

Appendix D: Traffic Appendices



DRAFT TECHNICAL MEMORANDUM

TO: Files

FROM: Seth Wright

DATE: May 1, 2007 (Revised August 23, 2007)

PROJECT: East 125th Street Development (PHA No. 0613I)

RE: Transportation Planning Assumptions

This memorandum summarizes the transportation planning assumptions to be used for the analyses of traffic, parking, transit and pedestrian conditions for the proposed East 125th Street Development EIS. Estimates of the proposed actions' peak hour travel demand are provided, along with a discussion of trip assignment methodologies.

PROPOSED DEVELOPMENT

The proposed development project consists of up to 300,000 sf of media/office space, up to 1,000 dwelling units, 470,000 sf of destination retail/entertainment space, a 30,000 sf cultural facility (500-seat auditorium), and possibly a 100,000 sf hotel with approximately 130 rooms. As shown in Figure 1, these development components would be distributed among three city blocks bounded by East 124th Street on the south, East 127th Street on the north, Second Avenue on the east, and Third Avenue on the west. It is anticipated that destination retail would be concentrated along East 125th Street, while residential uses would be located within the project site along East 126th Street and East 127th Street. As the proposed development would displace existing retail/commercial space currently present on the project site, the project's transportation demands would be the net difference between the demand from the proposed development and demand from displaced existing uses. The proposed development project for both future "No-Build" and future "Build" conditions will be analyzed for an Analysis year of 2012.

TRANSPORTATION PLANNING ASSUMPTIONS

The new residential and local retail uses that would result from the proposed project are expected to generate their highest demand during the traditional weekday 7:45-8:45 AM and 4-5 PM commuter periods as well as the 12-1 PM midday (lunch time) period. The transportation planning assumptions used to forecast changes in travel demand resulting from the proposed actions during these periods are summarized in Table 1 and discussed below. The trip generation rates, temporal distributions and mode choice assumptions for cultural facility, residential, office, hotel and retail uses shown in Table 1 were based on accepted *CEQR Technical Manual* criteria, standard professional references, and studies that have been done for similar uses in the Harlem area as well as other areas of the City. These sources were also supplemented by data from the 2000 Census.

Cultural Facility

For the purposes of the travel demand forecast, the proposed project's community facility component was assumed to be a 500-seat theater. The temporal distribution, mode choice and vehicle occupancy rates for this use were based on data from a December 2000 transportation survey conducted at Lincoln Center. The trip generation rate is based on the 2005 Seventh Regiment Armory EAS.

Residential

The forecast of travel demand from proposed residential development was based on the trip rate and temporal distribution cited in Pushkarev & Zupan, *Urban Space for Pedestrian*, 1975. The residential modal split reflects journey-to-work data from the 2000 Census. Although residential-based trips in the midday would likely be more local in nature than in the peak commuter hours (and therefore have a higher walk share, for example), the modal split based on census journey-to-work data is conservatively assumed for all analyzed weekday peak periods.

Office

The forecast of travel demand from proposed office development was based on the trip rate and temporal distribution cited in the 2001 *CEQR Technical Manual*. The weekday and Saturday midday modal split assumptions were based on data from the April 2004 *Downtown Brooklyn Development FEIS*. NYCDOT Employee Commute Options (ECO) survey data from office firms and governmental/educational institutions in Downtown Brooklyn were used to estimate vehicle occupancy.

Hotel

The travel demand forecast for hotel uses that would be developed in the No-Build condition was based on data from the *Renaissance Plaza Expansion EAS* (March 2003).

**TABLE 1
EAST 125TH STREET DEVELOPMENT TRAFFIC PLANNING ASSUMPTIONS**

Land Use:	<u>Office</u>		<u>Destination Retail</u>		<u>Residential</u>		<u>Hotel</u>		<u>Cultural Facility</u> (Theater)	
Size/Units:	300,000 gsf		470,000 gsf		1,000 D.U.		130 rooms		500 seats	
Trip Generation Rate:	(1,2)		(9)		(3,13)		(16)		(18)	
Weekday	18.00		82.59		8.075		9.4		2.19	
Saturday	0.90		109.72		7.678		8.61		2.19	
	per 1,000 sf		per 1,000 sf		per D.U.		per room		per seat	
Temporal Distribution:	(1)		(9)		(3,13)		(15,16)		(19)	
AM	11.8%		2.3%		9.1%		6.6%		0.0%	
MD	15.0%		8.7%		4.7%		8.3%		11.0%	
PM	13.7%		8.9%		10.7%		7.7%		20.0%	
Sat MD	15.0%		11.5%		8.2%		7.5%		25.0%	
Modal Splits:	(4,5)		(10)		(14)		(17)		(19)	
	AM/PM	SAT/MD	Weekday/Saturday		Weekday	Saturday			Weekday/Saturday	
Auto	12%	2%	15.0%	17.0%	14.0%	20.0%	20.0%		34.0%	34.0%
Taxi	1%	1%	9.0%	10.0%	1.0%	1.0%	14.0%		28.0%	28.0%
Subway	68%	7%	26.0%	15.0%	51.0%	33.0%	40.0%		19.0%	19.0%
Commuter Rail	1%	0%	1.0%	1.0%	1.0%	1.0%	0.0%		2.0%	2.0%
Bus	12%	7%	12.0%	20.0%	15.0%	15.0%	3.0%		4.0%	4.0%
Walk/Other	6%	83%	37.0%	37.0%	18.0%	30.0%	23.0%		13.0%	13.0%
	100.0%	100%	100.0%	100.0%	100.0%	100.0%	100.0%		100.0%	100.0%
In/Out Splits:	(3)		(9)		(15)		(16)		(19)	
	In	Out	In	Out	In	Out	In	Out	In	Out
AM	96%	4%	61.0%	39.0%	20.0%	80.0%	41.0%	59.0%	0.0%	0.0%
MD	39%	61%	55.0%	45.0%	51.0%	49.0%	68.0%	32.0%	100.0%	0.0%
PM	5%	95%	47.0%	53.0%	65.0%	35.0%	59.0%	41.0%	50.0%	50.0%
Sat MD	60%	40%	55.0%	45.0%	50.0%	50.0%	56.0%	44.0%	100.0%	0.0%
Vehicle Occupancy:	(6)		(11)		(14)		(16)		(19)	
Auto	1.42		2.00 2.70		1.21		1.6		2.7	
Taxi	1.42		2.00 2.80		1.40		1.4		2.7	
Truck Trip Generation:	(7,8)		(8,12)		(12)		(15,16)		(18)	
Weekday	0.16		0.35		0.07		0.06		0.025	
Saturday	0.01		0.02				0.01			
	per 1,000 sf		per 1,000 sf		per du		per 1,000 sf		per seat	
	(7,8)		(8,12)		(12)		(15)		(18)	
AM	7.0%		7.7%		12.2%		12.2%		0.0%	
MD	7.0%		11.0%		8.7%		8.7%		11.0%	
PM	3.0%		1.0%		1.0%		0.0%		1.0%	
Sat MD	11.0%		11.0%		0.0%		0.0%		11.0%	
	In	Out	In	Out	In	Out	In	Out	In	Out
All Periods	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%

Notes :

- (1) Source: *City Environmental Quality Review (CEQR) Technical Manual*, Appendix 3, 2001.
- (2) Saturday trip generation assumed to be 5% of weekday generation, consistent with assumptions in the *Coliseum Redevelopment FSEIS*, July 1997.
- (3) Pushkarev & Zupan, "Urban Space for Pedestrian," 1975. Saturday rate is based on *Coliseum Redevelopment FSEIS*, 1996.
- (4) Downtown Brooklyn Development FEIS, April 2004.
- (5) Source for Saturday data: Atlantic Yards Arena and Redevelopment Project FEIS, Nov. 2006
- (6) Source: NYCDOT ECO Survey data for Downtown Brooklyn.
- (7) Weekday office truck trip rate and temporal distribution based on PHA June 10, 2004 survey at existing office buildings in Midtown and Lower Manhattan.
- (8) Source for Saturday data: *Coliseum Redevelopment FSEIS*, July 1997.
- (9) Based on data for Land Use 820 (Shopping Center) from *ITE Trip Generation*, 7th Edition.
- (10) Based on data from transportation survey in the Plaza at the Hub in the Bronx 2006.
- (11) Based on Retail Survey at Atlantic Center, Brooklyn December, 1997.
- (12) Federal Highway Administration, "Curbside Pickup and Delivery and Arterial Traffic Impacts," 1981.
- (13) Saturday residential trip rate based on ratio of weekday/Saturday trip rates from *ITE Trip Generation*, 7th Edition, Land Use 220 (Apartment).
- (14) Based on 2000 Census journey-to-work data. Saturday modal split adjusted to reflect anticipated higher walk and auto mode shares compared to a weekday.
- (15) *Coliseum FSEIS* 1997.
- (16) Renaissance Plaza Expansion EAS, March 2003 and data from Marriott Hotel Transportation Survey, AKRF, August 1999.
- (17) Based on Harlem Park EIS.
- (18) Seventh Regiment Armory EAS, 2005.
- (19) Based on data from Lincoln Center Transportation Survey December, 2000. PM and Saturday PM temporal distributions are recommended by NYCDOT.

Destination Retail

It is anticipated that the retail uses developed under the Build scenario would be a mix of destination (or “big-box”) retail, specialty retail and local retail, attracting trips from the residential and worker populations on-site and in the surrounding neighborhood, as well as from neighborhoods outside the study area. It is anticipated that some number of these retail trips would be via the walk mode, and that many would be “linked” trips (e.g., a trip with multiple purposes, such as stopping at a retail store while commuting to or from work or home) and would therefore not represent the addition of new discrete trips to the study area transportation systems. For the purposes of the demand forecast, it is assumed that 40 percent of retail trips would be such “linked” trips, consistent with the rates assumed for other retail developments in New York City. The forecast of travel demand and the temporal distribution for proposed retail development was based on data for Land Use 820 (Shopping Center) from *ITE Trip Generation, 7th Edition*, while the modal split reflects data from a 2006 transportation survey done in the Plaza at the HUB, which is located in the Bronx. The vehicle occupancy was based on a December 1997 survey of retail patrons conducted at Atlantic Center in Brooklyn.

Truck Trips

Truck trip generation rates and temporal distributions for the office and retail uses were based on data from the July 1997 *Coliseum Redevelopment FSEIS* and from a 2004 PHA survey of existing office buildings in Midtown and Downtown Manhattan. Data from the *Renaissance Plaza Expansion EAS* were utilized for forecasting truck trip generation for the hotel use, while truck trips from the residential and retail uses were forecast based on data from the Federal Highway Administration’s, *Curbside Pickup and Delivery and Arterial Traffic Impacts*, 1981. Truck trip generation rates and temporal distributions for the cultural facility use were based on data from the December 2000 transportation survey conducted at Lincoln Center.

TRIP GENERATION

Table 2 shows a preliminary estimate of the peak hour person trips (versus the No-Build condition) that would occur in 2012 with implementation of the proposed project. The numbers in Table 2 do not yet reflect trips that would be eliminated by the displacement of existing land uses on the site. (These trips, which are expected to be minimal, will be incorporated into the forecast as project planning advances.) As shown in Table 2, the proposed project would generate approximately 2,345 person trips in the AM peak hour, 4,790 in the midday, 5,371 in the PM peak hour and 6,932 in the Saturday midday peak hour. Project-generated person trips by auto and taxi would total 435 in the AM peak hour, 1,002 in the midday, 1,223 in the PM peak hour and 1,929 in the Saturday midday peak hour. Project-generated peak hour subway trips would total 1,072, 1,192, 1,921 and 1,206 during these periods, respectively, while peak hour bus trips would total 295 in the AM peak hour, 526 in the midday, 645 in the PM peak hour and 1,294 in the Saturday midday peak hour.

**Table 2
EAST 125 STREET DEVELOPMENT TRAFFIC DEMAND FORECAST SUMMARY**

Land Use:	<u>Office</u>		<u>Destination Retail</u>		<u>Residential</u>		<u>Hotel</u>		<u>Cultural Facility</u>		<u>Total</u>		
Size/Units:	300,000	gsf	470,000	gsf	1,000	D.U.	130	rooms	500	seats			
Peak Hour Trips:													
	AM	637	893	735	81	0							
	MD	810	3,377	380	101	120							
	PM	740	3,455	864	94	219							
	Sat MD	41	5,905	630	84	274							
Person Trips:													
		<u>In</u>	<u>Out</u>	<u>In</u>	<u>Out</u>	<u>In</u>	<u>Out</u>	<u>In</u>	<u>Out</u>	<u>In</u>	<u>Out</u>	<u>In</u>	<u>Out</u>
AM	Auto	73	3	82	52	21	82	7	10	0	0	183	147
	Taxi	6	0	49	31	1	6	5	7	0	0	61	44
	Subway	416	17	142	91	75	300	13	19	0	0	646	426
	Commuter Rail	6	0	5	3	1	6	0	0	0	0	13	9
	Bus	73	3	65	42	22	88	1	1	0	0	161	134
	Walk/Other	37	2	202	129	26	106	8	11	0	0	273	248
	Total	611	25	545	348	147	588	33	48	0	0	1336	1009
MD	Auto	6	10	279	228	27	26	14	6	41	0	367	270
	Taxi	3	5	167	137	2	2	10	5	34	0	216	149
	Subway	22	35	483	395	99	95	28	13	23	0	655	537
	Commuter Rail	0	0	19	15	2	2	0	0	2	0	23	17
	Bus	22	35	223	182	29	28	2	1	5	0	281	245
	Walk/Other	262	410	687	562	35	33	16	7	16	0	1016	1013
	Total	316	494	1,858	1,519	194	186	70	32	121	0	2559	2231
PM	Auto	4	84	244	275	79	42	11	8	37	37	375	446
	Taxi	0	7	146	165	6	3	8	5	31	31	191	211
	Subway	25	478	422	476	286	154	22	15	21	21	777	1144
	Commuter Rail	0	7	16	18	4	4	0	0	2	2	23	31
	Bus	4	84	195	220	84	45	2	1	4	4	290	355
	Walk/Other	2	42	601	677	101	54	13	9	14	14	731	797
	Total	37	703	1,624	1,831	560	304	56	38	109	109	2386	2985
Sat MD	Auto	3	2	552	452	63	63	9	7	93	0	720	524
	Taxi	0	0	325	266	3	3	7	5	77	0	411	274
	Subway	17	11	487	399	104	104	19	15	52	0	678	528
	Commuter Rail	0	0	32	27	3	3	0	0	5	0	41	30
	Bus	3	2	649	531	47	47	1	1	11	0	712	582
	Walk/Other	1	1	1,202	983	94	94	11	8	36	0	1344	1087
	Total	24	16	3,247	2,657	315	315	47	37	274	0	3907	3025
Vehicle Trips :													
		<u>In</u>	<u>Out</u>	<u>In</u>	<u>Out</u>	<u>In</u>	<u>Out</u>	<u>In</u>	<u>Out</u>	<u>In</u>	<u>Out</u>	<u>In</u>	<u>Out</u>
AM	Auto (Total)	51	2	41	26	17	68	4	6	0	0	113	102
	* Taxi	4	4	27	27	4	4	6	6	0	0	41	41
	Truck	2	2	6	6	4	4	0	0	0	0	12	12
	Total	57	8	74	59	25	76	10	12	0	0	166	155
MD	Auto (Total)	4	7	140	114	22	22	9	4	15	0	190	147
	* Taxi	3	3	106	106	1	1	7	7	13	13	130	130
	Truck	2	2	9	9	3	3	0	0	0	0	14	14
	Total	9	12	255	229	26	26	16	11	28	13	334	291
PM	Auto (Total)	3	59	122	137	65	35	7	5	14	14	211	250
	* Taxi	5	5	118	118	4	4	7	7	17	17	151	151
	Truck	1	1	1	1	0	0	0	0	0	0	2	2
	Total	9	65	241	256	69	39	14	12	31	31	364	403
Sat MD	Auto (Total)	2	1	204	167	52	52	6	5	34	0	298	225
	* Taxi	0	0	139	139	3	3	6	6	28	28	176	176
	Truck	0	0	0	0	0	0	0	0	0	0	0	0
	Total	2	1	343	306	55	55	12	11	62	28	474	401

* Taxi trips are balanced.

Trips made solely by the walk mode would total 521 in the AM peak hour, 2,029 in the midday peak hour, 1,528 in the PM peak hour and 2,431 in the Saturday midday peak hour. Given the proposed project's relatively close distance to the 125th Street Metro-North commuter rail station, this mode would generate an estimated 22 trips in the AM peak hour, 40 trips in the midday peak hour, 54 trips in the PM peak hour and 71 trips in the Saturday midday peak hour.

Table 2 also shows a preliminary estimate of the project generated peak hour vehicle trips (auto, taxi and truck) that would occur in 2012 with implementation of the proposed project. Overall, as shown in Table 2, project generated vehicle trips en route to and from the study area would total 297 in the AM peak hour, 597 in the midday peak hour, 763 in the PM peak hour and 875 in the Saturday midday peak hour. In the AM peak hour there would be 215 project generated auto trips (inbound and outbound combined) and 82 taxi trips. In the midday peak hour, auto and taxi trips would total 337 and 260, respectively, while in the PM peak hour, auto trips would total 461 and taxi trips would total 302. In the Saturday midday peak hour, auto and taxi trips would total 523 and 352, respectively. (All taxi trips have been balanced to reflect that a proportion of taxis dropping off inbound passengers would be available to accommodate outbound trips.) Project generated truck trips would total 24 in the AM peak hour, 28 in the midday, 4 in the PM peak hour and none in the Saturday midday peak hour.

PARKING

Parking demand from office, and retail uses typically peaks in the weekday midday period and declines during the afternoon and evening. By contrast, residential and hotel demand typically peak in the overnight period. The analyses will document changes in off-street parking utilization in the No-Build and Build conditions within 1/4-mile of the project site during the weekday midday and overnight peak periods. On-street parking conditions (existing curbside regulations and parking utilization) within the study area will also be documented for these periods

Parking demand generated by new residential development will be forecast based on auto ownership data for the proposed project area derived from the 2000 Census. A rate of 0.20 spaces per room overnight will be assumed for parking demand from new hotel space based on data from the *Renaissance Plaza Expansion EAS*. Parking demand from new office and retail space will be derived from the forecasts of daily auto trips for these uses. Tables 3 and 4 show the parking accumulation for the proposed project during a weekday and a Saturday, respectively.

SELECTION OF PEAK HOURS FOR ANALYSIS

As discussed above, the proposed project would result in 321 vehicle trips (auto, taxi and truck) in the AM peak hour, 625 in the midday peak hour, 767 in the PM peak hour and 875 in the Saturday midday peak hour. Under *CEQR Technical Manual* criteria, if a proposed action in any area of the City would generate fewer than 50 peak hour vehicle trip ends, a need for further traffic analysis would be unlikely. The EIS traffic analyses will therefore quantitatively examine conditions in the weekday AM, midday, PM, and Saturday midday peak hours.

**Table 3
EAST 125TH STREET DEVELOPMENT TRAFFIC PLANNING ASSUMPTIONS
WEEKDAY ACCUMULATIONS**

	Office (1) 300,000 gsf		Destination Retail (2) 470,000		Residential (3)(4) 1,000 DU		Hotel (5) 130 DU		veh/rm 0.4		Cultural Facility (6) 500 seats		Total Accum.
	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	
	456 Total auto trips/day based on 12% auto share		2,912 AM/PM TRIPS		934 Total auto trips/day		154 Total auto trips/day		52 Total auto trips/day		138 Total auto trips/day		
12-1 AM	0	0	0	0	2	2	0	0	0	0	0	0	402
1-2	0	0	0	0	2	2	0	0	0	0	0	0	402
2-3	0	0	0	0	2	2	0	0	0	0	0	0	402
3-4	0	0	0	0	2	2	0	0	0	0	0	0	402
4-5	0	0	0	0	2	2	0	0	0	0	0	0	402
5-6	0	0	0	0	3	10	0	0	0	0	0	0	395
6-7	4	0	4	7	8	28	0	1	51	0	0	0	383
7-8	18	0	22	16	10	29	1	2	50	0	0	0	386
8-9	51	2	71	41	17	68	4	6	48	0	0	0	397
9-10	29	5	95	87	17	25	3	6	45	0	0	0	480
10-11	7	5	97	109	17	29	3	3	45	0	0	0	525
11-12	3	7	93	124	18	25	3	4	44	0	0	0	553
12-1 PM	4	7	90	140	22	22	9	4	49	15	0	18	596
1-2	7	3	94	127	24	24	7	9	47	3	0	21	609
2-3	7	4	97	115	25	23	5	12	40	0	0	0	594
3-4	8	11	94	114	33	19	6	5	41	3	3	21	590
4-5	3	59	38	122	65	35	7	5	43	14	14	21	551
5-6	5	33	10	119	49	21	6	6	43	7	7	21	538
6-7	6	13	3	114	49	26	7	5	45	14	3	32	570
7-8	2	5	0	122	45	30	6	4	47	7	3	36	608
8-9	0	0	0	66	36	19	4	2	49	2	2	36	581
9-10	0	0	0	26	8	12	3	1	51	0	6	30	472
10-11	0	0	0	7	6	7	1	0	52	0	0	0	417
11-12	0	0	0	0	5	5	0	0	52	0	0	0	403
	154	154		1456	467	467	75	75	68	68			

Notes:

- (1) Hourly pattern for office use are based on Pushkarev & Zupan, "Urban Space for Pedestrian. Lower auto-share in late morning and afternoon is reflected in the parking pattern
- (2) Destination retail pattern from ITE Trip Generation Handbook Land Use code 820, Shopping Centre.
- (3) Temporal distribution source: ABC West End Avenue Properties FEIS, p.I.I-41.
- (4) Assumes 8.075 pers-trips/D.U.; 14% and 20% auto mode share for weekday and Saturday respectively; and 1.65 auto occupancy.
- (5) Based on Marriott Hotel Transportation Survey, AKRF, August 1999.
- (6) Hourly pattern are based on PHA transportation planning assumptions.

**Table 4
EAST 125TH STREET DEVELOPMENT TRAFFIC PLANNING ASSUMPTIONS
SATURDAY ACCUMULATIONS**

	Office (1) 300,000 gsf		Destination Retail (2) 470,000		Residential (3)(4) 1,000 DU		Hotel (5) 130 room		veh/rm 0.4		Cultural Facility (6) 500 seats		Total Accum
	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	
12-1 AM	0	0	0	0	2	2	0	0	0	0	0	0	402
1-2	0	0	0	0	2	2	0	0	0	0	0	0	402
2-3	0	0	0	0	2	2	0	0	0	0	0	0	402
3-4	0	0	0	0	2	2	0	0	0	0	0	0	402
4-5	0	0	0	0	2	2	0	0	0	0	0	0	402
5-6	0	0	0	0	4	13	0	0	0	0	0	0	393
6-7	0	0	0	0	11	38	0	0	0	0	0	0	372
7-8	1	0	16	8	13	39	0	3	49	0	0	0	352
8-9	3	0	24	16	18	59	4	6	47	0	0	0	320
9-10	2	0	73	19	23	35	2	4	45	0	0	0	362
10-11	1	0	151	70	23	40	4	4	45	0	0	0	427
11-12	0	1	177	112	24	40	4	5	44	0	0	0	474
12-1 PM	1	2	193	145	34	43	5	5	44	0	3	0	515
1-2	2	1	204	167	52	52	6	5	45	0	37	0	588
2-3	2	1	201	195	34	33	4	7	42	0	0	0	593
3-4	0	1	182	209	55	36	6	5	43	0	0	0	585
4-5	0	2	149	218	62	41	4	4	43	0	3	34	532
5-6	0	3	109	206	69	45	10	5	48	3	34	34	461
6-7	0	1	63	130	65	27	6	6	48	5	0	39	437
7-8	0	0	31	50	61	26	5	4	49	22	0	61	476
8-9	0	0	25	37	45	26	4	3	50	0	0	61	484
9-10	0	0	9	18	16	16	3	2	51	0	3	58	472
10-11	0	0	8	12	9	10	2	1	52	0	55	3	413
11-12	0	0	0	0	7	6	0	0	52	0	0	0	402
	12	12	1623	1623	635	635	69	69	67	67	67	67	

Notes:

- (1) Hourly pattern for office use are based on Pushkarev & Zupan, "Urban Space for Pedestrian.
- (2) Destination retail pattern from ITE Trip Generation Handbook Land Use code 820 , Shopping Centre.
- (3) Temporal distribution source: ABC West End Avenue Properties FEIS, p.I.I-41.
- (4) Assumes 8.075 pers-trips/D.U.; 14% and 20% auto mode share for weekday and Saturday respectively; and 1.65 auto occupancy.
- (5) Based on Marriott Hotel Transportation Survey , AKRF, August 1999.
- (6) Hourly pattern are based on PHA transportation planning assumptions.

Transit (subway and bus) analyses generally examine conditions during the weekday AM and PM peak commuter periods, as it is during these times that overall transit demand (and the potential for significant adverse impacts) is typically greatest. The analyses of subway and bus conditions will therefore focus on these two periods.

Walk-only trips from the proposed project (i.e., walk trips not associated with other modes) would be widely dispersed among pedestrian facilities connecting the project site to the surrounding street system and would typically be most concentrated during the weekday midday (lunch time) and Saturday midday periods. By comparison, new pedestrian trips associated with the subway, bus and commuter rail modes would typically be most concentrated in the weekday AM and PM commuter peak hours. The pedestrian analyses will therefore examine conditions during the weekday AM and PM commuter peak hours, as well as the weekday midday and Saturday midday peak hours when trips generated by the proposed project's retail/entertainment components would be greatest.

VEHICLE TRIP ASSIGNMENT

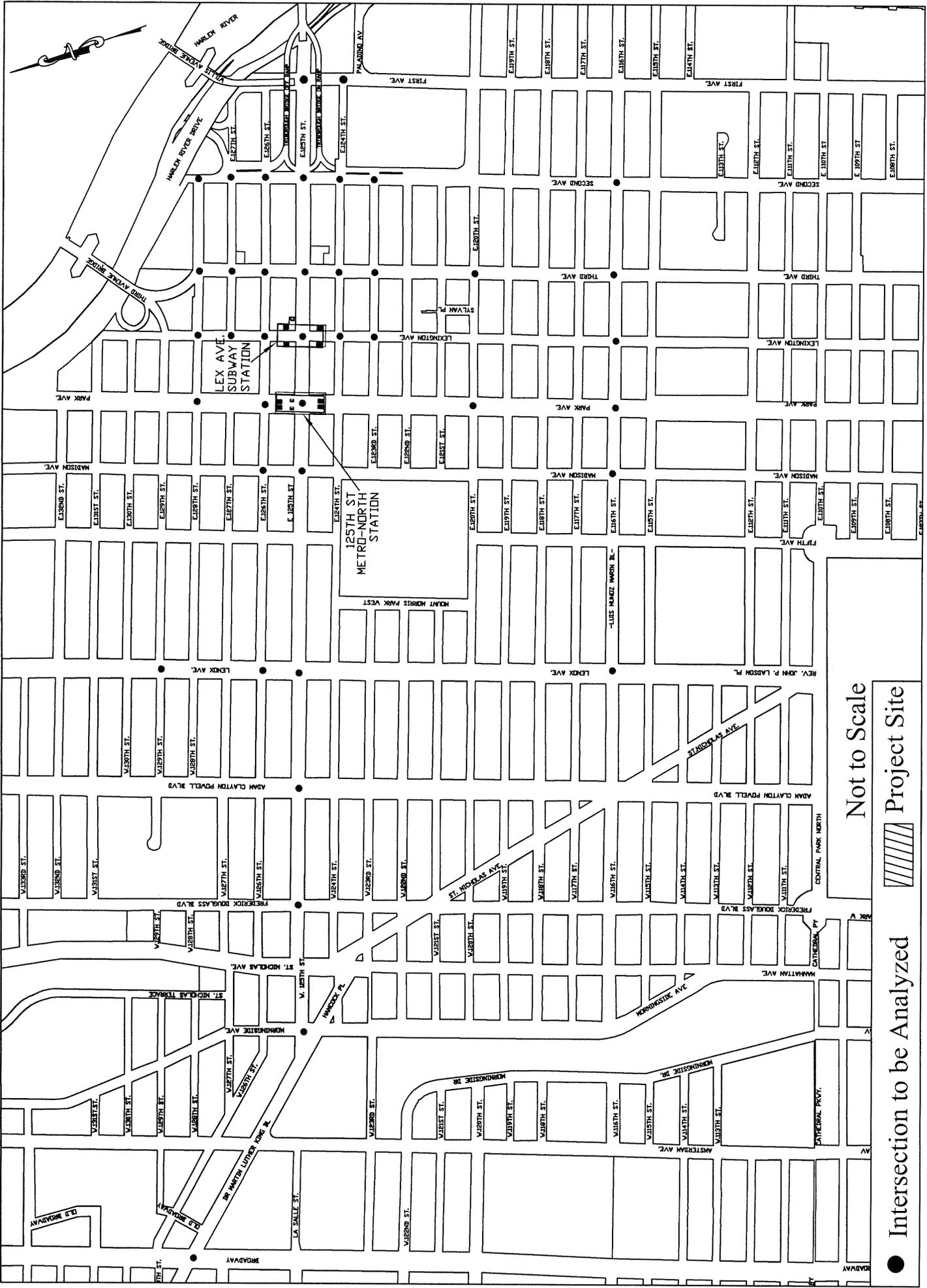
Auto/Taxi

The study area street network is a grid system of north-south avenues and east-west streets (see Figure 1). Most are one-way, although East 125th Street is bi-directional. Principal arterials include East 125th Street adjacent to the project site, which runs east-west, and First and Third avenues which run northbound and Second and Madison Avenues which run southbound. The intersections proposed for analysis are shown on Figure 1 along with the street directions and locations of nearby subway and Metro-North stations.

As discussed above, the proposed project would result in 321 vehicle trips (auto, taxi and truck) in the AM peak hour, 625 in the midday peak hour, 767 in the PM peak hour and 875 in the Saturday midday peak hour. Within the study area, these trips would typically travel along the four major north-south arterials and along East 125th Street to access the area of the project site. The minor street system, of East 124th Street (eastbound), East 126th Street (westbound), East 127th Street (eastbound) and East 128th Street (eastbound) would also be used by vehicles for local circulation to and from the immediate vicinity of the project site. Project-generated traffic is therefore expected to be most concentrated at intersections along the principal arterials and local streets adjacent to the project site providing access to and from the proposed project's garage facility. The specific intersections included in the traffic analysis were determined based upon the assignments of project-generated traffic to the study area street network. Figures 2 and 3 show the trip distribution percentages for the inbound vehicles trips and outbound vehicles trips, respectively.

Truck

Truck trips en route to and from the study area will be assigned to designated local and through truck routes. These include East 125th Street, First Avenue, Second Avenue, Third Avenue, and Madison Avenue. It is also assumed that many of these truck trips will be traveling to and from the Triborough Bridge.



Not to Scale

Project Site

● Intersection to be Analyzed



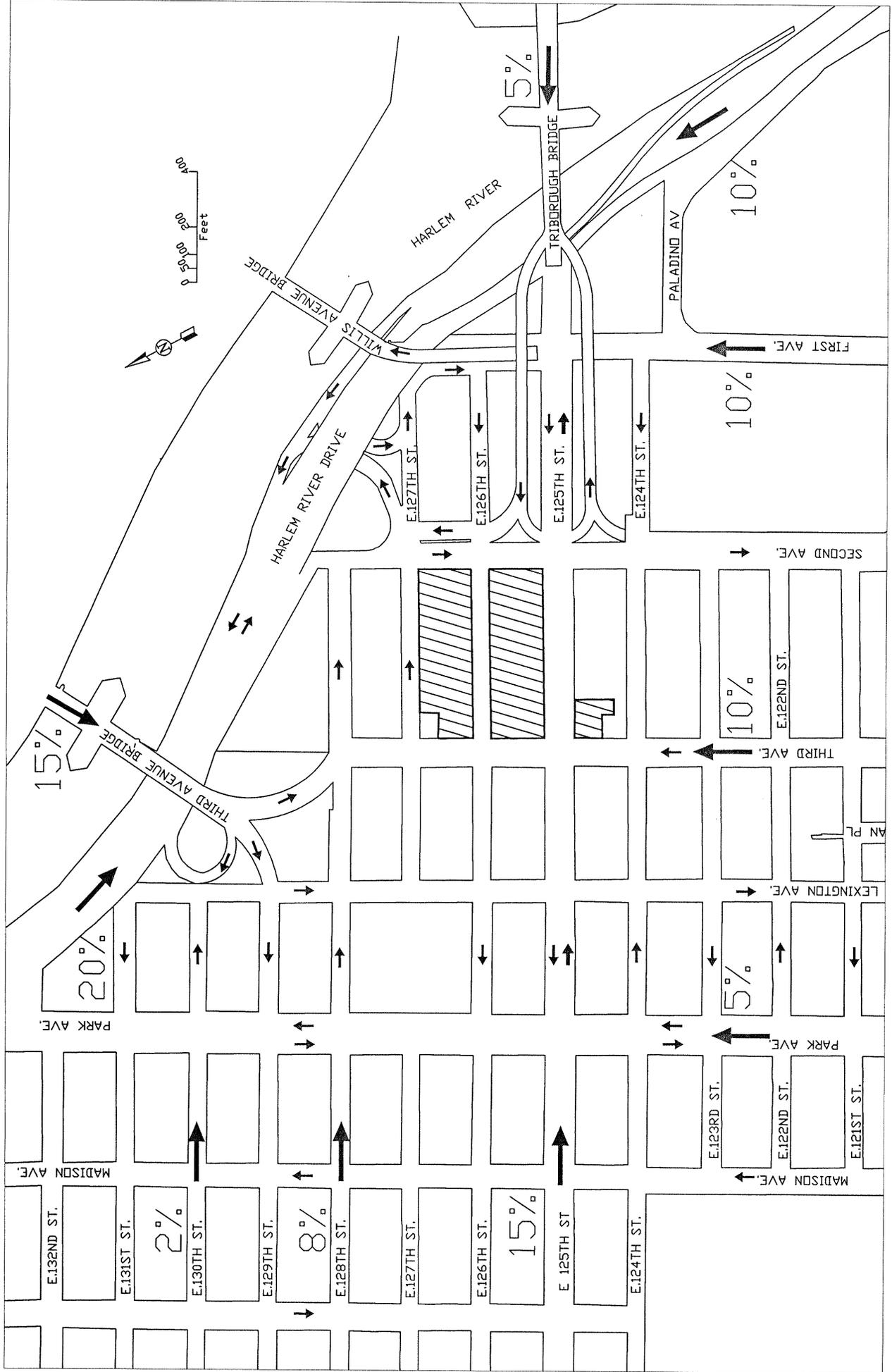
East 125th Street Development

Figure 1
Traffic Study Area

East 125th Street Development EIS

Figure 2

Percentages of Inbound Trip Distribution

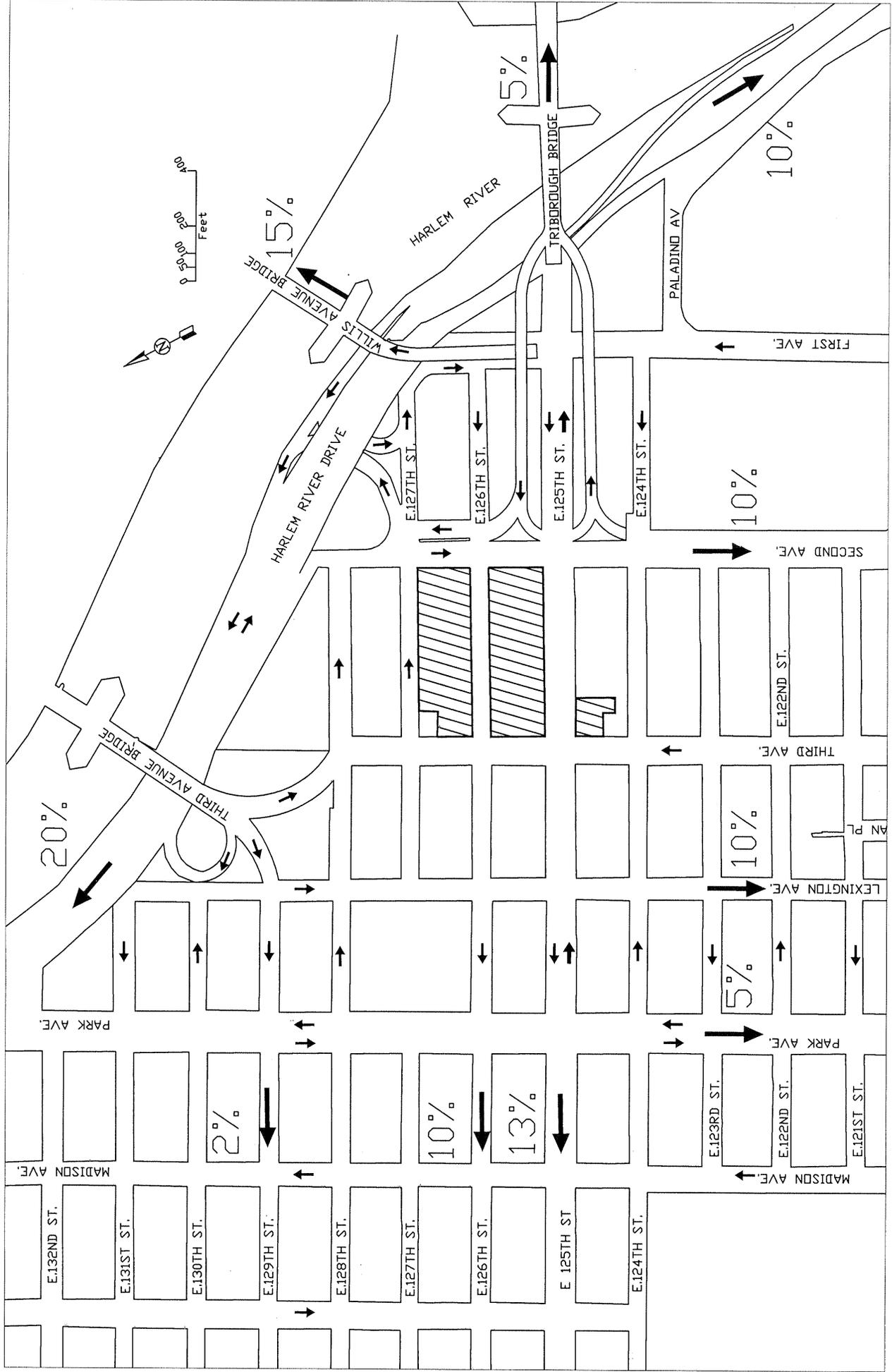


Project Site

East 125th Street Development EIS

Figure 3

Percentages of Outbound Trip Distribution



Project Site

SELECTION OF TRANSIT FACILITIES FOR ANALYSIS

As shown in Figure 1, one subway station and one commuter rail station are located in proximity to the proposed project. These are the 125th Street IRT (4,5,6) subway station at Lexington Avenue and the 125th Street Metro-North station at Park Avenue. Based on the preliminary travel demand forecast, in the AM peak hour, project generated subway trips would total 1,072, and Metro-North trips would total 22. In the PM peak hour, subway trips would total 1,921 and Metro-North trips would total 54. Under *CEQR Technical Manual* criteria, if a proposed project in any area of the City would generate fewer than 200 peak hour subway or bus trips, it is unlikely that there would be a need for further analysis. The 125th Street IRT subway station will therefore be analyzed quantitatively in the EIS.

Approximately eight MTA NYC Transit local bus routes are located within 1/4-mile of the project site along East 125th Street, and First, Second, Third and Madison Avenues. These routes include the Bx15, M15, M35, M60, M98, M100, M101, and M103 bus routes. As shown in Table 2, based on the preliminary travel demand forecast, the proposed project would generate 295 bus trips in the AM peak hour and 645 in the PM peak hour. As the proposed project would generate more than 200 new bus trips in both the AM and PM peak hours, the EIS will quantitatively analyze future bus conditions with the proposed project on these routes in both these periods.

SELECTION OF PEDESTRIAN ANALYSIS LOCATIONS

A quantitative analysis of pedestrian conditions in the vicinity of the project site will be included in the EIS to evaluate the pedestrian characteristics on the public sidewalks, corners and crosswalks connecting the site to the surrounding street system. The study area for the pedestrian analysis will focus on locations along the East 125th Street, East 126th Street, East 127th Street, Third Avenue and Second Avenue frontages of the project site.