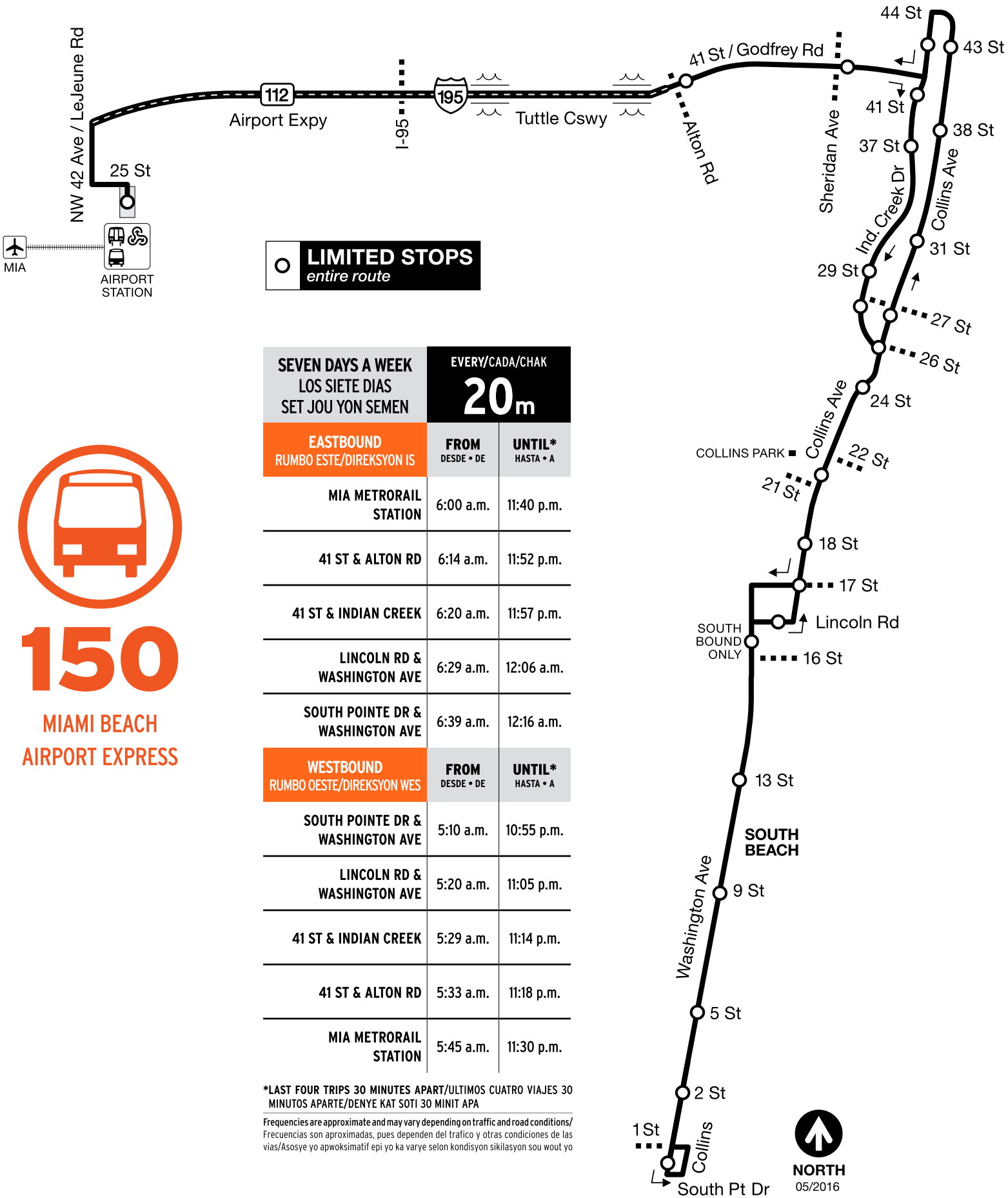


150

MIAMI BEACH AIRPORT EXPRESS

SEVEN DAYS A WEEK LOS SIETE DIAS SET JOU YON SEMEN	EVERY/CADA/CHAK 20m	
EASTBOUND RUMBO ESTE/DIREKSYON IS	**FROM** DESDE • DE	**UNTIL*** HASTA • A
MIA METRORAIL STATION	6:00 a.m.	11:40 p.m.
41 ST & ALTON RD	6:14 a.m.	11:52 p.m.
41 ST & INDIAN CREEK	6:20 a.m.	11:57 p.m.
LINCOLN RD & WASHINGTON AVE	6:29 a.m.	12:06 a.m.
SOUTH POINTE DR & WASHINGTON AVE	6:39 a.m.	12:16 a.m.
WESTBOUND RUMBO OESTE/DIREKSYON WES	**FROM** DESDE • DE	**UNTIL*** HASTA • A
SOUTH POINTE DR & WASHINGTON AVE	5:10 a.m.	10:55 p.m.
LINCOLN RD & WASHINGTON AVE	5:20 a.m.	11:05 p.m.
41 ST & INDIAN CREEK	5:29 a.m.	11:14 p.m.
41 ST & ALTON RD	5:33 a.m.	11:18 p.m.
MIA METRORAIL STATION	5:45 a.m.	11:30 p.m.

***LAST FOUR TRIPS 30 MINUTES APART**/ULTIMOS CUATRO VIAJES 30 MINUTOS APARTE/DENYE KAT SOTI 30 MINIT APA

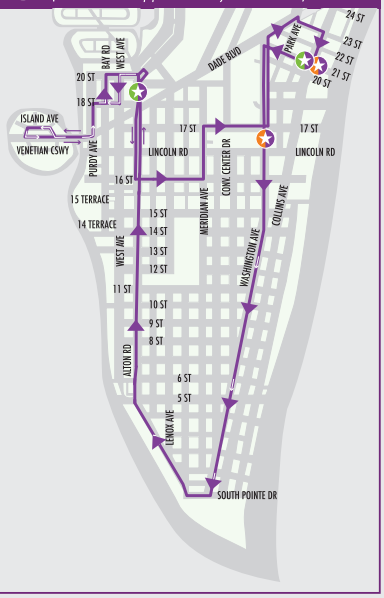
Frequencies are approximate and may vary depending on traffic and road conditions/ Frecuencias son aproximadas, pues dependen del trafico y otras condiciones de las vias/Asosye yo apwoksimatif epi yo ka varye selon kondisyon sikilasyon sou wout yo

COLLINS EXPRESS

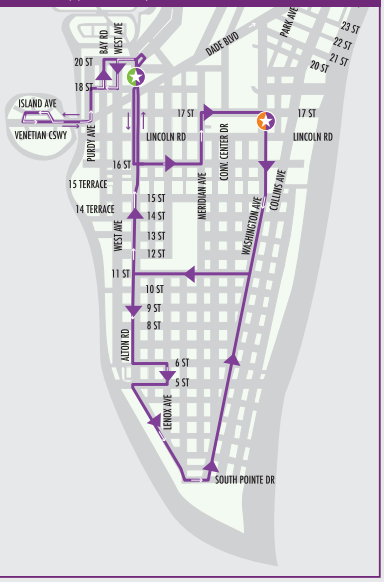
MIDDLE BEACH LOOP

MIAMIBEACH TROLLEY

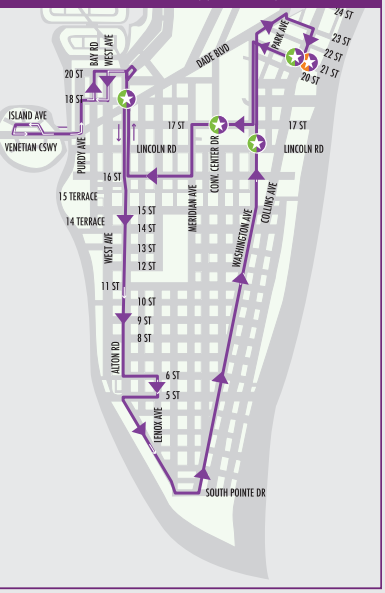
SOUTH BEACH LOOP - A
(Clockwise - Approximately 20 minutes)



SOUTH BEACH LOOP - VIA 11 ST
(Approximately 40 minutes)



SOUTH BEACH LOOP - B
(Counter Clockwise - Approximately 20 minutes)



ATTACHMENT G

Queuing

Grand Beach Hotel

Date: July 20,2011
Observer: J. Espinosa (DPA)

Vehicle	In	Out	Type	Arrival Time	Processing Time	Notes
1		X	Car	8:34 AM	0:00:37	Valet Return
2		X	Car	8:35 AM	0:01:06	Valet Return
3		X	Car	8:36 AM	0:00:25	Valet Return
4		X	Car	8:36 AM	0:00:38	Pick Up (Personal)
5	X		Car	8:41 AM	0:00:18	Guest In
6		X	Car	8:45 AM	0:00:30	Valet Return
7	X		Car	8:52 AM	0:01:17	Check In
8		X	Car	9:02 AM	0:01:46	Check Out
9	X		Car	9:04 AM	0:01:01	Check In
10	X		Car	9:05 AM	0:00:51	Check In
11		X	Van	9:06 AM	0:00:32	Tour
12		X	Taxi	9:09 AM	0:00:26	Guest Out
13	X		Car	9:09 AM	0:02:34	Check In
14		X	Car	9:10 AM	0:00:26	Valet Return
15		X	Car	9:11 AM	0:00:37	Valet Return
16	X		Car	9:14 AM	0:00:28	Guest In
17		X	Car	9:14 AM	0:00:22	Valet Return
18	X		Car	9:18 AM	0:01:02	Check In
19		X	Car	9:18 AM	0:00:36	Valet Return
20		X	Taxi	9:21 AM	0:00:22	Guest Out
21		X	Car	9:21 AM	0:01:26	Check Out
22		X	Car	9:22 AM	0:00:44	Valet Return
23	X		Car	9:25 AM	0:01:21	Check In
24		X	Car	9:25 AM	0:01:06	Valet Return
25		X	Car	9:26 AM	0:00:23	Valet Return
26		X	Car	9:28 AM	0:00:25	Valet Return
27		X	Car	9:29 AM	0:00:22	Valet Return
28		X	Car	9:29 AM	0:00:21	Valet Return
29		X	Car	9:34 AM	0:00:46	Valet Return
30	X		Car	9:38 AM	0:01:04	Check In
31		X	Car	9:38 AM	0:00:36	Valet Return
32		X	Car	9:39 AM	0:00:21	Valet Return
33		X	Car	9:41 AM	0:00:34	Guest Out
34		X	Car	9:43 AM	0:00:14	Valet Return
35		X	Car	9:45 AM	0:02:04	Check Out
36	X		Car	9:45 AM	0:01:20	Check In
37		X	Taxi	9:48 AM	0:00:48	Check Out
38		X	Car	9:49 AM	0:00:26	Guest Out
39		X	Car	9:49 AM	0:00:48	Valet Return
40	X		Car	9:51 AM	0:00:37	Check In
41		X	Car	9:51 AM	0:00:30	Valet Return
42		X	Car	9:57 AM	0:00:28	Valet Return
43		X	Car	9:58 AM	0:01:22	Check Out
44		X	Car	10:02 AM	0:00:32	Valet Return
45		X	Car	10:03 AM	0:00:35	Valet Return
46		X	Van	10:04 AM	0:00:46	Valet Return
47	X		Car	10:06 AM	0:00:39	Check In
48		X	Car	10:08 AM	0:01:58	Check Out
49		X	Taxi	10:08 AM	0:01:48	Check Out
50		X	Car	10:09 AM	0:00:41	Valet Return
51		X	Car	10:10 AM	0:00:44	Valet Return
52		X	Car	10:12 AM	0:00:26	Valet Return
53	X		Taxi	10:13 AM	0:00:42	Check In
54		X	Taxi	10:14 AM	0:02:21	Check Out
55			Taxi	10:16 AM	0:01:48	Check Out
56		X	Car	10:18 AM	0:00:37	Valet Return
57		X	Car	10:18 AM	0:00:56	Valet Return
58	X		Car	10:20 AM	0:00:40	Guest In
59		X	Car	10:24 AM	0:00:57	Valet Return

Total Processing Time: **0:50:10**
Average Processing Time: **0:00:51**

Shops at Merrick Park
Aurora Parking Garage

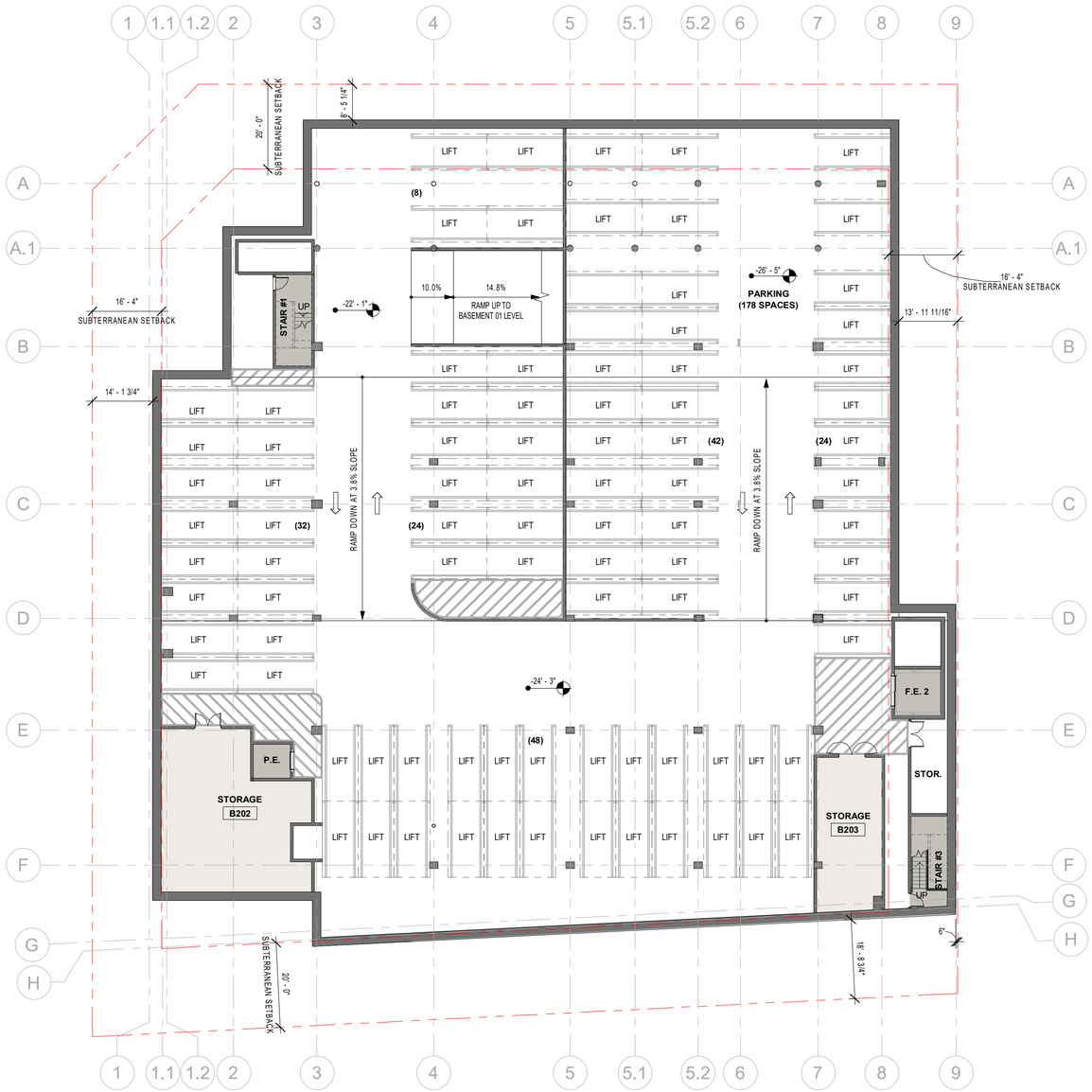
Garage Entrance Processing Time

Date: 2-May-17
Time: 5 - 6 pm

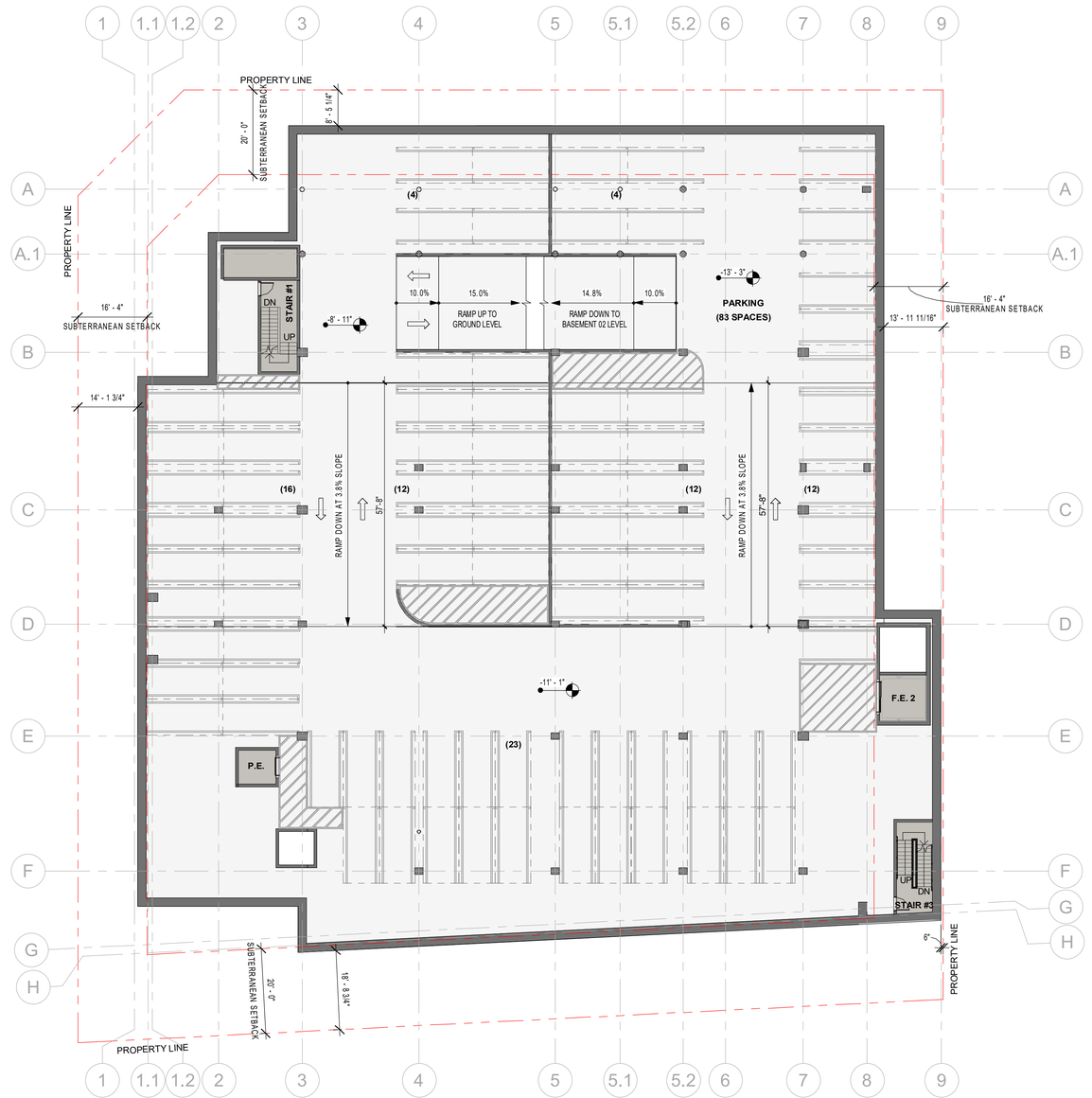
Car	Processing Time (sec)	Transaction Type	Car	Processing Time (sec)	Transaction Type
1	6.32	T	21	6.92	T
2	9.57	T	22	6.27	T
3	7.47	T	23	6.58	T
4	6.18	T	24	6.16	T
5	8.54	T	25	4.64	C
6	6.61	C	26	3.84	C
7	4.2	C	27	3.43	C
8	6.6	T	28	7.18	C
9	10.66	T	29	3.74	C
10	9.94	T	30	7.23	T
11	4.77	C	31	3.2	C
12	6.51	T	32	3.11	C
13	6.33	T	33	7.17	T
14	5.4	T	34	9.4	T
15	6.28	T	35	5.84	C
16	3.24	C	36	3.57	C
17	3.37	C			
18	7.97	T			
19	3.04	C			
20	6.07	T			

T= Ticket Dispenser
C= Card Reader

Ticket Dispenser Average	7.31	sec
Card Reader Average	4.25	sec
Combined Average	6.04	sec



1 A1.00 BASEMENT LEVEL 2 - FLOOR PLAN
1/16" = 1'-0"



2 A1.00 BASEMENT LEVEL 1 - FLOOR PLAN
1/16" = 1'-0"

N

0 8'-0" 16'-0" 32'-0"
SCALE: 1/16" = 1'-0"

NICHOLS BROSCH WURST WOLFE & ASSOCIATES, INC.

DON WOLFE
ARCHTIECT
AR000000

FB GARAGE & BALLROOM EXPANSION

4441 COLLINS AVE. MIAMI BEACH, FLORIDA

A1.00

Issue Date

location, a 5% probability of back-up onto the adjacent street is judged to be acceptable. Demand on the system for design is expected to be 110 vehicles in a 45-minute period. Average service time was expected to be 2.2 minutes. Is the queue storage adequate?

Such problems can be quickly solved using Equation (8–9b) given in Table 8-10 and repeated below for convenience.

$$M = \left[\frac{\ln P(x > M) - \ln Q_M}{\ln \rho}\right] - 1$$

where:

M = queue length which is exceeded p percent of the time
N = number of service channels (drive-in positions)
Q = service rate per channel (vehicles per hour)
$\rho = \dfrac{\text{demand rate}}{\text{service rate}} = \dfrac{q}{NQ}$ = utilization factor
q = demand rate on the system (vehicles per hour)
Q_M = tabled values of the relationship between queue length, number of channels, and utilization factor (see Table 8.11)

TABLE 8-11
Table of Q_M Values

ρ	$N = 1$	2	3	4	6	8	10
0.0	0.0000	0.0000	0.0000	0.0000			
0.1	.1000	.0182	.0037	.0008	.0000	0.0000	0.0000
.2	.2000	.0666	.0247	.0096	.0015	.0002	.0000
.3	.3000	.1385	.0700	.0370	.0111	.0036	.0011
.4	.4000	.2286	.1411	.0907	.0400	.0185	.0088
.5	.5000	.3333	.2368	.1739	.0991	.0591	.0360
.6	.6000	.4501	.3548	.2870	.1965	.1395	.1013
.7	.7000	.5766	.4923	.4286	.3359	.2706	.2218
.8	.8000	.7111	.6472	.5964	.5178	.4576	.4093
.9	.9000	.8526	.8172	.7878	.7401	.7014	.6687
1.0	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

$\rho = \dfrac{q}{NQ} = \dfrac{\text{arrival rate, total}}{(\text{number of channels})(\text{service rate per channel})}$
N = number of channels (service positions)

Solution

Step 1: $Q = \dfrac{60 \text{ min/hr}}{2.2 \text{ min/service}} = 27.3$ services per hour

Step 2: $q = (110 \text{ veh}/45 \text{ min}) \times (60 \text{ min/hr}) = 146.7$ vehicles per hour

Step 3: $\rho = \dfrac{q}{NQ} = \dfrac{146.7}{(6)(27.3)} = 0.8956$

Step 4: $Q_M = 0.7303$ by interpolation between 0.8 and 0.9 for $N = 6$ from the table of Q_M values (see Table 8-11).

Step 5: The acceptable probability of the queue, M, being longer than the storage, 18 spaces in this example, was stated to be 5%. $P(x > M) = 0.05$, and:

$$M = \left[\frac{\ln 0.05 - \ln 0.7303}{\ln 0.8956}\right] - 1 = \left[\frac{-2.996 - (-0.314)}{-0.110}\right] - 1$$
$$= 24.38 - 1 = 23.38, \text{ say } 23 \text{ vehicles.}$$

DRAFT

Ground Level	17	self park temp short term/non-shift						
B1	83	self park - attendant/valet assist						
B2 (employee)	133	valet park (90 surface spaces + 45 stacker)						
B2 (long term guest)	45							
	278							
			South Lot Current (spaces under current use)			Post Construction (below grade employee)		
			148			216	1.46	68
AM/PM Shifts (6am - 10pm)								
	Condo		5			7		
	Bleau Bar		3			4		
	Banquets		45			66		
	Concierge		1			1		
	Engineering		11			16		
	Finance		8			12		
	Bell Services		11			16		
	Pool		8			12		
	Restaurant		31			45		
	Housekeeping		47			69		
	Room Services		12			18		
	Internal Maint.		2			3		
	Reservations		2			3		
	Retail		3			4		
	Sales		1			1		
	Salon		2			3		
	Security		1			1		
	Spa		3			4		
	PBX		1			1		
	Warehouse		3			4		
			200	1.35		292	1.35	92
Shift Breakdown			Current			Post		
	7am - 3:30pm		38			55		
	8am - 4:30pm		58			85		
	9am - 5:30pm		25			36		
	10am - 6:30pm		15			22		
	11am - 7:30pm		13			19		
	3pm - 11:30pm		32			47		
	4pm - 12:30am		14			20		
	5pm - 1:30am		5			7		
			200			292		92

Queuing Analysis

19185	Fontainebleau Hotel Ballroom & Parking Garage	2/14/2020

Existing Fontainebleau Hotel Arrival (AM)

1	
Veh/hr	8
%	100%
time (min)	3.69
N	**2**
Qm	0.0994
Lanes	1
Q	16.25616
q	8
rho	0.246061
M	-0.51

LookUp		
N	RHO	
2		
		0
	{ 0 - 0.1 }	
Qm		0.1
	{ 0.1 - 0.2 }	
		0.2
0.09939	{ 0.2 - 0.3 }	0.2461
		0.3
	{ 0.3 - 0.4 }	
		0.4
	{ 0.4 - 0.5 }	
		0.5
	{ 0.5 - 0.6 }	
		0.6
	{ 0.6 - 0.7 }	
		0.7
	{ 0.7 - 0.8 }	
		0.8
	{ 0.8 - 0.9 }	
		0.9
	{ 0.9 - 1.0 }	
		1

Existing Fontainebleau Hotel Deparure (AM)

2	
Veh/hr	18
%	100%
time (min)	2.98
N	**2**
Qm	0.2779
Lanes	1
Q	20.12962
q	18
rho	0.447102
M	1.13089

LookUp		
N	RHO	
2		
		0
	{ 0 - 0.1 }	
Qm		0.1
	{ 0.1 - 0.2 }	
		0.2
	{ 0.2 - 0.3 }	
		0.3
	{ 0.3 - 0.4 }	
		0.4
0.27792	{ 0.4 - 0.5 }	0.4471
		0.5
	{ 0.5 - 0.6 }	
		0.6
	{ 0.6 - 0.7 }	
		0.7
	{ 0.7 - 0.8 }	
		0.8
	{ 0.8 - 0.9 }	
		0.9
	{ 0.9 - 1.0 }	
		1

Future Fontainebleau Hotel Arrival (AM)

1	
Veh/hr	13
%	100%
time (min)	3.69
N	**2**
Qm	0.2285
Lanes	1
Q	16.25616
q	13
rho	0.399848
M	0.65747

LookUp		
N	RHO	
2		
		0
	{ 0 - 0.1 }	
Qm		0.1
	{ 0.1 - 0.2 }	
		0.2
	{ 0.2 - 0.3 }	
		0.3
0.22846	{ 0.3 - 0.4 }	0.39985
		0.4
	{ 0.4 - 0.5 }	
		0.5
	{ 0.5 - 0.6 }	
		0.6
	{ 0.6 - 0.7 }	
		0.7
	{ 0.7 - 0.8 }	
		0.8
	{ 0.8 - 0.9 }	
		0.9
	{ 0.9 - 1.0 }	
		1

Future Fontainebleau Hotel Deparure (AM)

2	
Veh/hr	19
%	100%
time (min)	2.98
N	**2**
Qm	0.3039
Lanes	1
Q	20.12962
q	19
rho	0.471941
M	1.40345

LookUp		
N	RHO	
2		
		0
	{ 0 - 0.1 }	
Qm		0.1
	{ 0.1 - 0.2 }	
		0.2
	{ 0.2 - 0.3 }	
		0.3
	{ 0.3 - 0.4 }	
		0.4
0.30392	{ 0.4 - 0.5 }	0.47194
		0.5
	{ 0.5 - 0.6 }	
		0.6
	{ 0.6 - 0.7 }	
		0.7
	{ 0.7 - 0.8 }	
		0.8
	{ 0.8 - 0.9 }	
		0.9
	{ 0.9 - 1.0 }	
		1

Existing Fontainebleau Hotel Arrival (PM)

1	
Veh/hr	33
%	100%
time (min)	3.69
N	**4**
Qm	0.1824
Lanes	1
Q	16.25616
q	33
rho	0.5075
M	0.90795

LookUp		
N	RHO	
4		
		0
	{ 0 - 0.1 }	
Qm		0.1
	{ 0.1 - 0.2 }	
		0.2
	{ 0.2 - 0.3 }	
		0.3
	{ 0.3 - 0.4 }	
		0.4
	{ 0.4 - 0.5 }	
		0.5
0.18238	{ 0.5 - 0.6 }	0.5075
		0.6
	{ 0.6 - 0.7 }	
		0.7
	{ 0.7 - 0.8 }	
		0.8
	{ 0.8 - 0.9 }	
		0.9
	{ 0.9 - 1.0 }	
		1

Existing Fontainebleau Hotel Deparure (PM)

1	
Veh/hr	35
%	100%
time (min)	2.98
N	**4**
Qm	0.1196
Lanes	1
Q	20.12962
q	35
rho	0.434683
M	0.04636

LookUp		
N	RHO	
4		
		0
	{ 0 - 0.1 }	
Qm		0.1
	{ 0.1 - 0.2 }	
		0.2
	{ 0.2 - 0.3 }	
		0.3
	{ 0.3 - 0.4 }	
		0.4
0.11956	{ 0.4 - 0.5 }	0.43468
		0.5
	{ 0.5 - 0.6 }	
		0.6
	{ 0.6 - 0.7 }	
		0.7
	{ 0.7 - 0.8 }	
		0.8
	{ 0.8 - 0.9 }	
		0.9
	{ 0.9 - 1.0 }	
		1

Future Fontainebleau Hotel Arrival (PM)

3	
Veh/hr	35
%	100%
time (min)	3.69
N	**4**
Qm	0.2172
Lanes	1
Q	16.25616
q	35
rho	0.538258
M	1.37102

LookUp		
N	RHO	
4		
		0
	{ 0 - 0.1 }	
Qm		0.1
	{ 0.1 - 0.2 }	
		0.2
	{ 0.2 - 0.3 }	
		0.3
	{ 0.3 - 0.4 }	
		0.4
	{ 0.4 - 0.5 }	
		0.5
0.21717	{ 0.5 - 0.6 }	0.53826
		0.6
	{ 0.6 - 0.7 }	
		0.7
	{ 0.7 - 0.8 }	
		0.8
	{ 0.8 - 0.9 }	
		0.9
	{ 0.9 - 1.0 }	
		1

Future Fontainebleau Hotel Deparure (PM)

4	
Veh/hr	39
%	100%
time (min)	2.98
N	**4**
Qm	0.1609
Lanes	1
Q	20.12962
q	39
rho	0.484361
M	0.61215

LookUp		
N	RHO	
4		
		0
	{ 0 - 0.1 }	
Qm		0.1
	{ 0.1 - 0.2 }	
		0.2
	{ 0.2 - 0.3 }	
		0.3
	{ 0.3 - 0.4 }	
		0.4
0.16089	{ 0.4 - 0.5 }	0.48436
		0.5
	{ 0.5 - 0.6 }	
		0.6
	{ 0.6 - 0.7 }	
		0.7
	{ 0.7 - 0.8 }	
		0.8
	{ 0.8 - 0.9 }	
		0.9
	{ 0.9 - 1.0 }	
		1

Valet Time Main Fontainebleau Hotel (Arrival) Garage Parking Space

					Minutes
Processing time **:**	51 seconds	0.0167 min/ seconds			0.85
Driving time (most distant space) **:**	1000 Feet	0.00019 miles/ feet	0.06666667 hr / miles	60 min / hr	0.76
Mechanical Lift Processing Time:	30 sec/ lift	0.0167 min/ seconds	0 # lifts		0
Park Processing Time **:**			0 movement	0.15	0
Mechanical Arm Lift Time:	4.25 sec/arm	0 gates	0.0167 min/ sec		0.00
Walking time:	1000 feet	0.125 seconds/ feet	0.0167 min/ sec		2.08
Total					**3.69**

Valet Time Main Fontainebleau Hotel (Departure) Garage Parking Space

					Minutes
Processing time **:**	51 seconds	0.0167 min/ seconds			0.85
Driving time (most distant space) **:**	750 Feet	0.000189394 miles/ feet	0.06666667 hr / miles	60 min / hr	0.57
Mechanical Lift Processing Time:	30 sec/ lift	0.0167 min/ seconds	0 # lifts		0
Park Processing Time **:**			0 movement	0.15	0
Mechanical Arm Lift Time:	4.25 sec/arm	0 gates	0.0167 min/ sec		0.00
Walking time:	750 feet	0.125 seconds/ feet	0.0167 min/ sec		1.56
Total					**2.98**