	15:27	DN	30	15:30	15:30	30	3	1
361	7/13/98	M	14:30	DN	30	14:37	14:30	30	7	1
362	7/13/98	F	14:40	T	30	15:05	15:00	30	25	1
363	7/13/98	F	14:40	T	30	15:05	15:00	30	25	1
364	7/13/98	F	15:28	DN	30	15:47	15:30	30	19	1
365	7/13/98	M	15:44	DN	30	15:47	15:30	30	3	1
366	7/13/98	M	16:30	DN	30	16:37	16:30	30	7	1
367	7/13/98	F	17:01	DN	30	17:01	17:00	30	0	1
368	7/13/98	M	17:01	DN	30	17:01	17:00	30	0	1
369	7/13/98	F	17:01	DN	30	17:01	17:00	30	0	1
370	7/13/98	M	17:01	DN	30	17:01	17:00	30	0	1
371	07/20/98	F	7:27	DN	30	7:29	7:30	30	2	1
372	07/20/98	M	7:28	DN	30	7:29	7:30	30	1	1
373	07/20/98	F	7:32	DN	30	7:50	7:30	30	18	1
374	07/20/98	M	7:32	DN	30	7:50	7:30	30	18	1
375	07/20/98	M	7:55	DN	30	8:01	8:00	30	6	1
376	07/20/98	M	8:09	DN	30	8:09	8:00	30	0	1
377	07/20/98	F	8:25	DN	30	8:25	8:30	30	0	1
378	07/20/98	F	10:29	DN	30	10:34	10:30	30	5	1

Transfer Passengers Waiting Time Data (cont.)

O.N.	DATE	SEX	RAT	ADW	BLN	BDT	SDT	BLH	WAIT	LOC
379	7/22/98	F	7:50	DN	30	8:02	8:00	30	12	1
380	7/22/98	F	7:50	DN	30	8:02	8:00	30	12	1
381	7/22/98	F	9:57	DN	30	9:58	10:00	30	1	1
382	7/22/98	F	9:57	DN	30	9:58	10:00	30	1	1
383	7/22/98	M	9:57	DN	30	9:58	10:00	30	1	1
384	7/22/98	F	10:14	T	30	10:31	10:30	30	17	1
385	7/22/98	F	10:14	T	30	10:31	10:30	30	17	1
386	7/22/98	F	10:14	T	30	10:31	10:30	30	17	1
387	7/22/98	F	10:14	T	30	10:31	10:30	30	17	1
388	7/22/98	F	10:14	T	30	10:31	10:30	30	17	1
389	7/22/98	F	10:14	T	30	10:31	10:30	30	17	1
390	7/22/98	M	10:14	T	30	10:31	10:30	30	17	1
391	7/22/98	M	10:14	T	30	10:31	10:30	30	17	1
392	7/22/98	M	10:14	T	30	10:31	10:30	30	17	1
393	7/22/98	M	10:14	T	30	10:31	10:30	30	17	1
394	7/8/98	M	15:45	DN	38	15:56	15:49	35	11	1
395	7/8/98	F	15:54	DN	38	15:56	15:49	35	2	1
396	7/8/98	M	16:00	DN	38	16:48	16:22	33	48	1
397	7/8/98	M	16:43	DN	38	16:48	16:22	33	5	1
398	7/13/98	M	14:01	DN	38	14:04	14:09	31	3	1
399	7/13/98	F	15:00	DN	38	15:06	14:41	32	6	1
400	7/13/98	F	15:47	DN	38	15:57	15:49	35	10	1
401	7/15/98	M	16:22	DN	38	16:25	16:22	33	3	1
402	7/15/98	M	16:22	DN	38	16:25	16:22	33	3	1
403	7/15/98	F	16:55	T	38	17:04	16:58	36	9	1
404	7/15/98	M	16:55	T	38	17:04	16:58	36	9	1
405	07/20/98	M	9:25	DN	38	9:27	9:22	21	2	1
406	7/27/98	F	7:14	DN	38	7:20	7:13	32	6	1
407	7/27/98	F	7:14	DN	38	7:20	7:13	32	6	1
408	7/27/98	F	7:15	DN	38	7:20	7:13	32	5	1
409	7/27/98	F	7:33	DN	38	7:47	7:31	18	14	1
410	7/13/98	M	14:22	DN	63	14:47	14:41	32	25	1
411	7/13/98	F	14:22	DN	63	14:47	14:41	32	25	1
412	7/13/98	M	16:36	DN	63	16:46	16:49	32	10	1
413	7/8/98	M	15:55	DN	86	16:14	16:08	14	19	1
414	7/8/98	M	16:36	DN	86	16:43	16:44	11	7	1
415	7/8/98	M	17:07	DN	86	17:09	17:06	11	2	1
416	7/9/98	M	14:38	DN	86	14:45	14:43	14	7	1
417	7/9/98	M	15:10	DN	86	15:25	15:11	14	15	1
418	7/13/98	F	13:42	DN	86	14:06	14:01	14	24	1
419	7/13/98	F	14:01	DN	86	14:06	14:01	14	5	1
420	7/13/98	F	14:05	DN	86	14:06	14:01	14	1	1

Transfer Passengers Waiting Time Data (cont.)

O.N.	DATE	SEX	RAT	ADW	BLN	BDT	SDT	BLH	WAIT	LOC
421	7/13/98	M	14:05	DN	86	14:06	14:01	14	1	1
422	7/13/98	M	15:44	DN	86	15:59	15:54	9	15	1
423	7/13/98	F	15:44	DN	86	15:59	15:54	9	15	1
424	7/15/98	M	15:50	DN	86	15:54	15:54	9	4	1
425	07/20/98	M	8:25	DN	86	8:29	8:26	11	4	1
426	07/20/98	F	9:29	DN	86	9:36	9:35	14	7	1
427	7/22/98	M	9:13	DN	86	9:14	9:10	11	1	1
428	7/22/98	F	9:13	DN	86	9:14	9:10	11	1	1
429	7/27/98	F	8:20	DN	86	8:29	8:26	11	9	1
430	7/27/98	F	9:06	DN	86	9:24	9:21	11	18	1
431	7/23/98	F	7:35	T	13	7:50	7:48	20	15	2
432	7/23/98	M	7:35	T	13	7:50	7:48	20	15	2
433	7/23/98	M	7:35	DN	13	7:50	7:48	20	15	2
434	7/23/98	F	8:20	DN	13	8:30	8:27	19	10	2
435	7/23/98	M	8:20	DN	13	8:30	8:27	19	10	2
436	7/23/98	M	8:41	DN	13	8:53	8:48	10	12	2
437	7/23/98	F	8:52	T	13	8:53	8:48	10	1	2
438	7/23/98	F	8:52	T	13	8:53	8:48	10	1	2
439	7/23/98	F	9:16	T	13	9:22	9:17	10	6	2
440	7/23/98	F	9:16	T	13	9:22	9:17	10	6	2
441	7/23/98	F	9:16	T	13	9:22	9:17	10	6	2
442	7/23/98	M	9:16	T	13	9:22	9:17	10	6	2
443	8/5/98	M	7:34	DN	13	7:50	7:48	20	16	2
444	8/5/98	M	7:37	DN	13	7:50	7:48	20	13	2
445	8/5/98	F	7:37	DN	13	7:50	7:48	20	13	2
446	8/5/98	F	7:37	DN	13	7:50	7:48	20	13	2
447	8/5/98	F	8:14	DN	13	8:30	8:27	19	16	2
448	8/5/98	F	8:14	DN	13	8:30	8:27	19	16	2
449	8/5/98	M	8:26	DN	13	8:30	8:27	19	4	2
450	8/5/98	M	10:19	T	13	10:30	10:25	10	11	2
451	8/5/98	F	10:19	T	13	10:30	10:25	10	11	2
452	8/5/98	F	10:33	DN	13	10:44	10:45	10	11	2
453	8/5/98	F	10:33	DN	13	10:44	10:45	10	11	2
454	8/5/98	M	10:33	DN	13	10:44	10:45	10	11	2
455	8/5/98	F	10:33	DN	13	10:44	10:45	10	11	2
456	8/10/98	M	7:32	DN	13	7:48	7:48	20	16	2
457	8/10/98	F	7:32	DN	13	7:48	7:48	20	16	2
458	8/10/98	M	8:11	DN	13	8:27	8:27	19	16	2
459	8/10/98	M	8:11	DN	13	8:27	8:27	19	16	2
460	8/10/98	M	9:52	DN	13	9:57	9:55	10	5	2
461	8/10/98	M	9:52	T	13	9:57	9:55	10	5	2
462	9/24/98	M	14:13	DN	13	14:23	14:21	10	10	2

## Transfer Passengers Waiting Time Data (cont.)

O.N.	DATE	SEX	RAT	ADW	BLN	BDT	SDT	BLH	WAIT	LOC
463	9/24/98	M	14:13	DN	13	14:23	14:21	10	10	2
464	9/24/98	M	14:22	DN	13	14:23	14:21	10	1	2
465	9/24/98	M	14:48	DN	13	14:54	14:51	10	6	2
466	9/24/98	F	14:48	DN	13	14:54	14:51	10	6	2
467	9/24/98	F	14:48	DN	13	14:54	14:51	10	6	2
468	9/25/98	M	15:34	DN	13	15:37	15:30	10	3	2
469	10/1/98	F	13:57	DN	13	14:02	14:01	11	5	2
470	10/1/98	M	13:57	DN	13	14:02	14:01	11	5	2
471	10/1/98	M	14:27	DN	13	14:35	14:31	10	8	2
472	10/1/98	M	14:27	DN	13	14:35	14:31	10	8	2
473	10/1/98	M	14:27	DN	13	14:35	14:31	10	8	2
474	10/1/98	F	14:27	DN	13	14:35	14:31	10	8	2
475	10/1/98	M	15:19	DN	13	15:31	15:30	10	12	2
476	10/1/98	F	15:34		13	15:40	15:40	10	6	2
477	10/2/98	F	15:53	DN	13	16:14	16:09	19	21	2
478	10/2/98	F	15:53	DN	13	16:14	16:09	19	21	2
479	10/2/98	M	16:44	DN	13	16:55	16:50	21	11	2
480	10/2/98	M	16:44	DN	13	16:55	16:50	21	11	2
481	10/8/98	F	13:58	DN	13	14:02	14:01	11	4	2
482	10/8/98	M	14:06	DN	13	14:11	14:11	10	5	2
483	10/8/98	F	14:06	DN	13	14:11	14:11	10	5	2
484	10/8/98	M	14:06	DN	13	14:11	14:11	10	5	2
485	10/8/98	F	14:27	DN	13	14:39	14:31	10	12	2
486	10/8/98	M	14:28	DN	13	14:39	14:31	10	11	2
487	10/8/98	F	14:28	DN	13	14:39	14:31	10	11	2
488	10/16/98	M	15:26	DN	13	15:40	15:40	10	14	2
489	10/16/98	F	15:26	DN	13	15:40	15:40	10	14	2
490	10/16/98	M	15:57	DN	13	16:09	16:09	19	12	2
491	10/16/98	F	16:28	DN	13	16:30	16:29	20	2	2
492	10/16/98	M	16:28	DN	13	16:30	16:29	20	2	2
493	7/23/98	M	8:16	DN	27	8:26	8:19	16	10	2
494	7/23/98	M	9:23	T	27	9:27	9:24	15	4	2
495	7/23/98	F	9:23	T	27	9:27	9:24	15	4	2
496	7/23/98	M	9:29	DN	27	9:38	9:39	15	9	2
497	7/23/98	F	9:44	DN	27	9:57	9:54	15	13	2
498	7/23/98	F	9:44	DN	27	9:57	9:54	15	13	2
499	7/23/98	F	10:05	DN	27	10:10	10:09	15	5	2
500	7/23/98	M	10:06	DN	27	10:10	10:09	15	4	2
501	8/5/98	M	7:34	DN	27	7:36	7:33	15	2	2
502	8/5/98	M	7:34	DN	27	7:36	7:33	15	2	2
503	8/5/98	M	7:34	DN	27	7:36	7:33	15	2	2
504	8/5/98	M	8:20	DN	27	8:27	8:19	16	7	2

Transfer Passengers Waiting Time Data (cont.)

O.N.	DATE	SEX	RAT	ADW	BLN	BDT	SDT	BLH	WAIT	LOC
505	8/5/98	M	8:26	DN	27	8:27	8:19	16	1	2
506	8/5/98	M	8:58	DN	27	9:01	8:54	20	3	2
507	8/5/98	M	8:58	DN	27	9:01	8:54	20	3	2
508	8/5/98	M	9:18	DN	27	9:25	9:24	15	7	2
509	8/5/98	M	9:18	DN	27	9:25	9:24	15	7	2
510	8/5/98	M	9:18	DN	27	9:25	9:24	15	7	2
511	8/5/98	F	9:18	DN	27	9:25	9:24	15	7	2
512	8/5/98	M	9:48	DN	27	9:58	9:54	15	10	2
513	8/5/98	M	9:48	DN	27	9:58	9:54	15	10	2
514	8/5/98	M	9:48	DN	27	9:58	9:54	15	10	2
515	8/5/98	F	9:48	DN	27	9:58	9:54	15	10	2
516	8/5/98	M	9:51	DN	27	9:58	9:54	15	7	2
517	8/5/98	F	9:51	DN	27	9:58	9:54	15	7	2
518	8/5/98	M	9:51	DN	27	9:58	9:54	15	7	2
519	8/10/98	F	7:38	DN	27	7:48	7:48	15	10	2
520	8/10/98	M	7:38	DN	27	7:48	7:48	15	10	2
521	8/10/98	M	9:02	DN	27	9:05	8:54	20	3	2
522	8/10/98	M	10:00	DN	27	10:15	10:09	15	15	2
523	9/24/98	F	14:34	DN	27	14:38	14:35	15	4	2
524	9/24/98	M	14:34	DN	27	14:38	14:35	15	4	2
525	9/24/98	F	15:27	DN	27	15:32	15:29	15	5	2
526	9/24/98	M	15:34	DN	27	15:43	15:43	14	9	2
527	10/1/98	F	13:59		27	14:06	14:05	15	7	2
528	10/1/98	F	13:59		27	14:06	14:05	15	7	2
529	10/1/98	F	13:59		27	14:06	14:05	15	7	2
530	10/1/98	F	13:59		27	14:06	14:05	15	7	2
531	10/1/98	M	13:59		27	14:06	14:05	15	7	2
532	10/1/98	F	14:28	DN	27	14:38	14:35	15	10	2
533	10/1/98	F	14:28	DN	27	14:38	14:35	15	10	2
534	10/1/98	M	14:28	DN	27	14:38	14:35	15	10	2
535	10/1/98	M	14:40	DN	27	14:52	14:50	15	12	2
536	10/1/98	F	14:49	DN	27	14:52	14:50	15	3	2
537	10/2/98	F	15:53	DN	27	16:05	15:58	15	12	2
538	10/2/98	F	15:53	DN	27	16:05	15:58	15	12	2
539	10/2/98	M	15:53	DN	27	16:05	15:58	15	12	2
540	10/2/98	M	15:53	DN	27	16:05	15:58	15	12	2
541	10/2/98	M	15:53	DN	27	16:05	15:58	15	12	2
542	10/2/98	F	15:53	DN	27	16:05	15:58	15	12	2
543	10/2/98	M	15:53	DN	27	16:05	15:58	15	12	2
544	10/2/98	F	16:54	DN	27	17:15	17:08	20	21	2
545	10/2/98	M	16:55	DN	27	17:15	17:08	20	20	2
546	10/8/98	M	14:08	DN	27	14:11	14:05	15	3	2

Transfer Passengers Waiting Time Data (cont.)

O.N.	DATE	SEX	RAT	ADW	BLN	BDT	SDT	BLH	WAIT	LOC
547	10/8/98	F	14:28	DN	27	14:38	14:35	15	10	2
548	10/8/98	F	14:28	DN	27	14:38	14:35	15	10	2
549	10/8/98	F	14:28	DN	27	14:38	14:35	15	10	2
550	10/8/98	F	14:28	DN	27	14:38	14:35	15	10	2
551	10/8/98	M	14:28	DN	27	14:38	14:35	15	10	2
552	10/8/98	F	14:28	DN	27	14:38	14:35	15	10	2
553	10/8/98	M	14:47	DN	27	14:55	14:50	15	8	2
554	10/8/98	F	14:47	DN	27	14:55	14:50	15	8	2
555	10/16/98	M	15:19	DN	27	15:36	15:29	15	17	2
556	10/16/98	M	15:19	DN	27	15:36	15:29	15	17	2
557	10/16/98	M	15:25	DN	27	15:36	15:29	15	11	2
558	10/16/98	M	15:26	DN	27	15:36	15:29	15	10	2
559	10/16/98	M	15:57	DN	27	16:21	16:18	20	24	2
560	10/16/98	F	15:57	DN	27	16:21	16:18	20	24	2
561	10/16/98	M	16:05	DN	27	16:21	16:18	20	16	2
562	10/16/98	M	16:05	DN	27	16:21	16:18	20	16	2
563	10/16/98	F	16:05	DN	27	16:21	16:18	20	16	2
564	10/16/98	F	16:05	DN	27	16:21	16:18	20	16	2
565	7/23/98	M	7:54	T	33	8:05	8:05	20	11	2
566	7/23/98	F	7:54	T	33	8:05	8:05	20	11	2
567	7/23/98	M	8:16	DN	33	8:34	8:33	28	18	2
568	7/23/98	M	8:47	DN	33	9:00	9:00	28	13	2
569	7/23/98	F	8:52	T	33	9:00	9:00	28	8	2
570	7/23/98	F	8:52	T	33	9:00	9:00	28	8	2
571	7/23/98	F	9:16	T	33	9:31	9:29	28	15	2
572	7/23/98	M	9:16	T	33	9:31	9:29	28	15	2
573	8/5/98	M	8:04	DN	33	8:08	8:05	20	4	2
574	8/5/98	M	8:16	DN	33	8:32	8:33	28	16	2
575	8/5/98	F	8:18	DN	33	8:32	8:33	28	14	2
576	8/5/98	F	8:26	DN	33	8:32	8:33	28	6	2
577	8/5/98	M	8:58	DN	33	9:13	9:00	28	15	2
578	8/5/98	F	9:33	DN	33	9:58	9:56	28	25	2
579	8/5/98	M	9:56	DN	33	9:58	9:56	28	2	2
580	8/5/98	F	9:56	DN	33	9:58	9:56	28	2	2
581	8/5/98	M	10:19	DN	33	10:54	10:53	28	35	2
582	8/5/98	M	10:33	DN	33	10:54	10:53	28	21	2
583	8/10/98	F	7:21	T	33	7:37	7:37	31	16	2
584	8/10/98	F	7:21	T	33	7:37	7:37	31	16	2
585	8/10/98	F	7:32	S	33	8:05	8:05	20	33	2
586	8/10/98	F	10:19	DN	33	10:25	10:25	28	6	2
587	9/24/98	F	14:48	DN	33	15:02	15:01	28	14	2
588	9/24/98	M	14:48	DN	33	15:02	15:01	28	14	2

Transfer Passengers Waiting Time Data (cont.)

O.N.	DATE	SEX	RAT	ADW	BLN	BDT	SDT	BLH	WAIT	LOC
589	9/24/98	F	14:48	DN	33	15:02	15:01	28	14	2
590	9/24/98	F	15:20	DN	33	15:24	15:25	24	4	2
591	10/1/98	F	13:57	DN	33	14:06	14:05	25	9	2
592	10/1/98	F	13:57	DN	33	14:06	14:05	25	9	2
593	10/2/98	M	16:16	DN	33	16:23	16:25	28	7	2
594	10/8/98	F	14:27	DN	33	14:33	14:33	28	6	2
595	10/8/98	F	14:27	DN	33	14:33	14:33	28	6	2
596	10/8/98	M	14:28	DN	33	14:33	14:33	28	5	2
597	10/16/98	F	15:12	DN	33	15:13	15:01	28	1	2
598	10/16/98	M	15:19	DN	33	15:24	15:25	24	5	2
599	10/16/98	M	16:19	DN	33	16:25	16:25	28	6	2
600	10/16/98	F	16:19	DN	33	16:25	16:25	28	6	2
601	10/16/98	M	16:19	DN	33	16:25	16:25	28	6	2
602	10/16/98	F	16:28	DN	33	16:57	16:55	30	29	2
603	7/23/98	M	7:59	DN	111	8:27	8:21	10	28	2
604	7/23/98	F	8:02	DN	111	8:27	8:21	10	25	2
605	7/23/98	M	8:16	DN	111	8:27	8:21	10	11	2
606	10/1/98	F	14:12	DN	111	14:18	14:13	35	6	2
607	10/1/98	F	14:12	DN	111	14:18	14:13	35	6	2
608	10/1/98	F	14:40	DN	111	14:44	14:45	32	4	2
609	10/2/98	M	17:20	DN	111	17:43	17:40	35	23	2
610	10/2/98	F	17:20	DN	111	17:43	17:40	35	23	2
611	10/2/98	F	17:20	DN	111	17:43	17:40	35	23	2
612	10/16/98	F	15:57	DN	111	16:04	15:55	20	7	2
613	7/29/98	F	8:05	DN	3	8:10	8:10	15	5	3
614	7/29/98	F	8:05	DN	3	8:10	8:10	15	5	3
615	7/29/98	F	8:05	DN	3	8:10	8:10	15	5	3
616	7/29/98	M	8:05	DN	3	8:10	8:10	15	5	3
617	7/29/98	M	8:07	DN	3	8:10	8:10	15	3	3
618	7/29/98	F	8:07	DN	3	8:10	8:10	15	3	3
619	7/29/98	F	8:14	DN	3	8:24	8:10	15	10	3
620	7/29/98	M	8:14	DN	3	8:24	8:10	15	10	3
621	7/29/98	F	8:30	DN	3	8:41	8:40	15	11	3
622	7/29/98	F	8:58	DN	3	9:00	8:55	15	2	3
623	7/29/98	M	8:58	DN	3	9:00	8:55	15	2	3
624	7/29/98	M	8:58	DN	3	9:00	8:55	15	2	3
625	7/29/98	M	9:07	DN	3	9:13	9:10	15	6	3
626	7/29/98	F	9:07	DN	3	9:13	9:10	15	6	3
627	7/29/98	F	10:18	DN	3	10:29	10:25	15	11	3
628	7/31/98	M	7:35	DN	3	7:40	7:40	15	5	3
629	7/31/98	M	7:35	DN	3	7:40	7:40	15	5	3
630	7/31/98	F	7:35	DN	3	7:40	7:40	15	5	3



Transfer Passengers Waiting Time Data (cont.)

O.N.	DATE	SEX	RAT	ADW	BLN	BDT	SDT	BLH	WAIT	LOC
631	7/31/98	F	7:35	DN	3	7:40	7:40	15	5	3
632	7/31/98	F	7:35	DN	3	7:40	7:40	15	5	3
633	7/31/98	F	7:35	DN	3	7:40	7:40	15	5	3
634	7/31/98	F	7:35	DN	3	7:40	7:40	15	5	3
635	7/31/98	M	7:35	DN	3	7:40	7:40	15	5	3
636	7/31/98	F	7:35	DN	3	7:40	7:40	15	5	3
637	7/31/98	F	7:35	DN	3	7:40	7:40	15	5	3
638	7/31/98	F	9:33	DN	3	9:43	9:40	15	10	3
639	7/31/98	F	9:33	DN	3	9:43	9:40	15	10	3
640	7/31/98	F	9:33	DN	3	9:43	9:40	15	10	3
641	8/3/98	F	7:30	DN	3	7:40	7:40	15	10	3
642	8/3/98	F	7:33	DN	3	7:40	7:40	15	7	3
643	8/3/98	F	7:33	DN	3	7:40	7:40	15	7	3
644	8/3/98	M	7:33	DN	3	7:40	7:40	15	7	3
645	8/3/98	F	7:33	DN	3	7:40	7:40	15	7	3
646	8/3/98	F	8:01	DN	3	8:11	8:10	15	10	3
647	8/3/98	M	8:01	DN	3	8:11	8:10	15	10	3
648	8/3/98	F	8:01	DN	3	8:11	8:10	15	10	3
649	8/3/98	M	8:01	R	3	8:11	8:10	15	10	3
650	8/3/98	M	8:01	DN	3	8:11	8:10	15	10	3
651	8/3/98	M	8:26	DN	3	8:43	8:40	15	17	3
652	8/3/98	F	8:27	DN	3	8:43	8:40	15	16	3
653	8/3/98	F	8:27	DN	3	8:43	8:40	15	16	3
654	8/3/98	F	8:27	DN	3	8:43	8:40	15	16	3
655	8/3/98	M	8:27	DN	3	8:43	8:40	15	16	3
656	8/3/98	F	9:03	DN	3	9:17	9:10	15	14	3
657	8/3/98	M	9:03	DN	3	9:17	9:10	15	14	3
658	8/3/98	F	9:03	DN	3	9:17	9:10	15	14	3
659	8/3/98	F	9:57	DN	3	10:10	10:10	15	13	3
660	8/3/98	F	9:57	DN	3	10:10	10:10	15	13	3
661	8/3/98	M	10:37	DN	3	10:40	10:40	15	3	3
662	8/3/98	F	10:37	DN	3	10:40	10:40	15	3	3
663	8/3/98	F	10:39	DN	3	10:40	10:40	15	1	3
664	8/13/98	M	8:24	DN	3	8:25	8:25	15	1	3
665	8/13/98	F	8:33	DN	3	8:41	8:40	15	8	3
666	8/13/98	M	8:34	DN	3	8:41	8:40	15	7	3
667	8/13/98	F	8:39	DN	3	8:41	8:40	15	2	3
668	8/13/98	M	9:06	DN	3	9:14	9:10	15	8	3
669	8/13/98	F	9:34	DN	3	9:41	9:40	15	7	3
670	8/13/98	M	9:34	DN	3	9:41	9:40	15	7	3
671	8/13/98	F	9:35	DN	3	9:41	9:40	15	6	3
672	9/3/98	M	14:34	DN	3	14:38	14:40	15	4	3

Transfer Passengers Waiting Time Data (cont.)

O.N.	DATE	SEX	RAT	ADW	BLN	BDT	SDT	BLH	WAIT	LOC
673	9/3/98	F	14:34	DN	3	14:38	14:40	15	4	3
674	9/3/98	M	14:58	DN	3	15:00	14:55	15	2	3
675	9/3/98	F	15:14	DN	3	15:21	15:10	15	7	3
676	9/3/98	M	15:14	DN	3	15:21	15:10	15	7	3
677	9/3/98	F	15:14	DN	3	15:21	15:10	15	7	3
678	9/3/98	F	15:14	DN	3	15:21	15:10	15	7	3
679	9/3/98	M	15:14	DN	3	15:21	15:10	15	7	3
680	9/14/98	M	8:07	DN	3	8:20	8:10	15	13	3
681	9/14/98	M	8:33	S	3	8:52	8:40	15	19	3
682	9/14/98	F	9:03	DN	3	9:04	8:55	15	1	3
683	9/17/98	F	15:15	T	3	15:21	15:10	15	6	3
684	9/17/98	M	15:49	R	3	15:57	15:55	15	8	3
685	9/25/98	F	15:21	DN	3	15:29	15:25	15	8	3
686	9/25/98	M	15:57	DN	3	16:02	15:55	15	5	3
687	9/25/98	M	15:57	DN	3	16:02	15:55	15	5	3
688	9/25/98	M	15:57	DN	3	16:02	15:55	15	5	3
689	10/9/98	M	15:00	DN	3	15:02	14:55	15	2	3
690	10/9/98	M	15:00	DN	3	15:02	14:55	15	2	3
691	10/9/98	M	15:17	DN	3	15:22	15:10	15	5	3
692	10/9/98	M	16:10	DN	3	16:10	16:10	15	0	3
693	10/9/98	F	16:10	DN	3	16:10	16:10	15	0	3
694	10/9/98	M	16:34	DN	3	16:43	16:40	15	9	3
695	10/9/98	M	16:34	DN	3	16:43	16:40	15	9	3
696	10/9/98	M	16:40	DN	3	16:43	16:40	15	3	3
697	10/9/98	M	16:40	DN	3	16:43	16:40	15	3	3
698	10/9/98	F	16:40	DN	3	16:43	16:40	15	3	3
699	10/15/98	F	14:20	DN	3	14:37	14:40	15	17	3
700	10/15/98	M	15:23	DN	3	15:25	15:25	15	2	3
701	10/15/98	F	15:24	DN	3	15:25	15:25	15	1	3
702	8/3/98	M	9:34	DN	5	9:42	8:08	20	8	3
703	8/3/98	M	9:55	DN	5	10:13	10:12	31	18	3
704	8/3/98	M	10:00	DN	5	10:13	10:12	31	13	3
705	8/3/98	M	10:00	DN	5	10:13	10:12	31	13	3
706	8/3/98	F	10:00	DN	5	10:13	10:12	31	13	3
707	8/3/98	M	10:00	DN	5	10:13	10:12	31	13	3
708	8/3/98	M	10:39	DN	5	10:46	10:43	31	7	3
709	8/3/98	M	10:39	DN	5	10:46	10:43	31	7	3
710	8/3/98	M	10:39	DN	5	10:46	10:43	31	7	3
711	8/13/98	F	8:03	DN	5	8:12	8:08	20	9	3
712	8/13/98	F	8:03	DN	5	8:12	8:08	20	9	3
713	8/13/98	F	8:03	DN	5	8:12	8:08	20	9	3
714	8/13/98	F	8:33	DN	5	8:39	8:39	31	6	3

Transfer Passengers Waiting Time Data (cont.)

O.N.	DATE	SEX	RAT	ADW	BLN	BDT	SDT	BLH	WAIT	LOC
715	8/13/98	M	9:02	DN	5	9:09	8:08	20	7	3
716	8/13/98	F	10:34	DN	5	10:46	10:43	31	12	3
717	9/3/98	F	14:40	DN	5	14:44	14:20	31	4	3
718	9/3/98	M	14:40	DN	5	14:44	14:20	31	4	3
719	9/3/98	F	15:29	DN	5	15:32	15:19	28	3	3
720	9/3/98	M	15:44	DN	5	15:51	15:50	13	7	3
721	9/17/98	F	15:20	DN	5	15:21	15:19	28	1	3
722	9/17/98	M	15:20	DN	5	15:21	15:19	28	1	3
723	9/17/98	M	15:20	DN	5	15:21	15:19	28	1	3
724	9/25/98	F	15:15	DN	5	15:27	15:19	28	12	3
725	9/25/98	F	15:15	DN	5	15:27	15:19	28	12	3
726	9/25/98	F	16:13	T	5	16:16	16:07	17	3	3
727	9/25/98	M	16:13	T	5	16:16	16:07	17	3	3
728	10/9/98	M	15:17	DN	5	15:20	15:19	28	3	3
729	10/9/98	F	15:17	DN	5	15:20	15:19	28	3	3
730	10/9/98	F	16:10	DN	5	16:10	16:07	17	0	3
731	10/9/98	F	16:34		5	16:51	16:55	31	17	3
732	10/15/98	M	14:40	DN	5	14:52	14:51	31	12	3
733	7/29/98	M	8:31	DN	8	8:31	8:31	16	0	3
734	7/29/98	F	8:31	DN	8	8:31	8:31	16	0	3
735	7/29/98	F	8:35	DN	8	8:47	8:47	16	12	3
736	7/29/98	M	8:44	DN	8	8:47	8:47	16	3	3
737	7/29/98	M	8:48	DN	8	9:04	9:03	16	16	3
738	7/29/98	M	8:55	DN	8	9:04	9:03	16	9	3
739	7/29/98	F	9:07	DN	8	9:21	9:19	16	14	3
740	7/31/98	F	9:18	DN	8	9:20	9:19	16	2	3
741	8/3/98	F	7:33	DN	8	7:46	7:43	16	13	3
742	8/3/98	M	7:33	DN	8	7:46	7:43	16	13	3
743	8/3/98	M	8:18	DN	8	8:32	8:31	16	14	3
744	8/3/98	M	8:23	DN	8	8:32	8:31	16	9	3
745	8/3/98	F	8:30	DN	8	8:32	8:31	16	2	3
746	8/3/98	M	8:58	DN	8	9:05	9:03	16	7	3
747	8/3/98	F	9:03	DN	8	9:05	9:03	16	2	3
748	8/3/98	M	9:03	DN	8	9:05	9:03	16	2	3
749	8/3/98	F	10:50	DN	8	10:52	10:51	20	2	3
750	8/3/98	F	10:50	DN	8	10:52	10:51	20	2	3
751	8/3/98	M	10:50	DN	8	10:52	10:51	20	2	3
752	8/13/98	M	8:05	DN	8	8:17	8:15	16	12	3
753	8/13/98	M	8:14	DN	8	8:17	8:15	16	3	3
754	8/13/98	M	10:03	DN	8	10:12	10:11	20	9	3
755	9/3/98	M	14:40	T	8	14:45	14:23	17	5	3
756	9/3/98	F	14:40	T	8	14:45	14:23	17	5	3

Transfer Passengers Waiting Time Data (cont.)

O.N.	DATE	SEX	RAT	ADW	BLN	BDT	SDT	BLH	WAIT	LOC
757	9/3/98	F	15:14	DN	8	15:19	15:07	17	5	3
758	9/3/98	M	15:41	DN	8	15:45	15:24	17	4	3
759	9/14/98	M	8:51	S	8	9:12	9:03	16	21	3
760	9/14/98	F	9:04	DN	8	9:12	9:03	16	8	3
761	9/17/98	M	15:15	T	8	15:21	15:07	17	6	3
762	9/17/98	M	15:15	T	8	15:21	15:07	17	6	3
763	9/17/98	F	15:15	T	8	15:21	15:07	17	6	3
764	9/17/98	M	15:15	T	8	15:21	15:07	17	6	3
765	9/17/98	M	15:15	T	8	15:21	15:07	17	6	3
766	9/17/98	M	15:25	DN	8	15:49	15:48	24	24	3
767	9/17/98	F	15:25	DN	8	15:49	15:48	24	24	3
768	9/17/98	M	15:25	DN	8	15:49	15:48	24	24	3
769	9/25/98	M	15:28	T	8	15:43	15:24	17	15	3
770	9/25/98	F	15:34	DN	8	15:43	15:24	17	9	3
771	9/25/98	M	15:34	DN	8	15:43	15:24	17	9	3
772	9/25/98	F	15:57	DN	8	16:06	16:05	17	9	3
773	9/25/98	M	16:16	DN	8	16:20	16:05	17	4	3
774	9/25/98	M	16:16	DN	8	16:20	16:05	17	4	3
775	9/25/98	M	16:29	DN	8	16:33	16:22	17	4	3
776	9/25/98	M	16:29	DN	8	16:33	16:22	17	4	3
777	9/25/98	M	16:29	DN	8	16:33	16:22	17	4	3
778	9/25/98	F	16:54	T	8	17:09	16:56	17	15	3
779	9/25/98	M	16:54	T	8	17:09	16:56	17	15	3
780	9/25/98	F	16:58	T	8	17:09	16:56	17	11	3
781	9/25/98	M	16:58	T	8	17:09	16:56	17	11	3
782	10/9/98	M	15:17	DN	8	15:19	15:07	17	2	3
783	10/9/98	F	15:17	DN	8	15:19	15:07	17	2	3
784	10/9/98	F	16:10	DN	8	16:10	16:05	17	0	3
785	10/15/98	F	14:36	S	8	14:52	14:50	17	16	3
786	10/15/98	M	14:40	DN	8	14:52	14:50	17	12	3
787	10/15/98	F	14:40	DN	8	14:52	14:50	17	12	3
788	10/15/98	M	15:05	DN	8	15:09	15:07	17	4	3
789	10/15/98	M	15:24	DN	8	15:25	15:24	17	1	3
790	10/15/98	M	15:24	DN	8	15:25	15:24	17	1	3
791	10/15/98	M	15:24	S	8	15:57	15:48	24	33	3
792	7/29/98	M	8:44	DN	19	8:52	8:53	34	8	3
793	7/29/98	F	8:44	DN	19	8:52	8:53	34	8	3
794	7/29/98	M	8:44	DN	19	8:52	8:53	34	8	3
795	7/29/98	M	8:44	DN	19	8:52	8:53	34	8	3
796	7/29/98	F	9:15	DN	19	9:30	9:27	34	15	3
797	7/29/98	F	9:15	DN	19	9:30	9:27	34	15	3
798	7/29/98	F	10:18	DN	19	10:29	10:07	40	11	3

Transfer Passengers Waiting Time Data (cont.)

O.N.	DATE	SEX	RAT	ADW	BLN	BDT	SDT	BLH	WAIT	LOC
799	7/29/98	F	10:20	DN	19	10:49	10:47	40	29	3
800	8/3/98	F	7:23	DN	19	7:25	7:23	28	2	3
801	8/3/98	F	7:33	DN	19	7:52	7:51	28	19	3
802	8/3/98	F	7:33	DN	19	7:52	7:51	28	19	3
803	8/3/98	F	7:47	S	19	7:52	7:51	28	5	3
804	8/3/98	F	8:26	DN	19	8:53	8:53	34	27	3
805	8/3/98	F	8:37	DN	19	8:53	8:53	34	16	3
806	8/3/98	M	9:29	DN	19	10:07	10:07	40	38	3
807	8/3/98	M	9:41	DN	19	10:07	10:07	40	26	3
808	8/3/98	F	9:44	DN	19	10:07	10:07	40	23	3
809	8/3/98	F	9:44	DN	19	10:07	10:07	40	23	3
810	8/3/98	F	9:44	DN	19	10:07	10:07	40	23	3
811	8/3/98	M	9:57	DN	19	10:07	10:07	40	10	3
812	8/13/98	M	8:05	T	19	8:23	8:19	28	18	3
813	8/13/98	F	8:05	T	19	8:23	8:19	28	18	3
814	8/13/98	F	9:47	T	19	10:06	10:07	40	19	3
815	8/13/98	F	9:47	T	19	10:06	10:07	40	19	3
816	8/13/98	F	9:47	T	19	10:06	10:07	40	19	3
817	9/14/98	F	7:58	DN	19	8:15	8:19	28	17	3
818	9/14/98	M	8:25	T	19	8:47	8:19	28	22	3
819	9/14/98	F	8:25	T	19	8:47	8:19	28	22	3
820	9/14/98	F	8:39	DN	19	8:47	8:19	28	8	3
821	9/17/98	M	14:23	DN	19	14:39	14:47	40	16	3
822	10/9/98	F	16:36	DN	19	16:43	16:21	30	7	3
823	10/9/98	F	16:36	DN	19	16:43	16:21	30	7	3
824	10/9/98	M	16:36	DN	19	16:43	16:21	30	7	3
825	10/9/98	M	16:37	DN	19	16:43	16:21	30	6	3
826	10/15/98	M	14:59	DN	19	15:20	15:21	34	21	3
827	10/15/98	F	15:19	DN	19	15:20	15:21	34	1	3
828	10/15/98	M	15:38	DN	19	15:52	15:51	30	14	3
829	10/15/98	F	15:38	DN	19	15:52	15:51	30	14	3
830	7/31/98	M	7:35	DN	25	7:41	7:40	30	6	3
831	8/3/98	M	8:17	S	25	8:42	8:40	30	25	3
832	8/3/98	F	8:33	DN	25	8:42	8:40	30	9	3
833	8/3/98	M	8:33	DN	25	8:42	8:40	30	9	3
834	8/3/98	M	10:36	DN	25	10:41	10:40	30	5	3
835	8/13/98	F	8:15	DN	25	8:41	8:40	30	26	3
836	8/13/98	M	8:39	DN	25	8:41	8:40	30	2	3
837	8/13/98	F	8:39	DN	25	8:41	8:40	30	2	3
838	8/13/98	F	9:30	DN	25	9:40	9:40	30	10	3
839	8/13/98	F	10:34	DN	25	10:44	10:40	30	10	3
840	9/3/98	M	14:58	DN	25	15:06	15:10	30	8	3

Transfer Passengers Waiting Time Data (cont.)

O.N.	DATE	SEX	RAT	ADW	BLN	BDT	SDT	BLH	WAIT	LOC
841	9/3/98	M	15:01	DN	25	15:06	15:10	30	5	3
842	9/3/98	M	15:19	S	25	15:36	15:35	15	17	3
843	9/14/98	F	8:39	DN	25	9:04	8:40	30	25	3
844	9/17/98	M	14:30	DN	25	14:34	14:40	30	4	3
845	9/17/98	F	14:49	T	25	15:05	15:10	30	16	3
846	9/17/98	M	15:13	S	25	15:20	15:10	30	7	3
847	9/25/98	M	15:57	DN	25	16:02	16:00	15	5	3
848	9/25/98	F	16:20	DN	25	16:37	16:39	33	17	3
849	9/25/98	F	16:29	DN	25	16:37	16:39	33	8	3
850	9/25/98	F	16:54	DN	25	17:05	17:10	30	11	3
851	9/25/98	M	16:54	DN	25	17:05	17:10	30	11	3
852	10/9/98	F	14:49	DN	25	15:06	15:10	30	17	3
853	10/9/98	M	16:36	DN	25	16:38	16:39	33	2	3
854	10/9/98	F	16:36	DN	25	16:38	16:39	33	2	3
855	10/15/98	F	14:40	DN	25	14:40	14:40	30	0	3
856	10/15/98	M	14:40	DN	25	14:40	14:40	30	0	3
857	7/29/98	M	8:23	DN	39	8:34	8:21	33	11	3
858	8/3/98	F	10:48	DN	39	10:53	10:43	40	5	3
859	9/14/98	M	8:11	DN	39	8:55	8:54	33	44	3
860	9/25/98	M	15:28	DN	39	15:33	15:33	33	5	3
861	10/9/98	M	16:36	DN	39	16:43	16:39	33	7	3
862	10/9/98	F	16:37	DN	39	16:43	16:39	33	6	3
863	10/9/98	F	16:37	DN	39	16:43	16:39	33	6	3
864	10/15/98	F	14:13	DN	39	14:39	14:31	30	26	3
865	10/15/98	F	14:27	DN	39	14:39	14:31	30	12	3
866	10/15/98	M	15:24	DN	39	15:45	15:33	33	21	3
867	9/3/98	M	15:19	S	44	15:26	15:06	34	7	3
868	9/14/98	M	7:58	DN	44	8:07	8:09	25	9	3
869	9/17/98	M	14:49	T	44	15:09	15:06	34	20	3
870	9/17/98	F	15:01	DN	44	15:09	15:06	34	8	3
871	9/17/98	F	15:49	DN	44	15:59	15:38	32	10	3
872	9/25/98	F	15:18	DN	44	15:25	15:06	34	7	3
873	9/25/98	F	15:42	T	44	15:57	15:38	32	15	3
874	10/15/98	F	15:24	DN	44	15:40	15:38	32	16	3
875	10/15/98	M	15:34	DN	44	15:40	15:38	32	6	3
876	7/17/98	F	16:00	DN	8	16:11	16:06	12	11	4
877	7/17/98	M	16:01	DN	8	16:11	16:06	12	10	4
878	7/17/98	M	16:01	DN	8	16:11	16:06	12	10	4
879	7/17/98	M	16:09	DN	8	16:11	16:06	12	2	4
880	7/17/98	F	16:10	DN	8	16:11	16:06	12	1	4
881	7/17/98	M	16:10	DN	8	16:11	16:06	12	1	4
882	7/17/98	M	16:27	DN	8	16:44	16:43	17	17	4

Transfer Passengers Waiting Time Data (cont.)

O.N.	DATE	SEX	RAT	ADW	BLN	BDT	SDT	BLH	WAIT	LOC
883	7/17/98	F	16:27	DN	8	16:44	16:43	17	17	4
884	7/17/98	F	16:27	DN	8	16:44	16:43	17	17	4
885	7/17/98	F	16:42	DN	8	16:44	16:43	17	2	4
886	7/17/98	M	16:42	DN	8	16:44	16:43	17	2	4
887	7/17/98	M	16:42	DN	8	16:44	16:43	17	2	4
888	10/29/98	F	14:23	DN	8	14:26	14:26	17	3	4
889	10/29/98	M	14:23	DN	8	14:26	14:26	17	3	4
890	10/29/98	F	14:23	DN	8	14:26	14:26	17	3	4
891	10/29/98	M	14:23	DN	8	14:26	14:26	17	3	4
892	10/29/98	M	14:43	DN	8	14:57	14:54	11	14	4
893	10/29/98	M	14:43	DN	8	14:57	14:54	11	14	4
894	10/29/98	M	15:02	DN	8	15:11	15:11	17	9	4
895	10/29/98	M	15:23	DN	8	15:28	15:28	17	5	4
896	10/29/98	M	15:23	T	8	15:28	15:28	17	5	4
897	10/29/98	M	15:23	T	8	15:28	15:28	17	5	4
898	11/19/98	M	15:22	DN	8	15:32	15:28	17	10	4
899	11/19/98	M	15:22	DN	8	15:32	15:28	17	10	4
900	11/19/98	M	15:25	DN	8	15:32	15:28	17	7	4
901	11/19/98	M	15:26	DN	8	15:32	15:28	17	6	4
902	12/4/98	F	14:56		8	15:01	14:54	11	5	4
903	12/4/98	F	14:56		8	15:01	14:54	11	5	4
904	12/4/98	F	15:09	DN	8	15:11	15:11	17	2	4
905	12/4/98	M	15:26		8	15:40	15:28	17	14	4
906	12/4/98	M	15:26		8	15:40	15:28	17	14	4
907	12/4/98	F	15:26		8	15:40	15:28	17	14	4
908	12/4/98	F	15:57		8	16:13	16:06	12	16	4
909	12/4/98	F	15:57		8	16:13	16:06	12	16	4
910	12/4/98	F	15:57		8	16:13	16:06	12	16	4
911	12/4/98	F	16:11	DN	8	16:13	16:06	12	2	4
912	12/16/98	F	14:43	DN	8	14:54	14:54	11	11	4
913	12/16/98	F	14:52	T	8	15:12	15:11	17	20	4
914	12/16/98	F	14:52	T	8	15:12	15:11	17	20	4
915	12/16/98	M	15:30	DN	8	15:32	15:28	17	2	4
916	7/17/98	F	14:10	DN	15	14:14	14:11	26	4	4
917	7/17/98	F	14:10	DN	15	14:14	14:11	26	4	4
918	7/17/98	F	14:10	DN	15	14:14	14:11	26	4	4
919	7/17/98	F	14:10	DN	15	14:14	14:11	26	4	4
920	7/17/98	M	14:10	DN	15	14:14	14:11	26	4	4
921	7/17/98	M	14:10	DN	15	14:14	14:11	26	4	4
922	7/17/98	M	14:10	DN	15	14:14	14:11	26	4	4
923	7/17/98	M	14:10	DN	15	14:14	14:11	26	4	4
924	7/17/98	M	14:10	DN	15	14:14	14:11	26	4	4

Transfer Passengers Waiting Time Data (cont.)

O.N.	DATE	SEX	RAT	ADW	BLN	BDT	SDT	BLH	WAIT	LOC
925	7/17/98	F	14:10	DN	15	14:14	14:11	26	4	4
926	7/17/98	M	14:23		15	14:40	14:37	26	17	4
927	7/17/98	M	14:28		15	14:40	14:37	26	12	4
928	7/17/98	M	14:58		15	15:09	15:03	26	11	4
929	7/17/98	F	14:58		15	15:09	15:03	26	11	4
930	7/17/98	M	14:58		15	15:09	15:03	26	11	4
931	7/17/98	F	15:02		15	15:09	15:03	26	7	4
932	7/17/98	F	15:02		15	15:09	15:03	26	7	4
933	7/17/98	M	15:20		15	15:30	15:29	26	10	4
934	7/17/98	F	16:00	DN	15	16:21	16:21	26	21	4
935	7/17/98	M	16:32	DN	15	16:52	16:50	29	20	4
936	7/17/98	M	16:32	DN	15	16:52	16:50	29	20	4
937	7/17/98	F	16:32	DN	15	16:52	16:50	29	20	4
938	10/29/98	F	14:32	DN	15	14:37	14:37	26	5	4
939	10/29/98	F	14:32	DN	15	14:37	14:37	26	5	4
940	10/29/98	F	14:32	DN	15	14:37	14:37	26	5	4
941	10/29/98	F	14:32	DN	15	14:37	14:37	26	5	4
942	10/29/98	F	14:32	DN	15	14:37	14:37	26	5	4
943	10/29/98	M	14:54	DN	15	15:02	15:03	26	8	4
944	10/29/98	M	14:54	DN	15	15:02	15:03	26	8	4
945	10/29/98	M	15:39	DN	15	15:58	15:55	26	19	4
946	10/29/98	F	15:39	DN	15	15:58	15:55	26	19	4
947	11/19/98	F	16:13	DN	15	16:20	16:21	26	7	4
948	11/19/98	F	16:19	DN	15	16:20	16:21	26	1	4
949	11/19/98	F	16:19	DN	15	16:20	16:21	26	1	4
950	11/19/98	M	16:19	DN	15	16:20	16:21	26	1	4
951	12/4/98	F	15:09	DN	15	15:29	15:29	26	20	4
952	12/4/98	M	15:41	DN	15	15:57	15:55	26	16	4
953	12/4/98	M	15:42	DN	15	15:57	15:55	26	15	4
954	12/4/98	M	16:15		15	16:21	16:21	26	6	4
955	12/4/98	M	16:15		15	16:21	16:21	26	6	4
956	12/16/98	M	14:31	DN	15	14:38	14:37	26	7	4
957	12/16/98	M	14:31	DN	15	14:38	14:37	26	7	4
958	12/16/98	F	14:31	DN	15	14:38	14:37	26	7	4
959	12/16/98	F	15:21	DN	15	15:29	15:29	26	8	4
960	12/16/98	F	15:21	DN	15	15:29	15:29	26	8	4
961	12/16/98	M	15:23	DN	15	15:29	15:29	26	6	4
962	12/16/98	M	15:23	DN	15	15:29	15:29	26	6	4
963	12/16/98	F	15:23	DN	15	15:29	15:29	26	6	4
964	12/16/98	F	16:12		15	16:22	16:21	26	10	4
965	12/16/98	F	16:12		15	16:22	16:21	26	10	4
966	12/16/98	F	16:12		15	16:22	16:21	26	10	4



Transfer Passengers Waiting Time Data (cont.)

O.N.	DATE	SEX	RAT	ADW	BLN	BDT	SDT	BLH	WAIT	LOC
967	12/16/98	M	16:12		15	16:22	16:21	26	10	4
968	12/16/98	F	16:12		15	16:22	16:21	26	10	4
969	12/16/98	M	16:12		15	16:22	16:21	26	10	4
970	7/17/98	M	16:59	DN	32	17:00	16:58	44	1	4
971	7/17/98	M	16:59	DN	32	17:00	16:58	44	1	4
972	10/29/98	F	14:15	DN	32	14:46	14:41	45	31	4
973	10/29/98	M	14:15	DN	32	14:46	14:41	45	31	4
974	12/4/98	F	16:15		32	16:20	16:14	45	5	4
975	12/4/98	F	16:15		32	16:20	16:14	45	5	4
976	7/17/98	M	13:58	DN	39	13:59	13:55	40	1	4
977	10/29/98	M	14:12	DN	39	14:41	14:35	40	29	4
978	10/29/98	M	14:19	DN	39	14:41	14:35	40	22	4
979	12/4/98	F	15:05	DN	39	15:13	15:05	30	8	4
980	12/16/98	M	16:07	DN	39	16:19	16:11	33	12	4
981	7/17/98	M	14:22		120	14:40	14:35	40	18	4
982	7/17/98	F	16:07	DN	120	16:07	16:05	35	0	4
983	7/17/98	F	16:07	DN	120	16:07	16:05	35	0	4
984	7/17/98	F	16:46	DN	120	16:48	16:45	40	2	4
985	7/17/98	F	16:46	DN	120	16:48	16:45	40	2	4
986	7/17/98	F	16:46	DN	120	16:48	16:45	40	2	4
987	11/19/98	F	15:56	DN	120	16:05	16:05	35	9	4
988	11/19/98	F	15:56	DN	120	16:05	16:05	35	9	4
989	11/19/98	F	15:56	DN	120	16:05	16:05	35	9	4
990	11/19/98	M	15:56	DN	120	16:05	16:05	35	9	4
991	12/4/98	F	15:42		120	16:05	16:05	35	23	4
992	12/16/98	M	15:08		120	15:30	15:30	55	22	4
993	12/16/98	F	15:08		120	15:30	15:30	55	22	4
994	12/16/98	F	15:25	DN	120	15:30	15:30	55	5	4
995	12/16/98	F	15:25	DN	120	15:30	15:30	55	5	4
996	12/16/98	M	15:40	T	120	16:05	16:05	35	25	4
997	12/16/98	F	15:40	T	120	16:05	16:05	35	25	4
998	12/16/98	F	15:40	T	120	16:05	16:05	35	25	4
999	12/16/98	F	15:40	T	120	16:05	16:05	35	25	4
1000	7/17/98	M	14:05	DN	7N	14:05	14:05	15	0	4
1001	7/17/98	M	16:28	DN	7N	16:36	16:35	15	8	4
1002	7/17/98	M	16:59	DN	7N	17:05	17:04	15	6	4
1003	7/17/98	F	16:59	DN	7N	17:05	17:04	15	6	4
1004	10/29/98	M	14:19	DN	7N	14:24	14:20	15	5	4
1005	10/29/98	F	14:19	DN	7N	14:24	14:20	15	5	4
1006	10/29/98	M	15:02	DN	7N	15:03	15:03	15	1	4
1007	10/29/98	F	15:23	T	7N	15:39	15:33	15	16	4
1008	10/29/98	F	15:23	T	7N	15:39	15:33	15	16	4

Transfer Passengers Waiting Time Data (cont.)

O.N.	DATE	SEX	RAT	ADW	BLN	BDT	SDT	BLH	WAIT	LOC
1009	10/29/98	M	15:39	DN	7N	15:39	15:33	15	0	4
1010	10/29/98	M	15:39	DN	7N	15:39	15:33	15	0	4
1011	10/29/98	M	15:39	DN	7N	15:39	15:33	15	0	4
1012	10/29/98	M	15:39	DN	7N	15:39	15:33	15	0	4
1013	10/29/98	M	15:39	DN	7N	15:39	15:33	15	0	4
1014	11/19/98	M	16:04	T	7N	16:20	16:20	15	16	4
1015	11/19/98	M	16:04	T	7N	16:20	16:20	15	16	4
1016	11/19/98	M	16:04	T	7N	16:20	16:20	15	16	4
1017	11/19/98	M	16:04	T	7N	16:20	16:20	15	16	4
1018	11/19/98	M	16:04	T	7N	16:20	16:20	15	16	4
1019	11/19/98	M	16:04	T	7N	16:20	16:20	15	16	4
1020	11/19/98	F	16:04	T	7N	16:20	16:20	15	16	4
1021	11/19/98	F	16:04	T	7N	16:20	16:20	15	16	4
1022	11/19/98	F	16:04	T	7N	16:20	16:20	15	16	4
1023	11/19/98	F	16:04	T	7N	16:20	16:20	15	16	4
1024	11/19/98	F	16:04	T	7N	16:20	16:20	15	16	4
1025	11/19/98	F	16:04	T	7N	16:20	16:20	15	16	4
1026	11/19/98	F	16:04	T	7N	16:20	16:20	15	16	4
1027	11/19/98	F	16:26	DN	7N	16:36	16:35	15	10	4
1028	11/19/98	M	16:26	DN	7N	16:36	16:35	15	10	4
1029	12/4/98	M	15:04	DN	7N	15:06	15:03	15	2	4
1030	12/4/98	M	15:42		7N	16:01	15:50	17	19	4
1031	12/4/98	F	15:42		7N	16:01	15:50	17	19	4
1032	12/4/98	F	15:42		7N	16:01	15:50	17	19	4
1033	12/4/98	M	15:57		7N	16:01	15:50	17	4	4
1034	12/4/98	M	15:57		7N	16:01	15:50	17	4	4
1035	12/4/98	M	15:57		7N	16:01	15:50	17	4	4
1036	12/4/98	F	15:58		7N	16:01	15:50	17	3	4
1037	12/4/98	F	15:58		7N	16:01	15:50	17	3	4
1038	12/4/98	F	15:58		7N	16:01	15:50	17	3	4
1039	12/4/98	M	15:58		7N	16:01	15:50	17	3	4
1040	12/4/98	M	15:58		7N	16:01	15:50	17	3	4
1041	12/4/98	M	16:25		7N	16:40	16:35	15	15	4
1042	12/4/98	F	16:33		7N	16:40	16:35	15	7	4
1043	12/4/98	F	16:33		7N	16:40	16:35	15	7	4
1044	12/4/98	F	16:33		7N	16:40	16:35	15	7	4
1045	12/4/98	M	16:34		7N	16:40	16:35	15	6	4
1046	12/4/98	M	16:34		7N	16:40	16:35	15	6	4
1047	12/16/98	M	15:21	DN	7N	15:23	15:23	15	2	4
1048	12/16/98	M	15:40	T	7N	15:54	15:50	17	14	4
1049	12/16/98	M	15:40	T	7N	15:54	15:50	17	14	4
1050	12/16/98	M	15:40	T	7N	15:54	15:50	17	14	4

## Transfer Passengers Waiting Time Data (cont.)

O.N.	DATE	SEX	RAT	ADW	BLN	BDT	SDT	BLH	WAIT	LOC
1051	12/16/98	M	15:40	T	7N	15:54	15:50	17	14	4
1052	12/16/98	M	15:40	T	7N	15:54	15:50	17	14	4
1053	12/16/98	F	15:40	T	7N	15:54	15:50	17	14	4
1054	12/16/98	F	15:40	T	7N	15:54	15:50	17	14	4
1055	12/16/98	F	15:40	T	7N	15:54	15:50	17	14	4
1056	12/16/98	F	15:40	T	7N	15:54	15:50	17	14	4
1057	12/16/98	M	16:07	DN	7N	16:22	16:20	15	15	4
1058	12/16/98	M	16:07	DN	7N	16:22	16:20	15	15	4
1059	12/16/98	M	16:07	DN	7N	16:22	16:20	15	15	4
1060	12/16/98	M	16:07	DN	7N	16:22	16:20	15	15	4
1061	7/17/98	M	13:51	DN	7S	13:56	13:55	15	5	4
1062	7/17/98	M	14:50		7S	14:53	14:40	15	3	4
1063	7/17/98	M	15:37		7S	15:40	15:40	15	3	4
1064	7/17/98	M	15:37		7S	15:40	15:40	15	3	4
1065	7/17/98	M	16:28	DN	7S	16:31	16:25	15	3	4
1066	7/17/98	F	16:29	DN	7S	16:31	16:25	15	2	4
1067	7/17/98	F	16:29	DN	7S	16:31	16:25	15	2	4
1068	10/29/98	F	14:19	DN	7S	14:30	14:25	15	11	4
1069	10/29/98	M	14:43	DN	7S	14:55	14:55	15	12	4
1070	10/29/98	M	14:54	DN	7S	14:55	14:55	15	1	4
1071	10/29/98	F	15:39	DN	7S	15:56	15:55	15	17	4
1072	10/29/98	F	15:39	DN	7S	15:56	15:55	15	17	4
1073	10/29/98	F	15:39	DN	7S	15:56	15:55	15	17	4
1074	11/19/98	F	15:25	DN	7S	15:27	15:25	15	2	4
1075	11/19/98	M	15:26	DN	7S	15:27	15:25	15	1	4
1076	12/4/98	M	14:41	DN	7S	14:41	14:40	15	0	4
1077	12/4/98	F	14:55	DN	7S	14:57	14:55	15	2	4
1078	12/4/98	M	15:04	DN	7S	15:11	15:09	15	7	4
1079	12/4/98	M	15:29		7S	15:46	15:40	15	17	4
1080	12/4/98	M	15:41	DN	7S	15:57	15:55	15	16	4
1081	12/4/98	F	15:42		7S	15:57	15:55	15	15	4
1082	12/4/98	F	16:05		7S	16:12	16:10	15	7	4
1083	12/4/98	M	16:05		7S	16:12	16:10	15	7	4
1084	12/4/98	M	16:05		7S	16:12	16:10	15	7	4
1085	12/4/98	M	16:11		7S	16:12	16:10	15	1	4
1086	12/4/98	M	16:11		7S	16:12	16:10	15	1	4
1087	12/4/98	M	16:11		7S	16:12	16:10	15	1	4
1088	12/4/98	M	16:15		7S	16:28	16:25	15	13	4
1089	12/4/98	M	16:33		7S	16:44	16:40	15	11	4
1090	12/4/98	F	16:33		7S	16:44	16:40	15	11	4
1091	12/4/98	F	16:34		7S	16:44	16:40	15	10	4
1092	12/4/98	M	16:34		7S	16:44	16:40	15	10	4

Transfer Passengers Waiting Time Data (cont.)

O.N.	DATE	SEX	RAT	ADW	BLN	BDT	SDT	BLH	WAIT	LOC
1093	12/16/98	M	14:50	DN	7S	14:56	14:55	15	6	4
1094	12/16/98	M	15:40	T	7S	15:42	15:40	15	2	4
1095	12/16/98	M	15:40	T	7S	15:42	15:40	15	2	4
1096	12/16/98	M	15:40	T	7S	15:42	15:40	15	2	4
1097	12/16/98	F	15:40	T	7S	15:42	15:40	15	2	4
1098	12/16/98	F	15:40	T	7S	15:42	15:40	15	2	4
1099	12/16/98	F	15:40	T	7S	15:42	15:40	15	2	4
1100	12/16/98	M	16:12	DN	7S	16:25	16:25	15	13	4
1101	10/30/98	M	8:42	DN	LXN	8:52	8:51	35	10	5
1102	10/30/98	F	7:20	DN	LXS	7:36	7:36	22	16	5
1103	10/30/98	F	7:20	DN	LXS	7:36	7:36	22	16	5
1104	10/30/98	F	7:46	DN	LXS	7:57	7:56	20	11	5
1105	10/30/98	F	8:03	DN	LXS	8:10	8:09	13	7	5
1106	10/30/98	M	8:09	DN	LXS	8:23	8:24	15	14	5
1107	10/30/98	F	8:42	DN	LXS	9:07	9:05	41	25	5

## REFERENCES

1. **Koppelman, Bhat and Kpmh.** "A Self-Instructive Manual on Discrete Choice Analysis", Draft Final Report, Prepared for U.S. Department of Transportation, 1999.
2. **Jones, Rebecca W. and Machemehl, Randy B.** "User-Based Location Criteria for Transit Terminal Frequency", Southwest Region University Transportation Center, 1994.
3. **Welding, P.I.** "The Instability of a Close-Interval Service", Operational Research Quarterly, 1957, Vol.8, No.3, 133-148.
4. **Holroyd, E.M., Scraggs, D. A.** "Journey Times by Car and Bus in Central London", Traffic Engineering and Control, 1964, Vol.6, No.3, 169-173
5. **Holroyd, E.M., Scraggs, D. A.** "Buses in Central London", Traffic Engineering and Control, 1966, Vol.8, No.3, 158-160.
6. **Goodwin P. B.** "Car and Bus Journeys to and from Central London in Peak Hours", Traffic Engineering and Control, 1969, Vol.11, No.8, pp. 376-378.
7. **Flaherty, C. A. and Mangan, D. O.** "Bus Passengers Waiting Times in Central Areas", Traffic Engineering and Control, 1970, Vol.11, No.9, pp. 419-421.
8. **Barnett, Arnold.** "On Controlling Randomness in Transit Operations", Transportation Science, 1974, Vol.8; No.2, pp,102-116.
9. **Newell, G. F.** "Control of Pairing of Vehicles on a Public Transportation Route, Two Vehicles, One Control Point", Transportation Science, 1974, Vol.8, No.3, pp. 248-264.
10. **Jolleffe, J. K. and Hutchinson, T. P.** "A Behavioural Explanation of the Association Between Bus and Passenger Arrivals at a Bus Stop", Transportation Science, 1975, Vol.9, No.4, pp,248-282.
11. **Koffman, David Crain & Associates, Menlo Park, California.** "A Simulation Study of Alternative Real-Time Bus Headway Control Strategies", Transportation Research Record, 1978, No.663, pp.41-46.
12. **Turnquist, Mark A.** Northwestern University. "A Model for Investigating the Effects of Service Frequency and Reliability on Bus Passenger Waiting Times", Transportation Research Record, 1978, No.663, pp.70-73.
13. **Turnquist, Mark A. and Steven W. Blume.** "Evaluating Potential Effectiveness of Headway Control Strategies for Transit Systems", Transportation Research Record, 1980, No.746, pp.25-29.
14. **Tsao, Shou-min and Paul Schonfeld.** "Optimization of Zonal Transit Service",

Journal of Transportation Engineering, Vol.109, No.2 Mar.1983, pp,257-272.

15. **Mark. D. Abkowitz and Israel Engelstein.** "Factors Affecting Running Time on Transit Routes", Transportation Research, 1983, Vol.17A, No.2, pp. 107-113.
16. **Abkowitz, Mark, Amir Eiger and Israel Engelstein.** "Optimal Control of Headway Variation on Transit Routes", 1986, Journal of Advanced Transportation, Vol.20, No.1, pp. 73-88.
17. **Abkowitz, Mark and John Tozzi.** "transit route characteristics and headway-based reliability control", transportation research record, 1986, no.1078, 11-16