

I. Background

From 1987 to 1993, the Chicago Department of Transportation (CDOT)¹ constructed the Southwest Transit Project, which was placed into service by the Chicago Transit Authority (CTA) on October 31, 1993 as the Midway (Orange) Line. [Figure 1]

The transit project originally included Park-and-Ride lots at three outlying stations: Midway (300 spaces), Pulaski (300 spaces) and Kedzie (200 spaces). In addition, CDOT recieved separate funding under the Surface Transportation Act (STA) of 1987 for a parking demonstration project on the line.

The purpose of this demonstration, as specified by the STA, was to construct and open additional lots prior to the beginning of rail transit service to "demonstrate methods of facilitating the transfer of passengers between different modes of transportation and of establishing ridership before the opening of a rapid transit line."

Subsequently, park-and-ride lots were constructed at two stations on this line: 35th/Archer and Halsted (The lot for the Halsted Station is located at Archer/Green) [See Figure 2]. Prior to the opening of the Midway line, these stations were served by bus routes on Archer Avenue, a major diagonal arterial in the Southwest Corridor.

After the lots opened, a study was conducted to determine the impact on corridor community patterns of providing parking with bus service prior to the lines opening. The study results are presented below.

II. Methodology

Constuction was completed on the demonstration parking lots in June 1993 and they were opened to the public. Shortly thereafter, signs were posted at the lot entrances to identify the project and invite transit users to park in the lots without charge. A press release [Figure 2] and map were sent to community newspapers in the area.

Every Tuesday for thirteen weeks (July 13 to October 5, 1993), CDOT staff visited each lot at the end of the morning rush hour (approximately 9:30 a.m. at 35th/Archer, 10:00 a.m. at Archer/Green). For 13 weeks, counts were made, and license plates and municipal stickers were recorded.

¹and its predecessor, the Department of Public Works

During the final three weeks, questionnaires [Figure 3] were also distributed on windshields of cars in the lots and cars parked immediately outside the lots that had previously parked in the lot. Pre-metered envelopes were included to improve response rates.

These questionnaires [Figure 3] included 12 questions adapted from previously conducted park-and-ride surveys. Items included both actual information about that day's commute (origin, destination, occupancy, starting time, time to lot), attitudinal information (former mode, future mode, reason for use, ease of use) and market information (frequency of use, source of information, zip code).

III. Lot Usage

The lot at the Halsted station, proved to be a success. Usage counts at the Archer/Green lot rose steadily over the study period, from 10 autos during the first week, to the full capacity of 25 non-disabled spaces in week 12 and overcrowding by week 13.

With the exception of one very rainy day, the lot was over 90% capacity every week in September (weeks 9-12), despite the fact that only bus service was available.

On the last day of field work, not only were all 25 general-use spaces occupied, but two cars were parked in the handicapped spaces, two were parked in turn-around areas, and four previous users of the lot were parked in the adjacent segment of Green Street. While the count was being made, one vehicle parked briefly in the crosswalk access area, and two autos entered the lot, but found no parking space and exited. One of the two cars had previously been parked in the lot; the driver indicated that he would drive downtown.

The 35th/Archer demonstration proved disappointing. Two lots were constructed with a total of 68 spaces, but no more than three cars were ever parked in the lots. It was determined that these cars did not belong to CTA patrons, but to employees and clients of "Autos R US," an adjacent repair business. After the first few weeks of field work, even this type of use stopped. Therefore, no questionnaires were distributed at this site.

As shown in Appendix I, a total of 94 different vehicles parked in the Archer/Green (Halsted) lot on the dates studied². While there was significant turnover, there were six autos that were parked in the lots at least nine out of thirteen weeks and nine more that were present at least five weeks.

A pattern developed over the first half of the study period. of

²It was later determined that this included three pairs of cars registered to the same addresses.

six to ten new cars parking in the Archer/Green (Halsted) lot each week, with over half returning on one of the next two weeks. When demand at the lot reached capacity and cars were turned away, this pattern was disrupted.

The Chicago Area Transportation Study provided registration address data for 63 of the 94 Archer/Green (Halsted) lot users. After deleting records for multiple registrations at the same address and addresses outside the reasonable commuter shed ³ (possibly non-commuters or incorrect addresses), 48 addresses remained. This type of registration analysis provides more data points than the survey discussed below, but may also include those who did not use the lot for park-and-ride to the bus. Figure 4 shows the distribution of the 48 registration addresses.

Of these 48, only six were located within a one mile radius of the lot, but 38 were located closer to the 35th/Archer station than Halsted. Sixteen came from the 5 square-mile corridor between Kedzie and Western from 35th Street to 75th Street.

IV. Archer/Green (Halsted) survey results

Over the final three weeks of field work, questionnaires were left on 45 vehicles at the Archer/Green (Halsted) lot (some were left questionnaires twice). Of the 45 distributed, 19 surveys were returned, for a completion rate of 42%.

This rate compares favorably with surveys using similar techniques. A recent CTA survey at the Cumberland Park and Ride lot had a 21% return rate.

According to the survey, the typical user of the Archer/Green lot⁴:

- * is travelling from home to their primary worksite downtown
- * uses park-and-ride due to high downtown parking costs
- * uses the lot almost every weekday
- * had previously parked on the street to take the bus
- * finds the use of park-and ride to be very easy
- * learned about the lot by driving by it
- * arrives at the lot at about 7:50 am after a 16-minute drive

The geographic distribution of park-and-ride survey respondents is relatively dispersed (Figure 5), with a many having trip origins in

³On the original list, thirteen of 63 addresses were located outside the City of Chicago, but only two of the final 48 addresses are outside Chicago.

⁴Each of these items is true of a majority of respondents, except for the last one, which is based on averages.

a corridor between Western Avenue and Kedzie Avenue. The average auto access trip to the lot by respondents parking to use a bus is 4.9 miles.

The primary motivation for using park-and-ride appears to be the expense of downtown parking, with 16 of 17 bus users (94%) citing that as a reason.

Many respondents also listed other reasons:

- *Six (38%) said that park-and-ride was faster than waiting for transfers from local buses,
- *Four said they disliked downtown driving or found park-and-ride to be faster than driving all the way,
- *Three said bus service at their origin was not frequent enough or did not exist.
- *Two said that parking at their destination was insufficient or unsafe.

The responses about previous travel modes indicate little air quality impact. Most respondents had already been driving to points on Archer Avenue. Only one part-time driver to downtown was diverted onto transit, while two previous full-trip bus users and one person who previously walked began driving. However, it is not known if any of the on-street spaces vacated by users of the lot were taken over by drivers new to park-and-ride.

Respondents were asked about their projected future travel behavior, and the results were surprisingly diverse. No more than five respondents selected any one specific questionnaire choice. Over half of those (8 of 15) with an opinion will be using park and ride with transit: three at Archer/Green, five elsewhere. Four will access the Midway line by bus or on foot, and four others say they will remain bus riders to downtown.

Appendix II, the survey codebook, lists results in detail.

VI. Conclusions

The Southwest Park-and-Ride Demonstration Project has had mixed results. One location was over capacity, the other was unused during the demonstration period. Nonetheless, several things can be learned from the project.

- * Park-and-ride usage is a primarily a personal economic issue.

All but one of the survey respondents listed the cost of downtown parking as a reason for park and ride.

- * The quality of the transit network influences the decision to use

park-and-ride over full-trip transit.

While transit clearly benefits when downtown parking is expensive, if the transit network is considered to be of insufficient quality for a fast full-length trip, people may then use park-and-ride. About half of survey respondent listed a shortcoming of the feeder transit network as a reason for park-and-ride use. (Six said it was faster than waiting to transfer buses, two said bus service at origin was not frequent enough and one said there was no route available at the trip origin.)

Many users of the demonstration lots drove parallel to the bus route to arrive at the lot. Most had previously parked on the street to take the bus. The location of a lot within such a relatively short distance of downtown may actually have encouraged these respondents to drive a longer distance than they did previously. The lot may even serve those individuals as a type of remote parking lot for the downtown area.

* Transfer convenience may affect use of the lots.

Nearly 3/4 of survey respondents at Archer/Green said that park-and-ride was "very easy" to use. The distance from the lot to the express bus lot to the bus stop was short. At this site, the lot eventually reached capacity.

At 35th/Archer, a longer walk was required to the bus stop and inbound passengers had to cross a major arterial and no participants used park-and-ride.

* Park-and-ride's best advertisement is itself.

Most users of the crowded Archer/Green lot identified "driving by" as the way they learned of the facility. Many of these same people (including two future users) drove past the empty 35th/Archer lots. The 35th/Archer lots were located adjacent to the train embankment, but the lots and their signs were not as visible from Archer Avenue views by adjacent businesses. Also, fiscal constraints prevented the immediate installation of additional signs at Archer to inform motorists.

* A distinct pattern of market growth develops

With a new park-and-ride facility with no parking cost, the growth in usage has a distinct pattern. New patrons try the lot each week, with many continuing to use it and a few returning to original practices.

* Proximity of a lot to a business doesn't necessarily interfere with park-and-ride goals.

Even though the Archer/Green (Halsted) park-and-ride lot is

adjacent to businesses, transit users arrived earlier and were likely to preempt business patrons. One of the two respondents who used the lot without taking a bus was the owner of an adjacent business. He used the questionnaire to inquire about the purchase of monthly (or yearly) parking passes for himself and an employee in order to guarantee a space. This would suggest that he and the employee had used the lot previously but as lot use increased they became less able to find parking. It may also suggest that they feared that the little remaining

APPENDIX II

CODEBOOK OF RESPONSES- COMMUTER PARKING USER SURVEY

1a. Where did your trip to the parking lot start today? (Address or nearest street intersection)

Halsted & Archer (3)	.1 mi.
32nd Pl & May	.9
35th & Aberdeen	2.6
39th & Kedzie	3.3
35th & Watshtenaw	3.5
42nd & California	4.0
47th & Western	4.3
51st & California	6.0
63rd & Kedzie	6.3
6700 S. California	7.2
72nd & Whipple	7.3
79th & Damen	7.9
79th & Kedzie	8.0
Archer & Narragansett	9.3
95th & Cicero	12.8
Lemont, IL **	
U.S. 30 Merrillville, IN **	
AVE.:	4.9 mi.

1b. Is this...

16*	Home
1	School
0	Shopping
1	Primary work location
2*	Other work-related
0	Social/Recreation
0	Other

2a. What was your final destination after parking here this morning? (Address or nearest street intersection)

Michigan & Wacker
 Randolph & Dearborn
 Washington & Clark
 Washington & LaSalle
 "downtown" (2)
 70 W. Madison
 Monroe & Wells
 Monroe & Franklin
 Monroe & LaSalle
 Monroe & Clark
 Monroe & Dearborn
 Adams & Dearborn
 Adams & LaSalle
 Jackson & Wells

141 W. Jackson (Board of Trade)
 414 S. LaSalle
 2523 S. Archer **
 Archer & Halsted **

2b. Is this...

0	Home, School
0	Shopping
18	Primary work location
0	Other work-related
0	Social/Recreation, Other
1	NO RESPONSE

2c. Did you reach your final destination by bus?

17	Yes (CONTINUE)
2	No (SKIP TO #11)

3. Why did you use park-and-ride today?

16	Too expensive to park at destination
1	Not enough parking at destination
2	Faster than driving all the way
6	Faster than waiting for local bus to transfer
0	Dislike expressway driving
2	Dislike downtown driving
1	Safer than parking at my destination
2	Bus not frequent enough at trip start
1	No bus route near my trip start
2	Other
	- "Faster & Safer"
	- "Metra Too Expensive"

4. How many people were in your vehicle, including parking yourself, when you arrived at this lot?

13	1
3	2
1	3
0	4 or more

AVERAGE = 1.29

5a. How much time did it take you to drive to this lot?

2	5 minutes
1	7 minutes
4	10 minutes
4	15 minutes
4	20 minutes
1	30 minutes
1	45 minutes

AVERAGE = 16.0

5b. What time did you arrive?

1	6:00am	
1	7:00am	
1	7:25am	AVERAGE
1	7:30am	= 7:51am
2	7:50am	
5	8:00am	
2	8:05am	
1	8:15am	
3	8:30am	

6. Which days did you use this parking lot LAST WEEK?

0	Sun
13	Mon
14	Tue
14	Wed
15	Thu
14	Fri
1	Sat
1	I didn't park here last week

Total Days/Week:

1	0	
0	1	AVERAGE:
1	2	4.3 days/week
2	3	
2	4	
10	5	
1	6	
0	7	

7. Before the lot opened how would you have made this trip? (Check all that apply)

2	Drove all the way
0	Got a ride all the way
2	Walked to bus stop
3	Took more than one bus
0	Took the el
14	Parked on street, then took CTA
0	Other

8. After the Midway line opens, how will you make this trip?

4	Park here and take the train (SKIP TO # 10)
5*	Park at another station and take the train
1	Take a bus to a Midway line station
3*	Walk to a Midway line station
3	Continue to use a bus (SKIP TO # 10)
0	Drive all the way (SKIP TO # 10)
2	Other: I DON'T KNOW YET PARK ON ARCHER AND TAKE BUS

9. Which Midway Line station will you use ?

0	Roosevelt/State
4***	Halsted/Archer

0 Ashland/Archer
 2 35th/Archer
 2 Western/49th
 0 Pulaski/Archer
 0 Kedzie/49th
 3 Midway Airport

10. How do you rate park-and-ride as a way to travel?

11 Very easy (4)
 3 Somewhat easy (3)
 2 Neither easy nor difficult
 1 Somewhat
 difficult (1)
 0 Very difficult (0)

AVERAGE = 3.41 (on scale of 0-4)

11. How did you learn about this parking lot?

1 Newspaper article
 1 From a friend
 15 Drove by
 3 Other:
 - "Bus Driver"
 - "parked there before lot opened"

12. What is your home zip code?

1** 46410 (Merrilville, IN)
 1** 60437 (Lemont, IL)
 1 60453 (Oak Lawn)
 1 60606 (Near West Side)
 2 60608 (Roos-35/Halst-Cal)
 1 60620 (75-95/State-Westn)
 3 60629 (55-75/Western-Cic)
 6 60632 (35-55/Western-Cic)
 1 60638 (51-75/Cic-Harlem)
 2 60652 (75-87/Western-Cic)

Parking lot:

19 Archer/Green
 0 35th/Archer

Unsolicited additional comments:

2 requests for monthly parking rates and information

* includes only multiple response
 ** respondents not using transit
 *** implied by previous response