

**Connections 2015:
Fairfax County
Comprehensive Transit Plan**

4. Ridership Data Collection

January 2015

Prepared for:

Fairfax County Department of Transportation

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4.1 Data Collection Process

On/off data, a count of boardings and alightings by stop, are the single most important type of information used in the restructuring of existing bus routes. Planners strive to maximize convenience for the greatest number of passengers and ensure that service cuts or realignments have negative impacts on the least number of passengers possible. The data allow planners to identify specific route segments that are heavily used or underused and to build the route structure to serve the demand most efficiently.

For the Comprehensive Transit Plan (CTP), the Fairfax County Department of Transportation (FCDOT) specified that on/off data be collected for all routes in the Fairfax Connector system, as well as all for most Metrobus lines operating in the County. While buses on all Metrobus lines in the County¹ are equipped with Automated Passenger Counters (APCs), Fairfax Connector vehicles are not so equipped². Therefore, it was possible to obtain on/off data from the Washington Metropolitan Area Transit Authority (WMATA) for all Metrobus lines in the County, but new manually collected ridechecks had to be conducted as part of the CTP project to obtain on/off counts for all Fairfax Connector routes.

4.1.1. Fairfax Connector Ridechecks

Ridechecks are a data collection activity wherein a person rides a bus for an entire trip and records the number of passengers boarding and alighting at each stop. FCDOT specified that each scheduled trip on each Fairfax Connector route be ridechecked once. That is, every trip on the weekday schedule would be counted once, every trip on the Saturday schedule would be counted once, and every trip on the Sunday schedule would be counted once. The result is a representation of ridership on one composite weekday, one composite Saturday and one composite Sunday, each representing one typical day of travel. Thus, while Metrobus APC data represent an average collected over several days, the Fairfax Connector ridecheck counts represent a single day of observations collected over several different days.

Manually counting riders on 5,477 trips on 84 Connector routes was a labor-intensive and time-consuming process. A staff of checkers hired, organized, trained, and supervised by WBA Research was employed to conduct the ridechecks. The same staff also distributed printed surveys on all Connector trips and on all trips on the Metrobus lines that operate within the County. However, in order to allow ridecheck staff and survey staff to focus on accurately completing their individual tasks, no staff member had to count passengers and distribute surveys simultaneously.

Given the size of the ridecheck and survey tasks, it was understood early on that these tasks would take many months to complete. Scheduling these tasks was complicated by the fact that major changes were planned in the bus network to coincide with the opening of Phase 1 of the Metrorail Silver Line and the opening date of the new line was uncertain. It did not make sense to conduct ridership counts and surveys on routes that would be changing in the near future, so it was decided to delay counts and surveys on routes that were either 1) changing when the Silver Line opened, or 2) would at least be expected to see changes in ridership patterns once the Silver Line opened.

¹ Except the TAGS line (S80, S91), which uses a fleet of specialized vehicles that do not have APCs.

² FCDOT has an ongoing program that will result in the installation of APCs on its buses by the end of 2015.

Connector routes were split into two groups. The routes unaffected by the Silver Line opening were scheduled to be checked and surveyed in the fall of 2013, while the remaining routes were put on hold until after the Silver Line opened (at that time the opening date was still undetermined). The data collection began in September 2013, but had to be suspended in due to the October 2013 government shutdown which resulted in less travel by the substantial number of government workers who use the Fairfax County bus network. Data collection resumed when the shutdown ended and stopped for the winter in mid-December, but as a result of the shutdown, a small number Connector ridechecks and surveys had to be delayed until the spring of 2014.

The Silver Line opened on July 26, 2014 and changes were implemented on many Fairfax Connector routes at that time. While it typically takes six months or more for ridership patterns to adjust to major changes, the need to complete the updated Transit Development Plan in 2015 resulted in a decision to begin conducting ridechecks and surveys on the affected routes in September of 2014. These ridechecks were completed by mid-December.

The Fairfax Connectors routes that were ridechecked during each phase of data collection are listed in Table 4.1. The staff of checkers rode each trip and used tablet computers to record boardings and alightings and the time of arrival at each stop. Prior to commencing the fieldwork, FCDOT had supplied stop lists and bus schedules to the consultant team so that the ridecheck assignments could be programmed into the tablets. WBA then went through an extensive process of assembling trips and portions of driver runs into workable ridechecker assignments. Foursquare and WBA trained dozens of checkers in how to use the program.

Table 4.1: Connector Routes Ride Checked

Fall 2013		Fall 2014	
101	621	401	599
109	622	402	605
151	623	422	721
152	630	423	724
159	631	424	734
161	632	432	924
162	640	461	926
171	641	462	927
231	642	463	928
232	644	466	929
301	650	493	937
305	651	494	950
306	652	495	951
310		505	952
321		507	980
322		551	981
333		552	983
334		553	985
335		554	RIBS 1
371		557	RIBS 2
372		558	RIBS 3
373		559	RIBS 4
394		574	RIBS 5
395		585	

After the ridecheck assignments were completed, the data files were uploaded into a central database. The field results were validated and edited as necessary to correct obvious errors. For example, in some cases, the checker had boarded the wrong bus by mistake, and in others, the number of on and offs on a particular trip did not balance.

Over 97% of all trips scheduled for 2013 were checked and 100% of all trips scheduled for 2014 were checked. Ridership on trips that were missed and not easily rescheduled was estimated using other available data. The estimates occur at the trip level, but the database program distributes these riders proportionally to the individual stops on the route so that all of the reports produced by the database represent the full service day.

4.1.2. Metrobus APC Data

Similar to the Connector routes, Metrobus lines were split into an initial phase and a post-Silver Line phase. This was done primarily for distributing the on-board survey, as APC data can be obtained for any number of routes for the same period. The lines included in each phase are shown in Table 4.2.

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Table 4.2: Metrobus Lines Included

Spring (APC and Surveys)	Spring (APC only)	Fall (APC and Surveys)
1A, 1B, 1E, 1Z	9A	2T
1C	4A, 4B	3T
2A	7A, 7E, 7F, 7Y	15K, 15L
2B	7B, 7C, 7H, 7P, 7W, 7X	15M
3A	16G, 16H, 16K	23A, 23T
5A	16X	28A
11Y	21A, 21D	28X
16A, 16B, 16D, 16E, 16J, 16P	25A, 25C, 25D, 25E	
16L	25B	
17A, 17B, 17F, 17M		
17G, 17H, 17K, 17L		
18E, 18F		
18G, 18H, 18J		
18P, 18R, 18S		
26A		
28F, 28G		
29C, 29E, 29G, 29H, 29X		
29K, 29N		
REX		
S80, S91*		

* The S80, S91 uses specialized vehicles that are not APC-equipped so a one-day manual ridecheck was conducted similar to those for Fairfax Connector routes.

The initial group of Metrobus lines was originally planned to be surveyed in the fall of 2013, however, as a result of the October 2013 government shutdown, surveying on Metrobus lines was postponed until the spring of 2014.

In December 2013, WMATA implemented route changes that were intended to coincide with the opening of the Silver Line, even though the line had not yet opened. Temporary routings were put into effect until the Silver Line opened in July 2014. Even though the route changes were implemented early, surveying on the Metrobus lines affected by the Silver Line was held off until September of 2014 to allow as much time as possible for ridership patterns to adjust to the changes.

In order to be able to work with a consistent set of data for each line, it was decided to use APC data from the same time period that surveys were conducted on Metrobus lines. Therefore, APC data was obtained from WMATA for the spring of 2014 for the first group of lines and for the fall of 2014 for the lines affected by the Silver Line. As shown in the table above, APC data was requested for several lines that were not surveyed. On these lines the bulk of the riders do not ride within Fairfax County so it was felt that conducting surveys would not be cost-effective, however, APC data could be easily

obtained to understand the ridership that is within Fairfax County. Because these lines overlap mostly with the lines surveyed in the spring, APC data for these lines was obtained for the spring also.

4.2 Reports Produced

4.2.1. Fairfax Connector Routes

The detailed ridecheck data can be summarized in numerous ways. Electronic reports to supplement the summary provided in this chapter have been provided to the County that show ridership, maximum load and schedule adherence at the trip level; ridership by trip and time period at the stop level; running times by route segment; and total ridership for each stop in the system, combining together all routes that serve each stop. These reports were provided to FCDOT for all Connector routes and were used by the consultant team to develop recommendations for changes to existing routes. Examples of the trip-level and stop-level reports are presented on the following pages. Detailed data files were also provided to FCDOT showing ridership by stop and by trip.

Trip Summary Reports

The first sample report presented below in Figure 4.1 is a Trip Summary report for Connector Route 605 in the outbound direction (from Reston to the County Government Center). The report has two parts, a trip-by-trip listing of results, and then a summary sheet with totals by time period and for the day as a whole.

The trip-by-trip listing has some 20 columns of data. The first few columns identify the trip and when it was checked. The middle portion of the report provides the schedule adherence data for each trip, comparing the scheduled and actual departure, arrival, and run times. The right-hand portion of the report shows the ridership figures, including total boardings, end-of-line (EOL) passengers (those remaining on board at the end of the trip, who should be subtracted from the total for that trip since they will be counted on the next trip in the opposite direction), maximum load observed on the trip, and the stop where the maximum load occurred. The last columns contain reference information such as the Form ID, the bus vehicle number, and an indication of whether any notes are stored about that particular trip.

On the summary statistics page, the first column shows the total ridership and the number of checked trips compared to the number of scheduled trips. The second row, "Boardings less EOLs" provides the most accurate number of boardings on the route in the current direction, since passengers remaining on board at the end of the route usually are passengers wishing to travel in the opposite direction.

The second column of figures provides a summary of the loads observed on the route. The average 30-minute max load is the average of the maximum loads observed on all trips in the peak 30 minutes during that time period. The average time period max load is the average of all of the maximum loads observed in that time period. The average load factor is the average maximum load divided by the number of seats on the bus. Finally, the last figure is the number of trips violating the load standard (1.0, or a seated load, in this case).

The right-hand portion of the summary statistics page tabulates the schedule adherence results. It shows the number of on-time, early, and late trips compared to the number of observations. The rightmost column shows the schedule adherence allowances used to calculate the on-time performance statistics; in this case, buses are counted as "on time" if they are zero to five minutes late.

Figure 4.1 Route 605 Trip Summary Report



FCDOT
Fairfax TDP 2013

12/31/14
10:56

Route 605

Weekday Outbound

West County

Rte Num	Day	Date	Sched. Dep.	Time to Next Bus	Act. Dep.	Sched. Run Time	Act. Run Time	Sched. Arr.	Act. Arr.	Early/On-time/Late (E/-/L)			Trip On-Time?	Boardings	EOLs	Max. Load	Max. Stop	Form ID	Bus ID	Note
										Dep.	Midpts	Arr.								
AM Peak																				
605S	Tue	9/23/14	06:05	01:00	06:10	00:50	00:54	06:55	07:04	L	L/L/L/L/L	L	No	10	0	6	RPGL3	6003	6051	
605S	Wed	10/1/14	07:05	01:00	07:04	00:50	00:58	07:55	08:03	E	-/L/L/L/L	L	No	27	0	18	RPGL3	6015	7734	
605S	Tue	9/23/14	08:05	01:00	08:08	00:50	00:54	08:55	09:02	-	L/L/L/L/L	L	No	20	0	14	RPSL2	6005	6051	
Midday																				
605S	Wed	10/1/14	09:05	01:00	09:17	00:51	00:49	09:56	10:07	L	L/L/L/L/L	L	No	28	2	19	RPGL3	6017	7734	
605S	Tue	9/23/14	10:05	01:00	10:07	00:51	00:51	10:56	10:58	-	-/L/L/-	-	No	15	0	10	RPGL3	6007	6051	
605S	Wed	10/1/14	11:05	01:00	11:08	00:51	00:49	11:56	11:58	-	L/L/L/L/-	-	No	10	1	5	TRTCB	6019	7734	
605S	Thu	9/25/14	12:05	01:00	12:06	00:51	00:49	12:56	12:55	-	-/L/L/L/E	E	No	8	1	5	RPGL3	6009	7755	*
605S	Wed	10/1/14	13:05	01:00	13:05	00:51	00:53	13:56	13:59	-	L/L/L/L/-	-	No	20	4	14	RPSL2	6021	7734	
605S	Thu	9/25/14	14:05	01:03	14:06	00:51	01:01	14:56	15:07	-	L/L/L/L/L	L	No	23	3	13	RPGL3	6011	7755	
605S	Wed	10/1/14	15:08	01:07	15:10	00:51	00:56	15:59	16:07	-	-/L/L/L/L	L	No	16	5	7	FLSE4	6023	7734	
PM Peak																				
605S	Thu	9/25/14	16:15	01:00	16:20	00:51	01:14	17:06	17:34	L	L/L/L/L/L	L	No	29	6	14	CLIBNB	6013	7755	*
605S	Wed	10/1/14	17:15	01:04	17:21	01:00	01:52	18:15	19:14	L	L/L/L/L/??	L	No	22	0	14	BLRE3	6025	7734	
605S	Mon	9/15/14	18:19	01:16	18:19	00:59	01:07	19:18	19:27	-	L/L/L/L/L	L	No	8	3	4	TRTCB	2650	7716	
Evening																				
605S	Wed	10/1/14	19:35	01:00	19:36	00:50	00:48	20:25	20:25	-	-/L/L/L/-	-	Yes	16	1	11	BLRE3	6027	7734	
605S	Mon	9/15/14	20:35	00:00	20:58	00:50	00:23	21:25	21:21	L	?/L/L/L/-E	E	No	23	7	11	TRTCB	2652	7716	



Route 605

Summary Statistics Weekday Outbound

<i>AM Peak</i>				<u>Loading</u>		<u>Schedule Adherence</u>					
				No.	Val.Obs	%		No.	Val.Obs	%	Allowances
Total Boardings:	57						Overall On-Time:	0	3	0.0%	00:00
Boardings less EOLs:	57	Average 30 min. Max Load:	18.0	1	3	33.3%	Early Departures:	1	3	33.3%	00:00
Average Boardings/Trip:	19.0	Average Time Pd. Max Load:	12.6	1	3	33.3%	Late Departures:	1	3	33.3%	00:05
Total Scheduled Trips:	3	Average Time Pd. Load Factor:	0.32	0	3	0.0%	Early Arrivals:	0	3	0.0%	00:00
Total Checked Trips:	3	Trips Violating Load Standard:	0	0	3	0.0%	Late Arrivals:	3	3	100.0%	00:05
<i>Midday</i>				<u>Loading</u>		<u>Schedule Adherence</u>					
Total Boardings:	120			No.	Val.Obs	%		No.	Val.Obs	%	Allowances
Boardings less EOLs:	104	Average 30 min. Max Load:	19.0	0	7	0.0%	Overall On-Time:	0	7	0.0%	00:00
Average Boardings/Trip:	14.8	Average Time Pd. Max Load:	10.4	6	7	85.7%	Early Departures:	1	7	14.2%	00:05
Total Scheduled Trips:	7	Average Time Pd. Load Factor:	0.26	0	7	0.0%	Late Departures:	1	7	14.2%	00:00
Total Checked Trips:	7	Trips Violating Load Standard:	0	3	7	42.8%	Early Arrivals:	3	7	42.8%	00:05
<i>PM Peak</i>				<u>Loading</u>		<u>Schedule Adherence</u>					
Total Boardings:	59			No.	Val.Obs	%		No.	Val.Obs	%	Allowances
Boardings less EOLs:	50	Average 30 min. Max Load:	14.0	0	3	0.0%	Overall On-Time:	0	3	0.0%	00:00
Average Boardings/Trip:	16.6	Average Time Pd. Max Load:	10.6	1	3	33.3%	Early Departures:	2	3	66.6%	00:05
Total Scheduled Trips:	3	Average Time Pd. Load Factor:	0.27	0	3	0.0%	Late Departures:	0	3	0.0%	00:00
Total Checked Trips:	3	Trips Violating Load Standard:	0	0	3	0.0%	Early Arrivals:	3	3	100.0%	00:05
<i>Evening</i>				<u>Loading</u>		<u>Schedule Adherence</u>					
Total Boardings:	39			No.	Val.Obs	%		No.	Val.Obs	%	Allowances
Boardings less EOLs:	31	Average 30 min. Max Load:	11.0	1	2	50.0%	Overall On-Time:	0	2	0.0%	00:00
Average Boardings/Trip:	15.5	Average Time Pd. Max Load:	11.0	1	2	50.0%	Early Departures:	1	2	50.0%	00:05
Total Scheduled Trips:	2	Average Time Pd. Load Factor:	0.28	1	2	50.0%	Late Departures:	1	2	50.0%	00:00
Total Checked Trips:	2	Trips Violating Load Standard:	0	1	2	50.0%	Early Arrivals:	0	2	0.0%	00:05
<i>All Trips</i>				<u>Loading</u>		<u>Schedule Adherence</u>					
Total Boardings:	275			No.	Val.Obs	%		No.	Val.Obs	%	Allowances
Boardings less EOLs:	242	Average 30 min. Max Load:	19.0	1	15	6.6%	Overall On-Time:	1	15	6.6%	00:00
Average Boardings/Trip:	16.1	Average Time Pd. Max Load:	11.0	9	15	60.0%	Early Departures:	5	15	33.3%	00:05
Total Scheduled Trips:	15	Average Time Pd. Load Factor:	0.28	1	15	6.6%	Late Departures:	2	15	13.3%	00:00
Total Checked Trips:	15	Trips Violating Load Standard:	0	4	15	26.6%	Early Arrivals:	9	15	60.0%	00:05

On the trip-level (first) page, one can see that ridership is somewhat higher during the peak periods and in the latter part of the midday, than it is in the early, midday, or evening periods. Buses on this route were observed to run late throughout the day, particularly in the PM peak when trips took much longer than scheduled. Because of this late running, none of the outbound trips were counted as running “on time.”

Overall ridership on this route was moderate, with buses less than half full on most trips. The load factors shown on the summary page indicate that crowding is not an issue on this route, and there is substantial capacity for additional ridership.

Load Profile Reports

The second sample report is the load profile, shown in Figure 4.2. As implied by the name, this report contains figures on the load carried by vehicles on a route. The report has nine columns: the first three identify the stop; the next four show the total ons, offs, net change, and load out from stop; and the final two show the cumulative on and offs. At the bottom of the report, the total on and offs are shown, as well as the net ridership - which equals total ons minus the number of EOL passengers (those that remained on board at the end of the trip).

Again Route 605 outbound is used as the example. The first column shows the sequence order of stops served.³ By far the busiest stops on this route are the Reston Town Center Transit Station and the Fair Oaks Mall. Clearly this route connects residents along the route to these two anchor locations. Most other stops are relatively low volume, with the highest number of boardings near Reston and many alightings along Lee Jackson Highway.

The peak load point is indicated by the stop description being printed in capital letters. In the example, the peak load (155 passengers) occurs at Reston Parkway and Glade Drive. This load is the sum of the load on all of the buses at that stop over the course of the day.

4.2.2. Metrobus Lines

Metrobus ridership data was provided by WMATA in spreadsheet format. Four different files were provided showing different levels of aggregation. The data was provided at the route level and can be summarized by line. The four files are:

- Ridership by Route
- Ridership by Route and Trip
- Ridership by Route and Stop
- Ridership by Route, Stop and Time Period

The data files contain many columns which are different for each file. The key data items in each file are summarized below.

³ On some routes, there are multiple stop patterns served. In those cases the first column shows which route pattern numbers apply to that stop. Stops served by only one pattern are shown in italic type, while those stops shared by two or more variations are shown in Roman type.

Figure 4.2 Route 605 Load Profile Report



FCDOT
Fairfax TDP 2013

12/31/14
10:59

Route 605
Weekday Outbound

All Day West County

Stop Sequence	Stop Number	Stop Description (peak load point in CAPS)	Total Ons	Total Offs	Change	Load out from stop	Cumulative Ons	Cumulative Offs
2	TRTCB	Reston Town Ctr Transit Sta Bay	112	0	112	112	112	0
3	BLRE3	Bluemont @ Reston	11	0	11	123	123	0
4	RPSL2	Reston @ South Lakes	23	11	12	135	146	11
5	RPGL3	RESTON @ GLADE	22	2	20	155	168	13
6	RPOS2	Reston @ Oslo	0	1	-1	154	168	14
7	RPMC2	Reston @ Mclearen	0	5	-5	149	168	19
8	LADW3	Lawyers @ Daniel Webster	0	2	-2	147	168	21
9	LAMY91	Lawyers @ Glenbrooke Woods	0	6	-6	141	168	27
10	OXJS1	Ox Tr @ Joseph Siewick	1	4	-3	138	169	31
11	JSOT91	Fair Oaks Hospital	8	16	-8	130	177	47
12	R71	Rugby @ Lee Memorial	1	0	1	131	178	47
13	LJHO9	Lee Jackson Memorial @ Highland Oak	4	2	2	133	182	49
14	LJMU1	Lee Jackson Memorial @ Muirfield	4	12	-8	125	186	61
15	LJKA2	Lee Jackson Memorial @ Plaza La	8	21	-13	112	194	82
16	LJST1	Lee Jackson Memorial @ Stringfellow	9	11	-2	110	203	93
17	CLIBNB	Chantilly Library	18	4	14	124	221	97
18	STLJ3	Stringfellow @ Lee Jackson Memorial	0	2	-2	122	221	99
22	FLGH3	Fair Lakes Bv @ Great Heron	0	6	-6	116	221	105
23	FLSE4	Fair Lakes Bv @ Sedgelyurst	4	9	-5	111	225	114
24	FLFB3	Fair Lakes Pw @ Fair Lakes Shopping	3	10	-7	104	228	124
25	FLFL3	Fair Lakes Pw @ Fair Lakes Ci	1	6	-5	99	229	130
26	FLSH3	Fair Lakes Ci @ Shoppes La	2	8	-6	93	231	138
27	FLSH91	Fair Lakes Ci @ Hyatt Hotel	0	1	-1	92	231	139
28	FLSH92	Fair Lakes Ci @ Roger Stover	0	1	-1	91	231	140
29	FLRS4	Fair Lakes Ci @ Roger Stover	3	3	0	91	234	143
30	FLOC4	Fair Lakes Pw @ Oak Creek	1	1	0	91	235	144
31	FLPR4	Fair Lakes Pw @ Fair Lakes Promenad	0	5	-5	86	235	149
32	FLPR9	Fair Lakes Pw @ Fair Lakes Promenad	1	4	-3	83	236	153
33	FLLE3	Fair Lakes Pw @ Legato	0	1	-1	82	236	154
34	FOMALL	Fair Oaks Mall	32	66	-34	48	268	220
35	FLLE2	Fair Lakes Pw @ Legato	3	2	1	49	271	222
36	MOFL3	Monument @ Fair Lakes Promenade	0	1	-1	48	271	223
38	MOFC3	Monument @ Fairfax Corner Av	1	1	0	48	272	224
39	MOMO3	Monument @ Monument Wy	0	2	-2	46	272	226
40	MOMH4	Monument @ Monument Hills Wy	0	5	-5	41	272	231
41	MOPV3	Monument @ Park Vista	1	2	-1	40	273	233
42	GCRU2	Government Center Pw @ Runabout	0	1	-1	39	273	234
43	GCFO1	Government Center Pw @ Forum	0	1	-1	38	273	235
44	GCFO2	Government Center Pw @ Forum	2	2	0	38	275	237
45	GCFF9	Government Center @ Post Forest	0	5	-5	33	275	242
46	99999	EOL Passengers	0	33	-33	0	275	275
Totals:			275	275				
Net Ridership:			242					

Ridership by Route

This file shows ridership on each route, both daily and average per trip. Some of the more important items are:

- Route Number
- Trips Scheduled
- Passengers per Trip
- Passenger Miles per Trip
- Average Daily Passengers
- Average Daily Passenger Miles
- Passengers per Mile
- Passengers per Hour
- Total Trips Counted

Ridership by Route and Trip

This file shows daily ridership on each trip on each route. This file is most analogous to the Trip Summary Report for Connector routes. Some of the more important items are:

- Route Number
- Direction
- Trip Start Time
- Time Period
- Average Passengers
- Average Passenger Miles
- Maximum Load
- Passengers per Mile
- Passengers per Hour
- Total Trips Counted

Ridership by Route and Stop

This file shows daily ridership at each stop on each route. This file is most analogous to the Load Profile Report for Connector routes. Some of the more important items are:

- Route Number
- Direction
- Stop
- Passengers per Trip On
- Passengers per Trip Off
- Load per Trip
- Maximum Load Observed
- Daily Passengers On
- Daily Passengers Off
- Daily Load
- Total Trips Counted

Ridership by Route, Stop and Time Period

This file shows ridership by time period at each stop on each route. This file is similar to the Ridership by Route and Stop file except that data is listed separately for each time period instead of all day.

4.3 Ridership Summary

Table 4.3 shows the total daily ridership by route that was collected for all of the Fairfax Connector ridechecks conducted for the CTP. The counts are shown in comparison to the daily average ridership reported by FCDOT using data collected through the fareboxes. The farebox data is shown for the month of September 2013 or September 2014, depending on the year in which the ridechecks were done for that route. The farebox data represents an average ridership for the month and so is likely a more accurate figure than the one-day composite obtained through the ridechecks. However, the fareboxes only provide a total ridership figure and do not provide the stop-level detail of the ridechecks that is so useful for developing route restructuring recommendations.

Table 4.4 shows the average daily Metrobus ridership, summarized by line. This data was collected through WMATA's APCs over a several month period during which the same schedule was in effect. As noted above, the data is averaged over multiple days of service. The number of weekdays of data varies by route but is typically between 20 and 50. The number of weekend days tends to be around ten for most routes. The table also indicates whether the data is from the spring or fall of 2014.

Table 4.3: Daily Connector Ridership by Route

Route	Year (Fall)	Weekday		Saturday		Sunday	
		Ridecheck	Farebox (Sept.)	Ridecheck	Farebox (Sept.)	Ridecheck	Farebox (Sept.)
101	2013	580	605	403	315	204	197
109	2013	744	563	228	181	-	-
151	2013	1,334	1,317	757	708	483	502
152	2013	541	612	270	328	191	340
159	2013	569	587	-	-	-	-
161	2013	496	644	258	256	246	159
162	2013	534	365	209	110	212	140
171	2013	3,201	3,279	2,443	2,451	2,225	2,368
231	2013	358	245	-	-	-	-
232	2013	345	281	-	-	-	-
301	2013	304	226	-	-	-	-
305	2013	266	225	-	-	-	-
306	2013	177	190	-	-	-	-
310	2013	1,985	1,785	849	749	568	642
321	2013	888	897	475	503	356	447
322	2013	859	741	413	454	293	283
333	2013	403	352	-	-	-	-
334	2013	337	168	-	-	-	-
335	2013	202	212	-	-	-	-
371	2013	330	550	481	492	318	363
372	2013	354	212	-	-	-	-
373	2013	296	268	-	-	-	-
394	2013	152	137	-	-	-	-
395	2013	481	501	-	-	-	-
401	2014	2,560	2,941	1,473	1,779	1,109	1,410
402	2014	2,374	1,688	1,419	879	1,081	753
422	2014	84	79	-	-	-	-
423	2014	829	787	220	201	131	131
424	2014	285	231	-	-	-	-
432	2014	37	31	-	-	-	-
461	2014	61	65	-	-	-	-
462	2014	81	84	-	-	-	-
463	2014	319	353	215	126	103	79
466	2014	194	193	-	-	-	-
493	2014	67	63	-	-	-	-
494	2014	83	79	-	-	-	-
495	2014	43	54	-	-	-	-
505	2014	529	463	280	249	194	166
507	2014	88	90	-	-	-	-
551	2014	578	553	266	236	204	216
552	2014	146	160	-	-	-	-
553	2014	149	130	-	-	-	-
554	2014	194	179	-	-	-	-
557	2014	142	134	-	-	-	-
558	2014	43	36	43	37	45	34
559	2014	28	61	34	24	31	23
574	2014	373	381	215	171	179	159
585	2014	249	267	-	-	-	-
599	2014	253	248	-	-	-	-
605	2014	456	402	346	340	303	234

Route	Year (Fall)	Weekday		Saturday		Sunday	
		Ridecheck	Farebox (Sept.)	Ridecheck	Farebox (Sept.)	Ridecheck	Farebox (Sept.)
621	2013	241	252	-	-	-	-
622	2013	214	214	-	-	-	-
623	2013	451	463	-	-	-	-
630	2013	236	219	-	-	-	-
631	2013	389	472	-	-	-	-
632	2013	586	483	-	-	-	-
640	2013	166	106	-	-	-	-
641	2013	320	279	-	-	-	-
642	2013	474	449	-	-	-	-
644	2013	402	431	-	-	-	-
650	2013	205	223	-	-	-	-
651	2013	301	298	-	-	-	-
652	2013	249	296	-	-	-	-
721	2014	210	181	99	100	65	68
724	2014	53	57	-	-	-	-
734	2014	24	24	-	-	-	-
924	2014	223	224	-	-	-	-
926	2014	122	98	-	-	-	-
927	2014	147	133	-	-	-	-
928	2014	19	16	-	-	-	-
929	2014	215	182	-	-	-	-
937	2014	138	124	107	84	76	76
950	2014	2,813	2,755	1,641	1,627	1,351	1,374
951	2014	93	110	-	-	-	-
952	2014	100	118	-	-	-	-
980	2014	1,572	1,358	-	-	-	-
981	2014	162	155	97	219	107	111
983	2014	517	502	420	319	431	367
985	2014	74	84	-	-	-	-
RIBS1	2014	524	504	380	347	199	194
RIBS2	2014	595	528	327	359	237	217
RIBS3	2014	602	580	434	407	244	219
RIBS4	2014	173	186	94	90	47	37
RIBS5	2014	182	164	111	151	59	65
Total		38,773	37,284	15,007	14,284	11,292	11,371

Table 4.4: Daily Metrobus Ridership by Line

Line	Season (2014)	Weekday	Saturday	Sunday
11Y	Spring	475	-	-
15K,15L	Fall	567	-	-
15M	Fall	320	-	-
16A,16B,16D,16E,16J,16P	Spring	6,344	5,145	3,410
16G,16H,16K	Spring	4,416	2,922	1,859
16X	Spring	994	-	-
17A,17B,17F,17M	Spring	416	-	-
17G,17H,17K,17L	Spring	1,037	-	-
18E,18F	Spring	224	-	-
18G,18H,18J	Spring	597	-	-
18P,18R,18S	Spring	728	-	-
1A,1B,1E,1Z	Spring	4,343	2,629	1,745
1C	Spring	1,066	831	704
21A,21D	Spring	235	-	-
23A,23T	Fall	3,809	2,252	1,365
25A,25C,25D,25E	Spring	1,383	423	423
25B	Spring	1,438	652	-
26A	Spring	460	-	-
28A	Fall	5,128	4,868	3,680
28F,28G	Spring	524	-	-
28X	Fall	1,200	-	-
29C,29E,29G,29H,29X	Spring	1,099	-	-
29K,29N	Spring	2,693	1,256	-
2A	Spring	2,783	1,496	798
2B	Spring	1,015	560	-
2T	Fall	574	332	218
3A	Spring	2,465	1,123	710
3T	Fall	814	219	-
4A,4B	Spring	1,875	840	518
5A	Spring	1,573	1,055	1,060
7A,7E,7F,7Y	Spring	3,723	1,678	1,053
7B,7C,7H,7P,7W,7X	Spring	1,573	-	-
9A	Spring	1,651	1,234	794
REX	Spring	3,741	2,526	982
Total		61,281	32,042	19,317