

**Ideas to Reduce Roadway Noise, Improve Safety and
Increase Livability**

Jackson Heights Commercial Core
***(74th Street, 82nd Street,
37th Avenue, Roosevelt Avenue)***

Jackson Heights, Queens, NY

Draft for community review

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Submitted to the Coalition for a Quiet Jackson Heights

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Credits

The report, drawings, workshop, data and analysis was produced with the able assistance of Elena Patarini.

Overview

This report culminates a study investigating roadway noise and its causes in the commercial core of Jackson Heights in Queens, New York. The focus of this study is on physical and regulatory changes to the transportation system. In the past much emphasis has been given to “enforcement” and “education”. Yet our experience is that enforcement is fleeting and education is dubious. Better to rely on self-enforcing, self-explaining and self-evident measures.

We found a high percentage of livery cars (up to 27%) and delivery vans/trucks (up to 15%) in the study area, but few large trucks. This compares favorably to surrounding streets, but is nevertheless harmful to the historic buildings and cohesiveness of the neighborhood. On one historic-residential street we counted one truck every two minutes. Measures to reduce truck and livery car traffic are discussed including restricted delivery times, integrated deliveries, taxi stands, and prohibitions of truck turns.

We found some double parking (max 2/hr), more illicit parking (up to 12/hr) and much meter feeding (up to 39%). Measures to better manage the parking supply are discussed including meters which detect feeding, muni-meters, coordination with parking lots, more flexible loading zones, curb extensions, bus bulbs, and removed rush hour regulations. We end with a discussion of reduced parking supply via part-time pedestrian malls. These would have the most impact on roadway noise.

The objective of this report is not to provide finalized recommendations, rather solid evidence and an honest discussion of the issues. The hope is that the Coalition for a Quiet Jackson Heights takes the findings and engages the larger community in a discussion of roadway noise and its root causes.



Figure 1: Curb Extensions with Benches, 82nd Street

Issues

Community Observations

The project team and the Coalition set the project boundaries as the rectangle bounded by Roosevelt Avenue, 86th Street, 37th Avenue and 72nd Street. This encompasses four of the major commercial streets, the most pedestrian activity and the two subway lines of the neighborhood. The project team created a series of neighborhood maps (see maps B1, B2 and B3) and the Coalition identified the following issues contributing to excessive neighborhood noise:

1. Honking by drivers frustrated with traffic congestion due to double parked vehicles, partially due to meter feeding on the commercial streets – 82nd Street, 74th Street, 37th Avenue, and Roosevelt Avenue
2. Honking by livery car drivers illegally cruising for fares
3. Heavy truck traffic off designated truck routes
4. Honking by drivers frustrated with traffic congestion at T-intersections along Roosevelt Avenue where all traffic must turn.
5. Heavy U-turn traffic along 37th Avenue
6. Confusing intersection for drivers, cyclists and pedestrians at Roosevelt Avenue and Broadway.
7. Heavy traffic on Roosevelt Avenue, Northern Boulevard and the Brooklyn-Queens Expressway.
8. Elevated train on Roosevelt Avenue (#7).

We agreed to focus on the first three on the list. They were manageable for the group, realistic and within the scope of the project. In that the issues have to do with traffic and driver behavior, the Coalition decided to perform two surveys in July and August 2003:

- vehicle type, and
- meter usage and illegal parking.

The vehicle type survey tells us how many trucks (small and large), busses and livery cabs are in the area. For example we will know if large trucks are driving off the designated truck routes. We will know what percentage of vehicles are livery cabs that may or may not be cruising for fares (and honking).

The meter usage and illegal parking survey tells us how the existing parking supply is used, legally and illegally. For example on our block with 80 meter hours, 20 of those hours may be occupied by the same vehicles. Their drivers are feeding the meters. Similarly we can understand how many vehicles are parking in crosswalks, at hydrants and double parked. This will substantiate (or not) the perception that double parking causes drivers to honk. This survey will also tell us if there really is a lack of parking in the area, or if the parking supply is simply being misused. This survey also tells us if there is

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enough delivery parking in the area, based on the number of trucks parked at meters and elsewhere. Or if other vehicles are illegally parking in truck loading zones.

Simultaneously the project team surveyed the on-street parking supply in area through what is known as a Curb Allocation survey. This tells us what each portion of curb is used for and when: meters, street cleaning, driveways, fire hydrants, loading zones, bus stops. As many uses vary during the course of a day (no standing zones during rush hours or street cleaning) an additional variable is calculated known as a parking-hour.

For example 83rd Street between Roosevelt and 37th Avenues is 720 feet long and has space for 40 cars on each side. On the east side there are five meters, three hydrants and one bus stop. The west has eight meters and one driveway. On Wednesday the east side of the street is cleaned. As shown in Table 1, multiplying each space by the number of hours one may or may not park there on a typical Wednesday yields 114 no parking-hours, 122.5 metered parking-hours and 723.5 free (unmetered) parking-hours. Similar surveys were performed on all blocks in the study area.

Space/regulation	Eastside		Westside		Both Sides	
	Spaces	Parking-hours	Spaces	Parking-hours	Spaces	Parking-hours
Hydrant (= 1.5 spaces)	3	54			3	54
Bus stop (= 4 spaces)	1	48			1	48
Driveway (= 1 space)			1	12	1	12
No Parking Subtotal		102		12		114
Meter (9 AM - 7 PM, 7 days)	5	50	8	80	13	130
Street cleaning (8.30-10.00 AM, Wed)		-7.5				-7.5
Metered Subtotal		42.5		80		122.5
No Regulation	31	372	31	372	62	744
Street Cleaning (8.30-10.00 AM, Wed)		-46.5				-46.5
Before Meter		10		16		26
Free Subtotal		335.5		388		723.5
Total	40	480	40	480	80	960

Table 1: Curb Allocation on 83rd Street, 7 AM – 7 PM on Wednesday

Roadway Noise

As the impetus for this work is roadway noise, we surveyed the sound levels in the area to validate the concerns of the group. The measurements were taken on May 16th, 2003 with a digital decibel reader. Each survey was two minutes long and taken 25 feet away from the center of the nearest travel lane. According to Chapter 6 of Title 15 of the Rules of the City of New York, allowable sound levels are 92 dB for vehicles over four tons (trucks), 88 dB for motorcycles and 82 dB for all other vehicles (cars) on streets with speeds of 35 mph or less.¹ From Table 2 three of the four sites identified by the group exceed the maximum legal sound levels for trucks. At all four sites the ambient noise is higher than 50 dB, the level at which sound becomes generally bothersome to humans. The levels are mapped on Map B4.

It is also important to note the difference in ambient sound levels and the spikes (maximum). A change of 10 dB either doubles or halves the noise level, a change of 5 dB is “perceptible”, and a change of 3 dB or less is barely noticeable to the human ear. On 74th Street, the sound spike is almost five times greater than the ambient level. The conclusion is that, regardless of the actual levels, sound spikes truly bother people.

There is a correlation between roadway noise and vehicle speed and size. If one reduces vehicle speeds, manage traffic to reduce aggressive driving, and organize traffic patterns to keep larger vehicles on designated routes, in short, to calm traffic, then the street will be less noisy. Other measures to reduce roadway noise (plant trees, remove elevated trains, convert trucks to solar or battery powered, etc.) fall outside the project scope.

Location	Ambient dB	Maximum dB	Difference dB
37 th Av, 79 th to 80 th St	57	86	29
74 th St, Roosevelt to 37 th Av	54	93	39
82 nd St, Roosevelt to 37 th Av	67	97	30
Roosevelt Av, 74 th to 75 th Street	60	97	37

Table 2: Noise Levels in Jackson Heights

¹ The legal allowable sound levels for speeds of more than 35 mph are: trucks 96 dB, motorcycles 92 dB, cars 88 dB. All of the streets in the study area have a speed limit of 30 mph.

Survey and Analysis

Trucks and Livery Cars

The Coalition suggested that there was an overabundance of trucks and livery cars in the neighborhood contributing to roadway noise via rumbling and honking. To substantiate this claim we (the project team and coalition) performed vehicle classification surveys on the four streets which were thought to have the most noise. The surveys were taken on a typical weekday afternoon and a typical Saturday afternoon, the times when noise was perceived to be worst. Each survey lasted 30 minutes. The truck category includes commercial vans, delivery (UPS) trucks and large, 3-axel trucks. The bus category includes large and small busses, ambulettes and for hire passenger vans. Livery cars are for hire, non-medallion taxis. The findings are presented in Table 3 and Table 4 and in Map B5.

Location	Car	Livery	Truck	Bus	Total
37 th Av, 74 th – 75 th St	430	84	44	6	564
	76%	15%	8%	1%	
74 th St, 37 th – Roosevelt Av	142	28	8	12	190
	75%	15%	4%	6%	
82 nd St, 37 th – Roosevelt Av	136	56	40	32	264
	52%	21%	15%	12%	
85 th St, 37 th – Roosevelt Av	154	24	16	4	198
	78%	12%	8%	2%	
total	862	192	108	54	1216
	71%	16%	9%	4%	

Table 3: Vehicle Type, Weekdays, 3-7 PM (30 min. counts)

Location	Car	Livery	Truck	Bus	Total
37 th Av, 74 th – 75 th St	536	92	12	0	640
	84%	14%	2%	0%	
74 th St, 37 th – Roosevelt Av	208	84	12	6	310
	67%	27%	4%	2%	
82 nd St, 37 th – Roosevelt Av	210	40	24	18	292
	72%	14%	8%	6%	
85 th St, 37 th – Roosevelt Av	224	28	8	0	260
	86%	11%	3%	0%	
total	1178	244	56	24	1502
	78%	16%	4%	2%	

Table 4: Vehicle Type, Saturdays, 2-6 PM (30 min. counts)

As a way to judge whether there are too many trucks on these streets or not, we can compare to similar counts on surrounding roadways. According to the NYC Department of Transportation report *New York City Bridge Traffic Volumes 2001*, trucks and commercial vans constitute 13 percent of afternoon traffic on the closest bridges to Jackson Heights, as shown in Table 5.

Location	Trucks	Total Volume
Roosevelt Avenue Bridge	425	4536
Flushing Bridge	1327	11287
Greenpoint Avenue Bridge	970	5502
Hunters Point Bridge	218	1541
Totals	2940	22866
Percentage	13%	

Table 5: Trucks on Nearby Bridges, Weekdays 4-7 PM

Trucks on 82nd Street

The comparison to nearby bridges suggests that trucks are not a serious issue, except for 82nd Street with 15 percent trucks on weekday afternoons. As that street is a commercial spine, it follows that there will be trucks. Yet it must be asked if these trucks need to be on this street at this time period. Would it be possible to shift delivery hours to the early morning or late night, times when the street is not crowded with pedestrians? Similarly one wonders why eight percent of Saturday afternoon traffic are commercial vans and trucks.

Trucks on 37th Avenue and 85th Street

Eight percent of weekday afternoon traffic on these streets are trucks. While 37th Avenue is certainly commercial, it is not a designated truck route. Yet it is a through route and one wonders if some of these trucks are using the street as a bypass to the truck routes on Broadway, Roosevelt Avenue and Northern Boulevard. Conversely 85th Street is almost purely residential, yet there is about one truck every two minutes.

Livery Cabs

Livery cars make up more than one-fourth (27%) of all traffic on 74th Street during Saturday afternoons and more than one-fifth (21%) of all traffic on 82nd Street during weekday afternoons. While livery cars are not restricted to certain routes as trucks are, it is illegal to "cruise" for fares. The number of livery cars, and the reported honking suggest this is a prime area for cruising. Overall livery cabs constitute sixteen percent of traffic during both time periods. It may be worth considering how to better manage this traffic.

Meter Feeding and Illicit Parking

The Coalition suggested that traffic congestion and associated honking by frustrated drivers was due to double parked vehicles on the commercial streets – 82nd Street, 74th Street, 37th Avenue, and Roosevelt Avenue. To investigate this perception we (the project team and coalition) performed two surveys. First we counted all the meters in the area and noted hours of availability. This yields a meter-hour number. For example on the subject blocks there are 150 meters which are available for 534 hours on weekday afternoons and 600 hours on Saturday afternoons.

Next we surveyed parked vehicles once an hour for four hours from 3 to 7 PM on a typical weekday and from 2 to 6 PM on a typical Saturday. We recorded the license plate numbers (last three digits only) and noted where they were parked: at a meter, double parked, at a hydrant, in a crosswalk, etc. This tells us the number of unused meter-hours, number of meter-hours where the driver “fed” the meter, and number of other “illicit” parking activity. [Not all of this behavior is necessarily illegal. For example waiting in the car at a fire hydrant is legal, double parking out of the flow of traffic often does not incur a summons. Feeding the meter is clearly illegal.] Finally we compared the number of meter and illicit activity to the number of meter-hours available, see Table 6 and Table 7 and Map B6.

Location	Meter-hours			Double parking -hours	Other illicit parking -hours	Total illicit parking -hours
	Available	Empty	Feeding			
37 th Av, 73 rd – 76 th St	160	2	41	2	9	11
		1%	26%	--	--	--
74 th St, 37 th – Roosevelt Av	156	2	32	8	46	54
		1%	21%	--	--	--
82 nd St, 37 th – Roosevelt Av	102	6	29	2	1	3
		6%	29%	--	--	--
Roosevelt Av, 82 nd – 86 th Street (north side)	116	17	24	3	14	17
		15%	21%	--	--	--
total	534	27	127	15	70	85
		5%	24%	--	--	--

Table 6: Meter Usage and Illicit Parking, Weekdays, 3-7 PM

Location	Meter-hours			Double parking -hours	Other illicit parking -hours	Total illicit parking -hours
	Available	Empty	Feeding			
37 th Av, 73 rd – 76 th St	160	0	63	5	30	35
		0%	39%	--	--	--
74 th St, 37 th – Roosevelt Av	156	5	55	6	20	26
		3%	35%	--	--	--
82 nd St, 37 th – Roosevelt Av	168	3	31	3	11	14
		2%	18%	--	--	--
Roosevelt Av, 82 nd – 86 th Street (north side)	116	15	18	1	13	14
		13%	16%	--	--	--
total	600	23	166	15	74	89
		4%	28%	--	--	--

Table 7: Meter Usage and Illicit Parking, Saturdays, 2-6 PM

Notes:

1. Meter feeding is counted when a vehicle remains at a meter longer than the time permitted.
2. Other illicit parking includes stopped in a crosswalk, at a hydrant, in a bus stop, at a taxi stand or loading zone, in a driveway, etc.

Meter Feeding

Vehicles parked at meters longer than the time permitted (meter feeding) is a serious issue in the neighborhood, especially on Saturdays. Overall the percentage of meter-hours fed is about one-fourth of the total time available. On 37th Avenue between 73rd and 76th Street the problem reaches almost 40 percent on Saturday afternoons. On 82nd Street, vendors were recorded to have taken many meters for the entire time period.

While extending the time on one's meter while shopping may be desirable, anecdotally we know that many shop keepers park in the morning and feed the meter throughout the day. The problem is that this diminishes the supply of available parking (for shopping or deliveries) and forces drivers to park elsewhere. From Table 6 and Table 7 we note that, except for 74th Street during the week, the amount of double and other illicit parking is less than the amount of meter feeding. Thus if one were to eliminate the feeding, there would be enough room to accommodate all vehicles at metered spaces. This in turn would allow traffic to flow more smoothly and reduce honking.

Empty Meters

There were few, if any free meters during our survey. This undoubtedly fuels the perception that there is a parking shortage in the area. Yet that perception must be countered by the numbers of meter feeders.

The exception is on Roosevelt Avenue where 13-15 percent of meter-hours went unused. We note that the amount of illicit parking almost equals the number of free meters. We are not suggesting that there is a one for one exchange, for the free meter-hours may or may not coincide with the illicit parking, yet this brings up a question about driver behavior. Drivers choose to not park at a meter for various reasons. During our survey regular cars were parked in taxi stands, trucks were double parked next to empty loading zones, and livery cabs were parked in crosswalks next to empty meters. This all begs the question, if we were to free up the 24-28 percent of meters occupied by meter feeders, would other drivers use them?

Double and Other Illicit Parking

82nd Street has the lowest level of illicit parking. This is due to the curb extensions which eliminate parking at fire hydrants and crosswalks. We also note the number of double parked vehicles is one-fourth to one-half of that on 74th Street. This suggests that the curb extensions narrow the street such that drivers feel less comfortable double parking here. The image below shows a similar lack of double parking on 75th Street due to the median.

74th Street sees the highest amount of illicit parking, 54 or 13.5 vehicles per hour on weekday afternoons. We observed that this primarily occurs on the west side where there is a large loading zone. Many delivery vehicles must double park due to cars occupying the loading zone.



Figure 2: Median, 75th Street

Discussion

Traffic

As stated above, the Coalition suggested that there was an overabundance of trucks and livery cars in the neighborhood contributing to roadway noise. Our surveys showed a large percentage of livery cars and delivery vans/trucks, but few larger (3 axle) trucks. On 82nd Street for example the number of passenger cars is reduced to 52 percent due to the amount of vans, trucks and livery cars. Yet compared to surrounding bridge traffic, the number of trucks is not overrepresented. That said, three of the streets studied lie in the Jackson Heights Historic District: 37th Avenue (east of 77th), 82nd Street and 85th Street. Excessive levels of truck traffic is harmful to the historic buildings and cohesiveness of the neighborhood.

Unfortunately there is little to be done about excessive truck traffic. New York City suffers from getting the vast majority of its deliveries via trucks, as opposed to rail. As such, there is simply too much truck traffic in the five boroughs compared to the rest of the country. Typical remedies, No Thru Truck signage, and increased enforcement are often ignored and sporadic at best. The best hope may lie in the NYC-DOT truck route study currently underway. A few minor tweaks may be available to the community though.

First, deliveries could be scheduled for early in the day. This may not always be convenient, but if a binding regulation were made, and the parking regulations similarly altered, it could be made to work. For example loading zones could only be in effect until 2 PM, after which the spaces would be metered.

Second, a system of integrated deliveries could be established using non-motorized transport. UPS, FedEx and other delivery companies use delivery tricycles in parts of Manhattan and elsewhere around the globe. Businesses in the area could pool their resources create a local delivery team. This could be coordinated with an off-street parking lot.

Third, trucks could be prohibited from turning onto the historic, residential side streets via signage supported by curb extensions. An example of this technique is found on 180th Street in Jamaica where curb extension were installed along the border between and industrial street and residential area. A similar treatment is on Norman Avenue in Greenpoint, Brooklyn. On 85th Street the loading zone for the supermarket at 37th Avenue should be moved to the Avenue. This would remove some large trucks from this historic, residential block.



Figure 3: Curb Extension to Discourage Turning Trucks, 180 St, Queens



Figure 4: "No Thru Truck Traffic," Norman Avenue, Brooklyn

Livery cars

If little can be done about truck traffic, even less can be done about livery cars. The numbers (27 percent on 74th Street) clearly show this is an issue in the neighborhood, yet livery cars are a way of life for many New Yorkers. The goal, at least in terms of roadway noise, should be to reduce the honking.

One way would be to allow non-medallion cabs to legally accept street hails in the outer boroughs. Another would be to establish more taxi stands around the subway stops (74th and 82nd Streets). Presently there are four taxi-only parking spaces on the north side of Roosevelt Avenue between 82nd and 84th Streets and one on 37th Road. Even so our survey showed these were not well used. The stands should ideally be located near the subway entrance.

Parking

As stated above, the Coalition suggested that traffic congestion and associated honking by frustrated drivers was partial due to double parked vehicles. Our surveys confirmed that there is some double parking, more illicit parking and much meter feeding. The question then is, what can be done? There are three avenues to explore with regard to parking: better management of the existing supply, increased supply, decreased supply, or some combinations thereof.

Reduce Meter Feeding

The most common method to control meter feeding is active enforcement. The simplest technique is to mark the tires of cars at meters every time period; those that have not rotated before the next time period are evidence of meter feeding. This has been done in Berkeley, CA. Another technique is to record license plates numbers, much the same way that we did for our survey. Both of these are incredibly time consuming and rarely used.

With advances in meter technology it is possible to control meter feeding electronically. One technique is to install a detector in each parking space which communicates with the meter. If the vehicle has not moved, the meter will accept no more money. There is currently a test of this in New Haven, CT with wired technology and with a wireless system in Cambridge, MA. Another benefit of the wireless system is that each meter also can be linked to the parking agency and police for repair or misuse.

If Muni-meters are used (see below), controlling feeding is more difficult. One technique is for the payer to enter a license plate number (or last three digits for example) before receiving the slip. The common problem is that many drivers do not know their plate numbers, or enter a wrong digit. Some meters use electronic payment systems (the NYC Parking Card), and could be programmed to not dispense another slip to the same card within the time limit. But this does not apply to those paying cash.

Reduce Illicit Parking

Coordinating parking supply and demand in a congested area is a somewhat quixotic quest. Take for example Roosevelt Avenue. In Table 6 we found an equal number of empty spaces to the number of double parked vehicles and vehicles parked in crosswalks, in taxi stands and elsewhere. Some of the meters were occupied by taxis – instead of the taxi stand. Even when there is enough supply, drivers find reasons not to utilize it. Similarly we found on 74th Street, the space dedicated to loading was often used by non-commercial vehicles. When a truck did arrive, it's driver had to double park.

One solution is more flexible parking management. Instead of attempting to predict the allocation and relying on enforcement, use variable pricing and location depending on the need. Make the first fifteen minutes of parking cost little, and increase the charge incrementally. Do not tie parking regulations to a specific spot, but to anywhere on the block. The idea is have parking available to those conducting business on the block.

Another solution is to physically enforce the regulations. We note again that 82nd Street had the lowest level of double parking and had no parking at fire hydrants and crosswalks. This is due to the curb extensions. Similar treatments should be considered for the other commercial streets in the area, especially 74th Street.

Coordinate On and Off-street Parking

In our study area there are four parking lots. While we did not survey their utilization rates, it may be possible to coordinate this supply with the on-street parking supply. This would be an ideal location for drivers who need to park longer than an hour to leave their vehicles. Perhaps a package delivery system could be developed where one's purchases could be delivered to the lot while you continue to shop. Another idea is to charge a reduced rate in exchange for a guaranteed payment – a monthly pass.

Increase Supply via Muni-meters

In the study area bounded by Roosevelt Avenue, 86th Street, 37th Avenue and 72nd Street there are 578 parking meters. If the single parking meters were replaced with Muni-meters, there would be approximately 738 metered spaces in the study area, an increase of 160 spaces or 28 percent.

The reason for the increase is that parking meters are typically placed at 22 to 25-foot intervals. This yields eight to nine parking meters per block along 37th and Roosevelt Avenues. Yet on streets without meters, vehicles are parked closer together. For example on the east side of 81st Street between Roosevelt and 37th Avenue there are eight metered parking spaces with the rest un-metered. We counted 34 parked vehicles in about 544 feet - 16 feet per vehicle. Given higher turnover along the commercial streets, drivers will not park so tightly. Therefore we use 18 feet per vehicle to calculate that each block along 37th and Roosevelt Avenues could hold up to 11 vehicles, an increase of 2-3 vehicles per block. The meter count and possible increase is listed in Table 8.

The Muni-meter system uses a single meter usually located in the center of the block. It dispenses a time-coded slip which the driver places on the dashboard of the vehicle. They can be found increasingly around New York, especially Midtown Manhattan and city parking lots such as at Broadway and 31st Street, the Flushing Parking Garage, the Queensboro Hall Parking Garage, and the Sunnyside Parking Field.

Would this 28 percent increase in metered parking be enough? To find out we take the number of meter-hours and illicit parking-hours from our survey of meter use above and compare it to the additional hours one would get with Muni-meters. Table 9 shows clearly that, except on 74th Street, the additional supply would accommodate demand.

A large downside of Muni-meters is that single parking meters are often used as bicycle racks. This can be alleviated by adding real bicycle racks on the block.

Location	Existing Meters	If Muni-meters	Difference
37 th Av, 72 nd – 86 th St	212	270	58
37 Rd, 72 nd – 77 th St	22	28	6
72 nd St, 37 th – Roosevelt Av	14	18	4
73 rd St, 37 th – Roosevelt Av	14	18	4
74 th St, 37 th – Roosevelt Av	39	51	12
75 th St, 37 th – Roosevelt Av	15	20	5
76 th St, 37 th – Roosevelt Av	17	22	5
77 th St, 37 th – Roosevelt Av	6	8	2
78 th St, 37 th – Roosevelt Av	8	10	2
79 th St, 37 th – Roosevelt Av	17	22	5
80 th St, 37 th – Roosevelt Av	18	24	6
81 st St, 37 th – Roosevelt Av	16	20	4
82 nd St, 37 th – Roosevelt Av	42	53	11
83 rd St, 37 th – Roosevelt Av	13	16	3
84 th St, 37 th – Roosevelt Av	17	22	5
85 th St, 37 th – Roosevelt Av	14	18	4
86 th St, 37 th – Roosevelt Av	8	10	2
Roosevelt Av, 72 nd – 86 th St (north side)	86	108	22
Total	578	738	160
			28%

Table 8: Meter v. Muni-meter Comparison

Location	Existing meter-hours	Additional hours with Muni-meters	Illicit parking-hours (from Table 6)
37 th Av, 73 rd – 76 th St	160	44	11
74 th St, 37 th – Roosevelt Av	156	48	54
82 nd St, 37 th – Roosevelt Av	102	26	3
Roosevelt Av, 82 nd – 86 th Street (north side)	116	32	17

Table 9: Meter v. Muni-meter Comparison, Weekdays 3-7 PM

Increase Supply via Curb Extensions at Hydrants

There are 39 fire hydrants in the study area. Legally one may not park within 15 feet of a hydrant, so each one typically requires 30 feet of curb space (less if near the corner). One innovative idea (in the US) is to construct a curb extension at the hydrant and relocate the hydrant onto the extended curb, see Figure __. The no parking zone then can be reduced by half or more, resulting in one extra parking space. In our study area we estimate about 30 more parking spaces. An added benefit is curb extensions physically restrict drivers from blocking hydrants.

Increase Supply via Bus Bulbs

There are eight bus stops in the study area. A recent innovation (in the US) is to construct a curb extension at the bus stop. This is known as a bus bulb, and allows the bus driver to stop in the travel lane to receive passengers. It is common knowledge that busses rarely pull all the way into bus stops in New York, for various reasons. A bus bulb simply codifies this practice. Additionally, passengers do not have to walk in the street when boarding the bus.

Typically bus stops are 80 feet long, space for 4 parked cars. The bus bulb need only be as long as to the rear door of the bus, about 30 feet. This permits about 40 feet (given the return angle of the bus bulb) to be returned to parking, enough for two vehicles. If bus bulbs were to be built, 16 new spaces would be created.



Figure 5: Hydrant on Curb Extension, 82nd Street



Figure 6: Bus Bulb, Broadway & 110 Street, Manhattan

Increase Supply via Fewer Rush Hour Parking Restrictions

There are 30 parking spaces in the study area which have No Standing restrictions totaling 114 parking-hours. These restrictions are in place during rush hours to facilitate additional traffic flows. There are 22 of these spaces with 66 parking-hours on 82nd Street and 8 spaces with 48 parking-hours on Roosevelt Avenue. While sometimes achieving this objective, rush hour regulations remove the buffer of parked cars next to the sidewalk, restrict parking during busy parts of the shopping day, induce more travel with

more lanes, and permit higher speeds and increased turning speeds. All of this impacts negatively on pedestrian safety and commercial activity.

Decrease Supply

Lastly it should be noted that increased parking supply may simply increase demand. Parking is a vary elastic good, especially cheap, on-street parking. What is to stop this additional parking from being misused in much the same way the current parking is misused. Likewise if people know they can park easily and cheaply on, say 82nd Street, they will. More parking equals more driving which usually equals more congestion.

Imagine if 74th and 82nd Streets became pedestrian promenade. Maybe not at all time, especially during the mornings when most deliveries occur. Maybe only during the late afternoons and evenings, during the summer or on weekends. [Police, fire, ambulances and the Q32, Q33 and Q47 busses would always be allowed passage.] Word would get out that driving to Jackson Heights during these hours is folly, so they would not. Meanwhile shopping would increase, especially when it is warm. And the streets would be less noisy.



Figure 7: Mulberry Street Summer Promenade, Manhattan



Figure 8: Fulton Street Noon Promenade, Manhattan

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EXISTING CONDITIONS

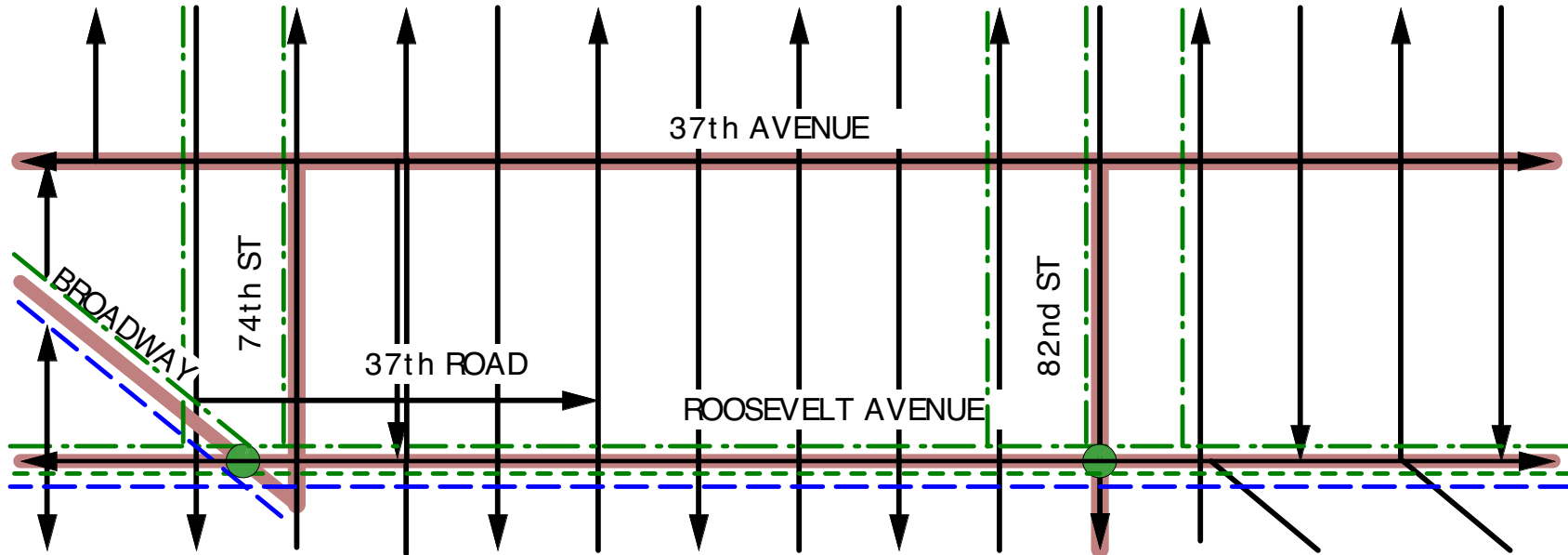


JACKSON HEIGHTS

TRAFFIC NETWORK

Key:

- STREET DIRECTION
- COMMERCIAL STREET
- SUBWAY STATION
- - - ELEVATED TRAIN
- . - BUS LINE
- - - LOCAL TRUCK ROUTE



JACKSON HEIGHTS

COMMUNITY OBSERVATIONS

Key:



HIGH TRUCK ACTIVITY



DOUBLE PARKING



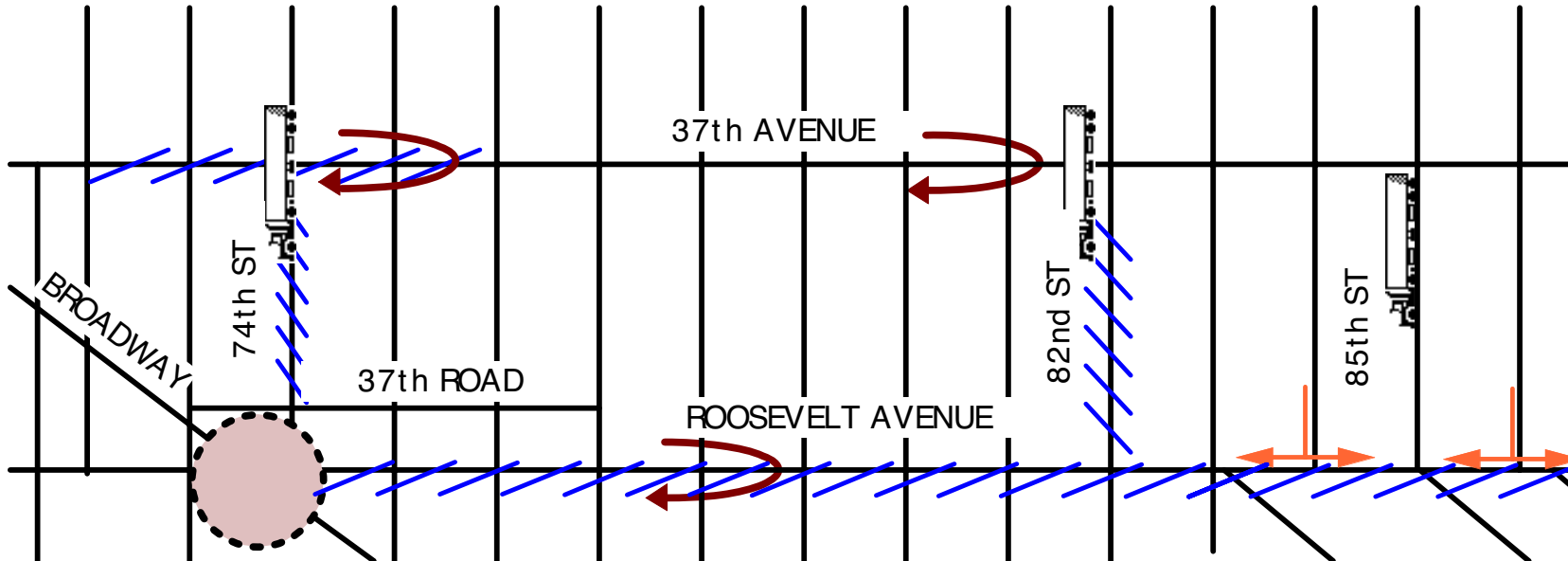
U-TURN



FORCED TURN

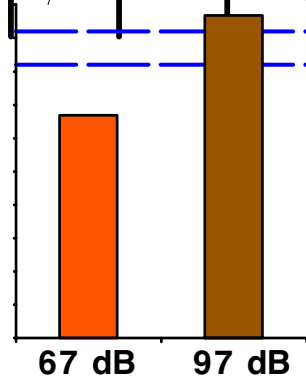
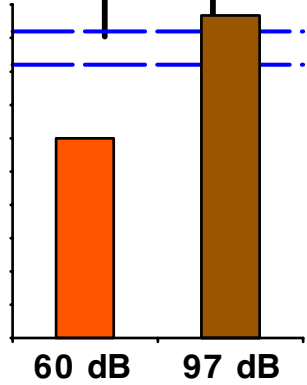
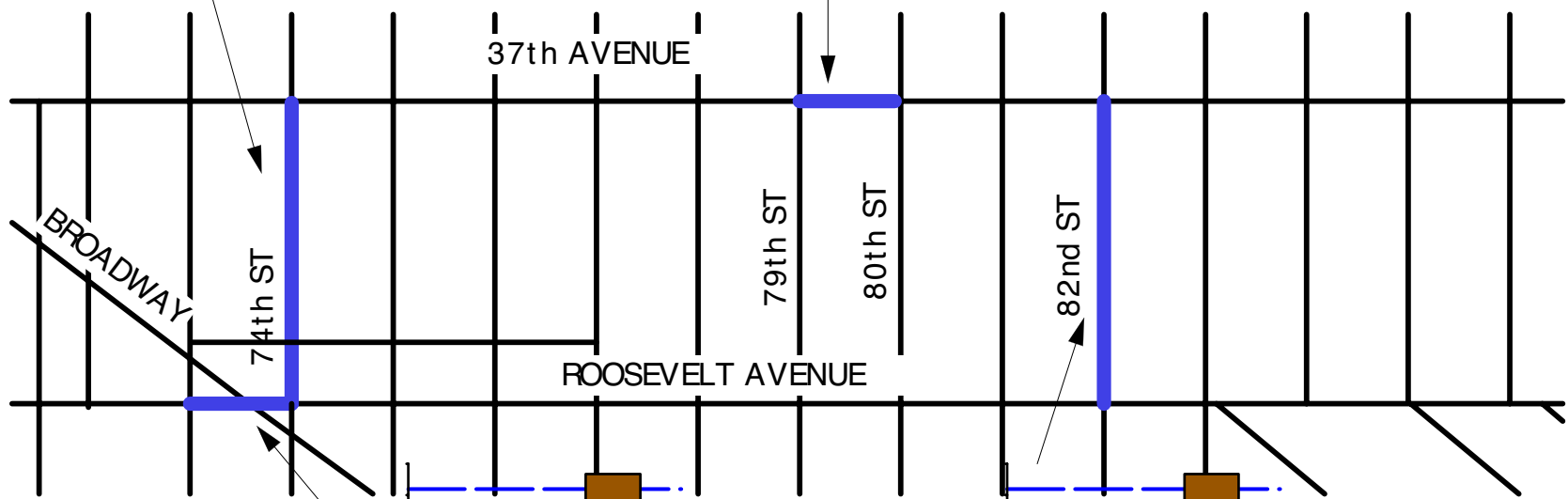
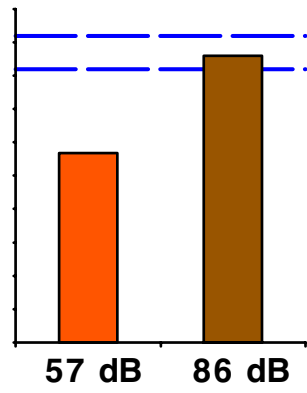
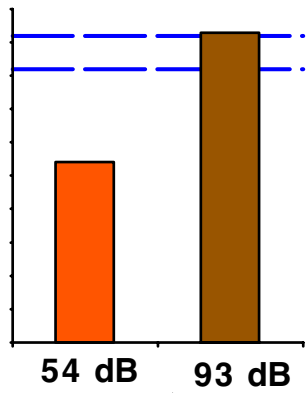
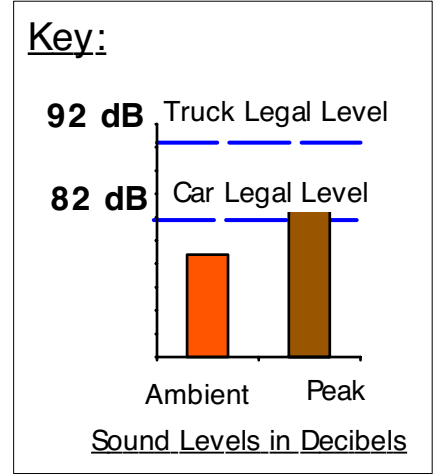


CONFUSING INTERSECTION



JACKSON HEIGHTS

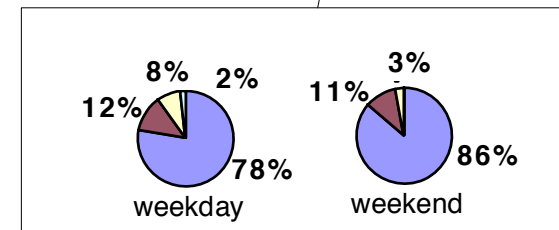
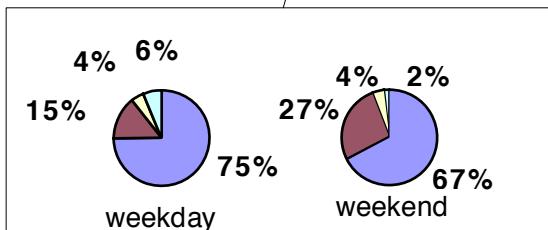
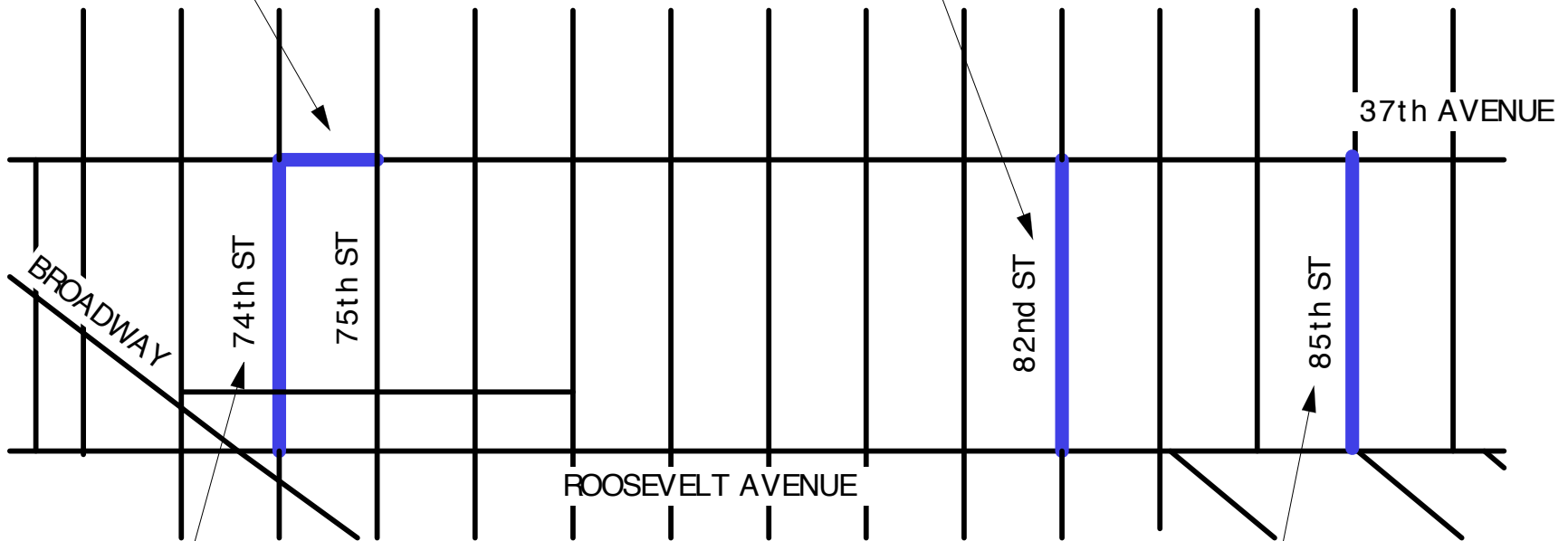
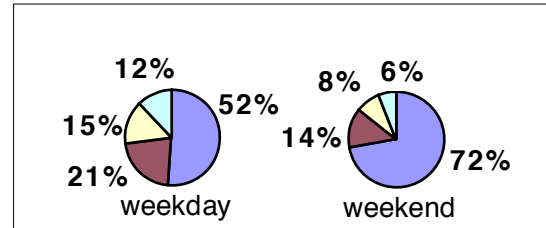
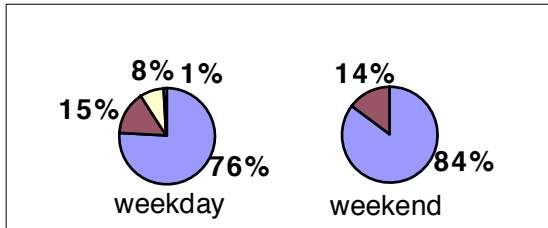
SOUND LEVELS



JACKSON HEIGHTS

VEHICLE TYPE

Key:



JACKSON HEIGHTS

METER USE AND ILLICIT PARKING

Key:

