PARKING STUDY

Prepared for the

VILLAGE OF ROCKVILLE CENTRE, NY

Raymond, Parish, Pine & Weiner, Inc.

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May, 1979

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A. SURVEY AND ANALYSES DATA

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INTRODUCTION

Rockville Centre has a parking shortage. This study was commissioned by the Village trustees in order to establish the extent of the shortage and to recommend suitable sites for construction of one or more parking garages. The report is presented in four separate sections, as follows:

(1) Survey and analysis of the existing parking conditions and quantification of the present parking shortage;

(2) Identification of one or more sites suitable and desirable for the location of a parking garage;

(3) Design of alternate garage plans for the selected sites;

(4) Financial analysis of construction and operational costs of a garage selected by the Board of Trustees.

A summary of the survey data and analysis, selected design solutions and financial analysis are contained in the main portion of this report. Additional survey data and additional alternate garage plans are included in the appendices.

THE PRESENT PARKING SHORTAGE

In the first phase of the study the parking shortage within the downtown was quantified. For the evaluation of the parking shortage, the commuters' need was separated from the parking requirements of downtown establishments. It was further assumed that any new developments will provide sufficient parking for employees and customers.

The project area is shown on Figure 1 (PARKING INVENTORY). The total number of parking spaces and various floor areas are indicated within six sub-areas of the downtown, with ratios calculated that express the relationship between parking demand and supply in each area.

A more detailed breakdown of existing parking space and floor area is shown on Figure 2 (EXISTING FLOOR AREA AND PARKING SPACES).

The total number of parking spaces in the downtown is 3,384, of which about 600 serve commuters. There are 954,600 square feet of floor space in the area. Thus, the existing overall parking ratio is 2.91 cars/1,000

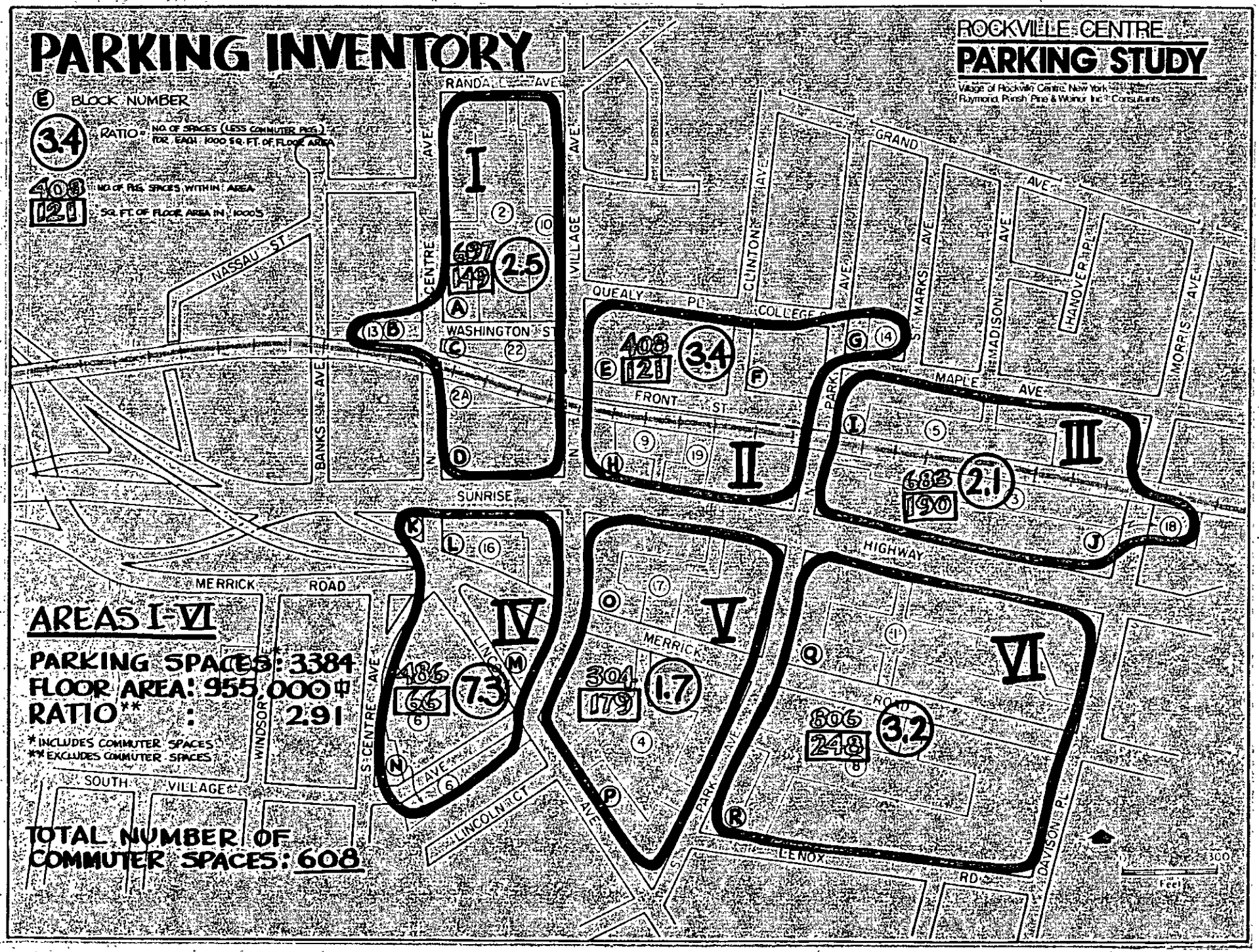

PARKING INVENTORY
ROCKVILLE CENTRE
PARKING STUDY
Village of Rockville Centre, New York
Raymond, Parish, Pine & Weiner Inc. Consultants
E BLOCK NUMBER
3.4 RATIO = NO. OF SPACES (LESS COMMUTER PKG.) FOR EACH 1000 SQ. FT. OF FLOOR AREA
408 NO. OF PKG. SPACES WITHIN AREA
121 SQ. FT. OF FLOOR AREA IN 1000'S
AREAS I-VI
PARKING SPACES*: 3384
FLOOR AREA: 955,000 ⌗
RATIO** : 2.91
* INCLUDES COMMUTER SPACES
** EXCLUDES COMMUTER SPACES
TOTAL NUMBER OF COMMUTER SPACES: 608
I
697
149
2.5
II
408
121
3.4
III
683
190
2.1
IV
486
66
7.3
V
304
179
1.7
VI
806
248
3.2
RANDALL AVE
NASSAU ST
WASHINGTON ST
SUNRISE
MERRICK ROAD
SOUTH VILLAGE
LINCOLN CT
QUEALY PL
COLLEGE
FRONT ST
MAPLE AVE
HIGHWAY
LENOX RD
DAVISON PL
GRAND AVE
CENTRE AVE
VILLAGE AVE
CLINTON AVE
ST MARKS AVE
MADISON AVE
HANOVER PL
MORRIS AVE
BANKS AVE
WINDSOR
S CENTRE AVE
PARK AVE
Feet

FIG. 1

EXISTING FLOOR AREA AND PARKING SPACES

ROCKVILLE CENTRE, NEW YORK C.B.D.

BLOCK	PVT. PKG.	PUBLIC PARKING ALL-DAY	6-8	4	2	1	ON STREET	TOTAL (Now)	TOTAL PKG.	FLOOR AREA COMMERCIAL	OFFICE	TOTAL	PARKING RATIO/1000 ft²
A	94	▣160	75	-	78	-	31	344	438	32,000	98,000	130,000	2.14*
B	-	▣50	-	-	-	-	-	50	50	-	-	0	
C	-	▣117	-	-	-	-	3	120	120	-	-	0	
D	-	-	73	-	-	-	16	89	89	18,700	-	18,700	4.76
I	94	327	148	-	78	-	50	603	697	50,700	98,000	148,700	2.49*
E	10	-	-	-	-	-	33	33	43	8,000	1,400	9,400	4.57
F	10	-	-	-	-	-	31	31	41	22,600	10,300	32,900	1.25
G	-	-	36	-	-	14	15	65	65	10,000	-	10,000	6.50
H	95	-	-	40	39	16	69	164	259	43,000	26,100	69,100	3.75
II	115		36	40	39	30	148	293	408	83,600	37,800	121,400	3.36
J	45	▣99	31	-	47	-	28	205	250	46,400	5,500	51,900	2.91*
J	25	▣182		-	201	-	25	408	433	101,000	37,500	138,500	1.81*
III	70	281	31		248		53	613	683	147,400	43,000	190,400	2.11*
K	-	-	-	-	-	-	-		-	3,375	-	3,375	0
L	29	-	27	-	60	-	9	96	125	14,200	5,500	19,700	6.35
M	-	-	-	-	-	-	19	19	19	43,225	-	43,225	0.44
N	-	143	-	-	28	-	171	342	342	-	-	0	0
IV	29	143	27		88		199	457	486	60,800	5,500	66,300	7.33
O	20	-	-	-	90	3	49	142	162	92,800	17,400	110,200	1.44
P	-	53	-	-	67	11	11	142	142	53,200	16,000	69,200	2.05
V	20	53			157	14	60	284	304	146,000	33,400	179,400	1.68
Q	108	-	-	-	227	-	61	288	396	176,600	16,000	192,600	2.06
R	86	53	-	20	179	-	72	324	410	55,800	-	55,800	7.35
VI	194	53		20	406		133	612	806	232,400	16,000	248,400	3.24
TOTALS	522	857	242	60	1,016	44	643	2,862	3,384	720,900	233,700	954,600	2.91*

▣ COMMUTER PARKING SPACES (TOTAL: 608)

* MINUS DESIGNATED COMMUTER PARKING SPACES

FIG. 2

square feet of floor area. While the most appropriate parking ratio depends on the mix of activities and types of surrounding residential development, the required ratio for fully satisfactory operation in Rockville Centre is probably 3.75 cars/1,000 square feet of floor area. This difference (of about .84/1,000 square feet) indicates an overall gross deficiency of about 800 spaces.

Of the 3,384 parking spaces within the study area 522 are provided in private lots. Of the 2,862 public parking spaces 643 are curb spaces. The remaining 2,219 spaces are provided on 17 off-street public lots. See Figure 3 (PUBLIC PARKING LOTS).

Detailed analysis of the survey data for individual sub-areas of the downtown indicates that actually about 850 additional parking spaces would be needed, taking into account both the needs of downtown workers and customers, and the distribution of existing space and parking (see Figure 4, PARKING NEEDS). In this analysis it was assumed that 4 parking spaces are required for each 1,000 square feet of commercial floor area, and 3 spaces are required for 1,000 square feet of office floor area.

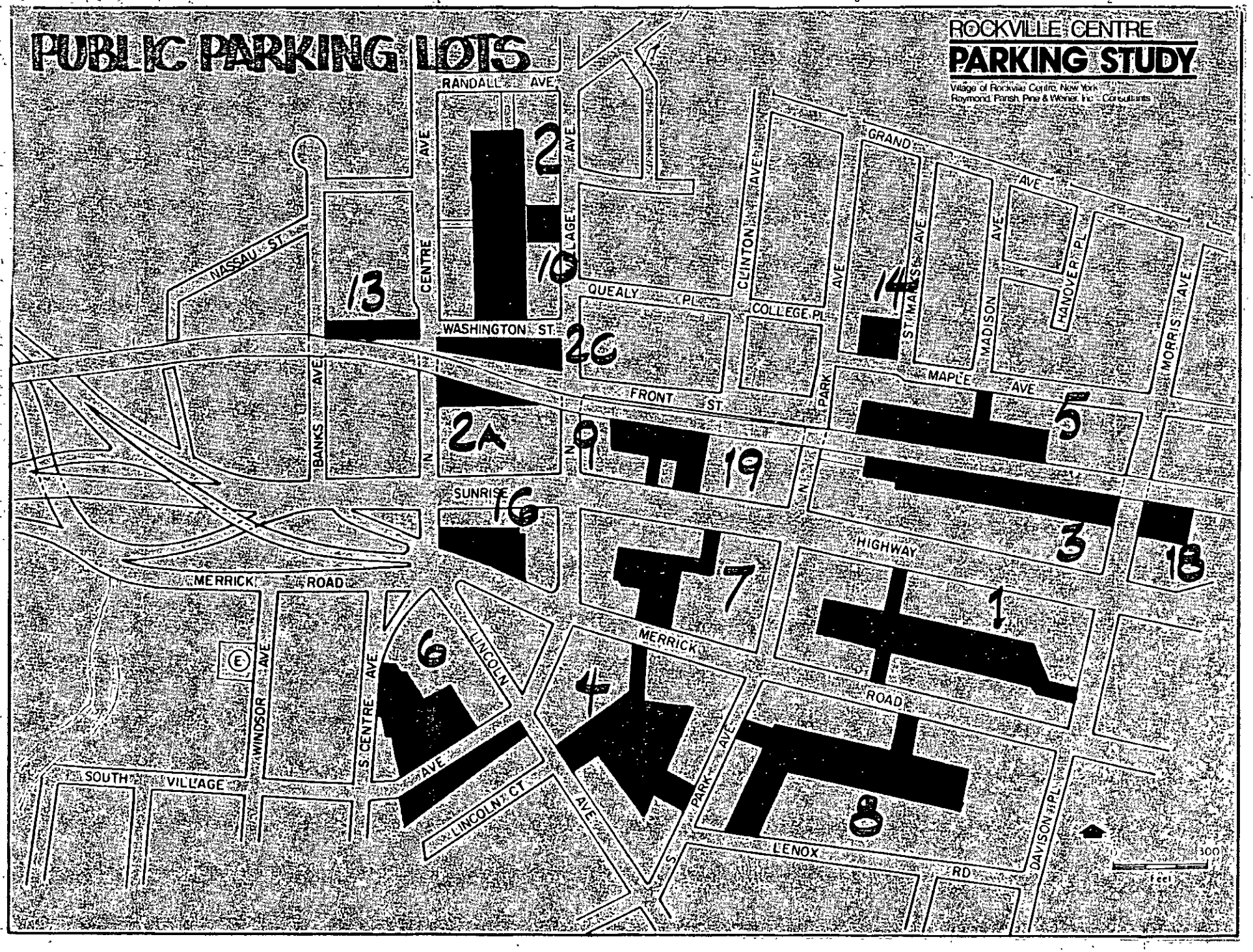

PUBLIC PARKING LOTS
ROCKVILLE CENTRE
PARKING STUDY
Village of Rockville Centre, New York
Raymond Parish, Pine & Weiner, Inc. - Consultants
RANDALL AVE
NASSAU ST
CENTRE AVE
VILLAGE AVE
WASHINGTON ST
QUEALY PL
CLINTON AVE
COLLEGE PL
GRAND AVE
ST MARKS AVE
MADISON AVE
HANOVER PL
MORRIS AVE
MAPLE AVE
FRONT ST
PARK AVE
BANKS AVE
N. CENTRE AVE
SUNRISE
HIGHWAY
MERRICK ROAD
LINCOLN
LINCOLN CT
WINDSOR AVE
S. CENTRE AVE
SOUTH VILLAGE AVE
S. PARK AVE
LENOX RD
DAVISON PL
300 feet
1
2
2A
2C
3
4
5
6
7
8
9
10
13
14
16
18
19

FIG. 3

PARKING NEEDS

ROCKVILLE CENTRE, NEW YORK C.B.D.

BLOCK	FLOOR AREA		PARKING FACTORS		PUBLIC & PRIVATE PARKING SPACES MINUS COMMUTERS			
	COMMERCIAL	OFFICE	COMMERCIAL 4/1000	OFFICE 3/1000	EXISTING SPACES	NEEDED SPACES	PLUS OR MINUS	
A	32,000	98,000	128	294	278	422	-144	I
B	0	0	0	0		–		
C	0	0	0	0	3	–	+3	-128
D	18,700	0	76	0	89	76	+13	
E	8,000	1,400	32	42	43	74	-31	II
F	22,600	10,300	91	31	41	122	-81	
G	10,000	0	40	0	65	40	+25	-78
H	43,000	26,100	172	78	259	250	+9	
I	46,400	5,500	186	16	151	202	-51	III
J	101,000	37,500	404	112	251	516	-265	-316
K	3,375	0	14	0	0	14	-14	IV
L	14,200	5,500	57	16	125	73	+52	
M	43,225	0	173	0	19	173	-154	(+226)
N	0	0	0	0	342	–	+342	
O	92,800	17,400	371	52	162	423	-261	V
P	53,200	16,000	213	48	142	261	-119	-380
Q	176,600	16,000	706	48	396	754	-358	VI
R	55,800	0	223	0	410	223	+187	-171

DEFICIT = 847 SPACES

FIG. 4

A survey of the utilization of public off-street parking spaces confirms the extent of the parking shortage. The survey was conducted in mid-week in June, 1978. More than 80% utilization of all public off-street spaces occurred from about 11:00 AM until after 2:00 PM (see Figure 5, PERCENT UTILIZATION OF OFF-STREET PARKING). This degree of utilization is very high. Experience shows that a utilization ratio of 60% to 70% is the maximum which can be experienced over a long period of the day without perception of a parking deficiency.

Because of the built-up nature of the center of the Village it is evident that the over-all shortage of 850 parking spaces (excluding the commuters' needs) cannot be eliminated through the enlargement of the surface lots, since about 8 acres of land would be required. Thus, the only feasible method of increasing the parking supply is via construction of multi-level decks. In fact, more than one garage may ultimately be required.

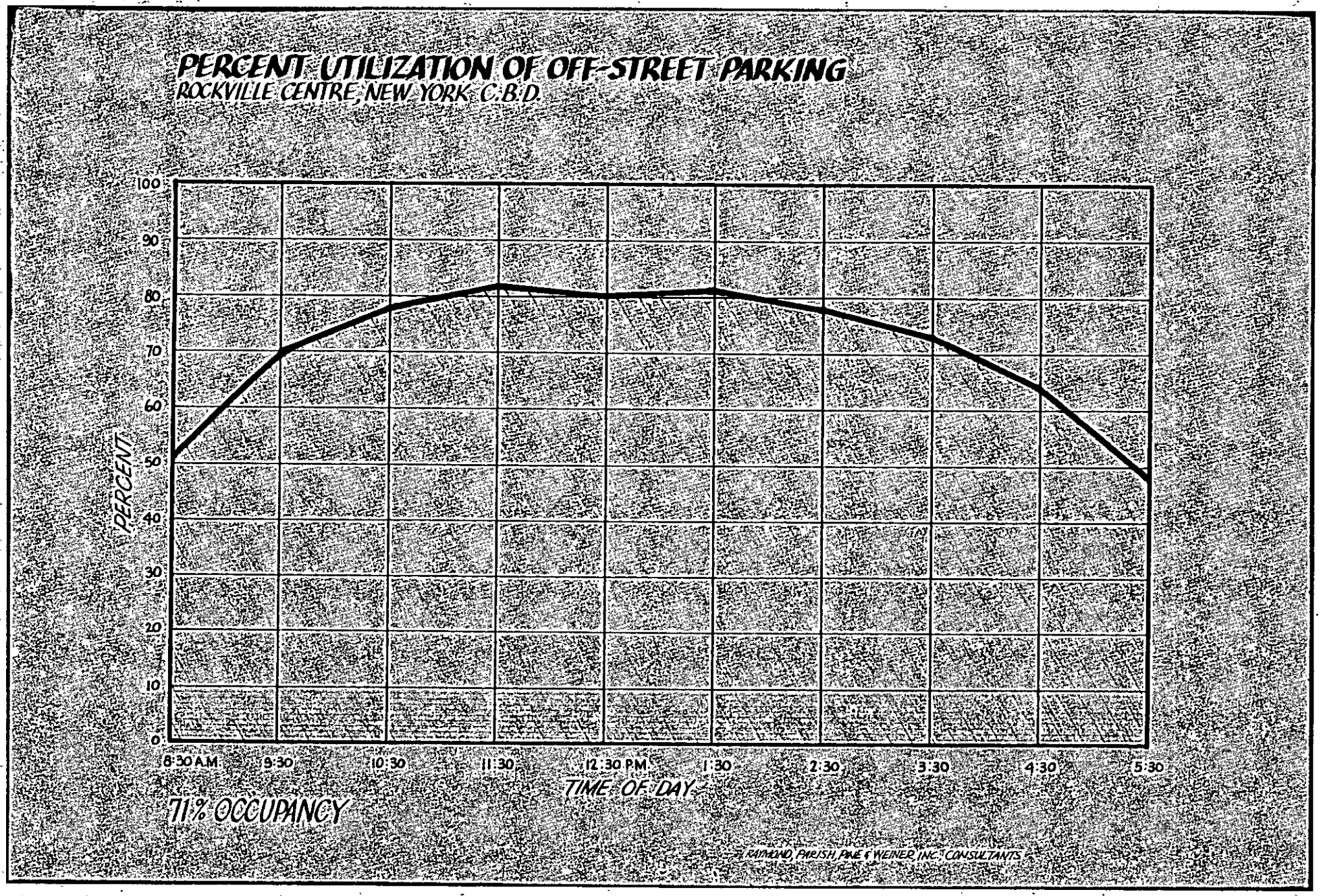

PERCENT UTILIZATION OF OFF-STREET PARKING
ROCKVILLE CENTRE, NEW YORK C.B.D.
PERCENT
100
90
80
70
60
50
40
30
20
10
0
8:30 A.M.
9:30
10:30
11:30
12:30 P.M.
1:30
2:30
3:30
4:30
5:30
TIME OF DAY
71% OCCUPANCY
RAYMOND, PARISH, PINE & WEINER, INC. CONSULTANTS

FIG. 5

RECOMMENDED PARKING GARAGE SITES

Analysis of the survey data indicated that there is a shortage of both short and long term parking in the downtown area. Selection of sites for one or more parking garages should be based on several considerations (to the extent possible). The sites should be publicly owned and should not require displacement of existing businesses. In addition, they should be located in an area where they can serve multiple purposes, including commuters, all day parkers, merchants and shoppers.

Considering the interests of commuters, shoppers and downtown workers, as well as physical constraints and property ownership, there appear to be only three sites that are suitable for the construction of parking garages. See Figure 6 (POTENTIAL SITES FOR PARKING GARAGES). Other available sites are either too small, or are located outside the core of the downtown.

Of the three locations, site 1 (present lot 2c) would serve the commuters very well, while site 3 (present lot 1) would cater best to the shoppers. To provide a balanced service, however, both of these garages would have to be built. Al-

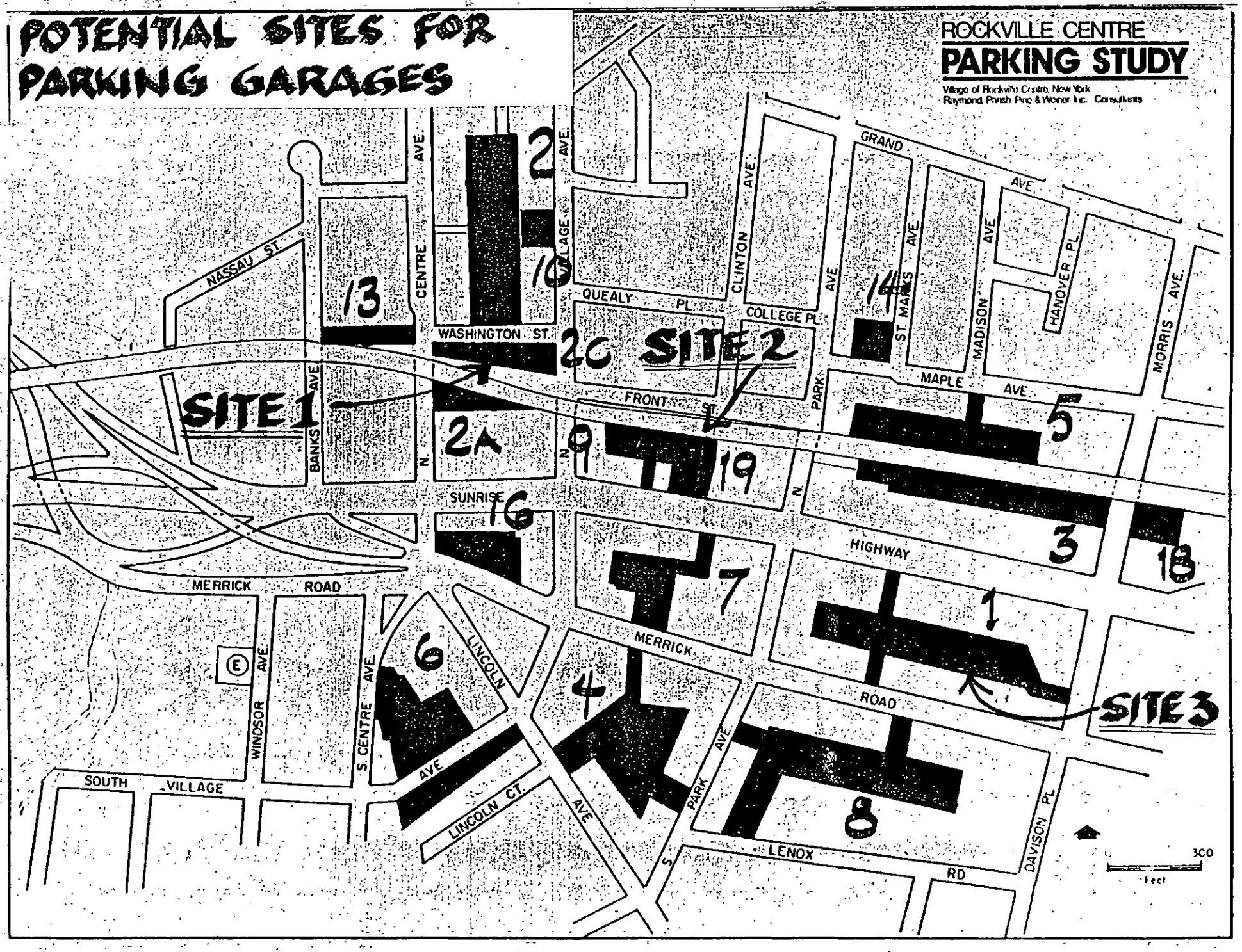

POTENTIAL SITES FOR PARKING GARAGES
ROCKVILLE CENTRE
PARKING STUDY
Village of Rockville Centre, New York
Raymond, Parish Pine & Weiner Inc. Consultants
SITE 1
SITE 2
SITE 3
1
2
2A
2C
3
4
5
6
7
8
9
10
13
14
16
18
19
NASSAU ST.
CENTRE AVE.
VILLAGE AVE.
WASHINGTON ST.
QUEALY PL.
COLLEGE PL.
CLINTON AVE.
GRAND AVE.
ST. MARKS AVE.
MADISON AVE.
HANOVER PL.
MORRIS AVE.
MAPLE AVE.
FRONT ST.
PARK AVE.
BANKS AVE.
N. CENTRE AVE.
SUNRISE
HIGHWAY
MERRICK ROAD
WINDSOR AVE.
S. CENTRE AVE.
LINCOLN AVE.
LINCOLN CT.
S. PARK AVE.
LENOX RD
DAVISON PL.
SOUTH VILLAGE
300
Feet

FIG. 6

though both sites are available, the use of site 3 would require careful design to minimize any adverse visual effects. A parking garage on site 2 (present lots 9 and 19 plus adjacent properties, if desired) would be centrally located, could serve commuters, shoppers, and downtown workers, and could provide a desirable architectural feature in the center of the area. It might be possible to build a garage at that location entirely on public property, but to provide an ideal solution, some land acquisition would be necessary.

These possible sites are further described in the following chapter.

PARKING GARAGE PLANS

Alternate plans were prepared for the three sites recommended for possible garage development. Two of the analyzed sites (1 and 3) are wholly owned by the village, so that construction could commence without much delay. The design of parking garages for these two sites are relatively straightforward, due to the configuration of the properties.

Site 2, on the other hand, represents a more difficult design problem. It would be possible to develop a garage on wholly village owned property, but this would place too great a limitation on the capacity of the structure. Acquisition of adjoining privately owned property might slow the development process. An additional difficulty with the development of site 2 is the necessary relocation of two bus routes that presently pass through the public parking lot (No. 9) that would become part of the parking garage. Despite these difficulties, the locational and design features of a garage on site 2 offer advantages that could make its development the most desirable solution for the Village, and it is this site which is recommended for consideration.

Garage on Site 1

Site 1 is an area bounded by North Centre Avenue, Washington Street, North Village Avenue and the Long Island Railroad. A few privately owned properties at the northeast corner of this area are excluded from the site. At present, the northerly portion of the site is occupied by a municipal parking lot (No. 2C) and the southerly portion is the right-of-way of Front Street. The site is approximately 400 feet long, and is more than 120 feet wide for most of its length. These dimensions would allow the design and construction of an economical parking garage.

A four-story parking garage, as shown in Figure 7, could provide 665 parking spaces on five levels (including the roof). Since at present there are about 100 parking spaces on the site, the garage development would result in a net gain of 565 spaces. Because of its location most of the spaces in the garage would be used for long term parking. Commuters would be the prime customers, since the garage's easterly end would be very close to a staircase leading to the railroad platform. It would also be possible to provide a direct pedestrian bridge connection between the top level of the garage and the railroad platform.

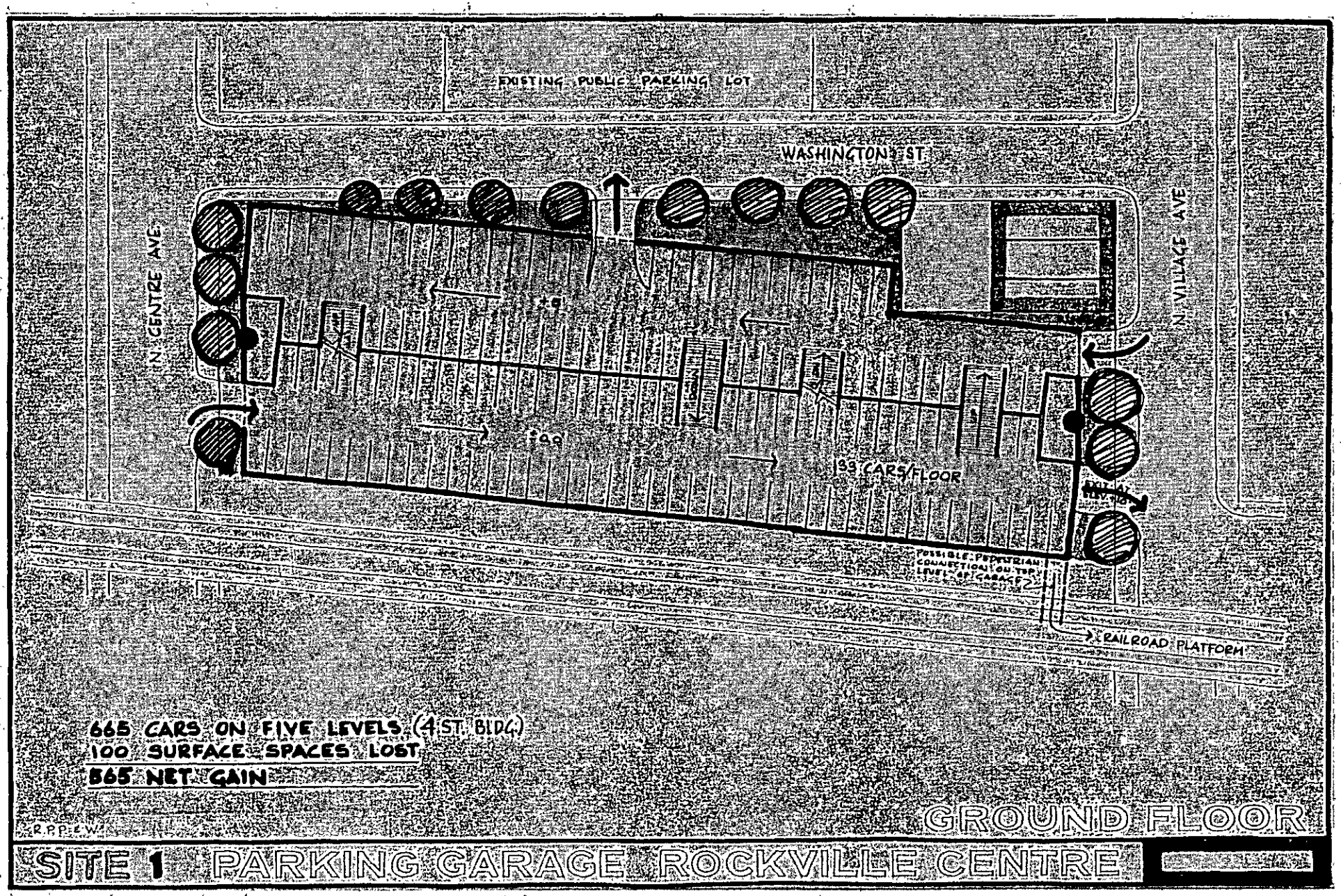

EXISTING PUBLIC PARKING LOT
WASHINGTON ST.
N. CENTRE AVE.
N. VILLAGE AVE
139 CARS/FLOOR
POSSIBLE PEDESTRIAN CONNECTION ON TOP LEVEL OF GARAGE
RAILROAD PLATFORM
665 CARS ON FIVE LEVELS (4 ST. BLDG.)
100 SURFACE SPACES LOST
565 NET GAIN
GROUND FLOOR
SITE 1 PARKING GARAGE ROCKVILLE CENTRE

FIG. 7

A "split level" design would be most suitable for this site. Entrances would be provided from North Centre Avenue and North Village Avenue, and cars could exit onto Washington Street and North Village Avenue.

The parking garage would be built on publicly owned property, it could be built to an economical configuration and size, and it would have a good circulation pattern. However, the garage would not really serve those who wish to shop in the downtown area, although it might free a few of the parking spaces near the shopping district that are presently used by commuters or merchants. The garage might also be used by office workers, but its distance from major office buildings would limit this function.

Garage on Site 2

Site 2 is located within the block that is bounded by North Village Avenue, Sunrise Highway, North Park Avenue and the Long Island Railroad. The site includes two present municipal parking lots (Nos. 9 and 19). In addition, the alternate garage plans include in the site a portion of an adjoining private property and/or a portion of the lane along the southerly side of the elevated railroad structure.

Due to the complexity of this design problem and to the numerous different possibilities that exist, eight alternate garage plans were prepared for evaluation on Site 2. The alternates explored various design features and possibilities. Major questions that the alternate solutions had to deal with were as follows:

- Extent of private property acquisition (if any);
- Elimination or retention of the vehicular connection between Sunrise Highway and the railroad station in mid-block;
- Retention, reduction in width, or elimination of the lane along the south side of the elevated railroad structure;
- Extent of set-back (if any) along Sunrise Highway;
- Provision of a small shopping mall on the first floor of the garage;
- Type of desirable garage layout.

Alternate H of the eight plans (A-H) is felt to be the most desirable solution. This plan has the following features:

- A shopping mall is provided;
- Acquisition is limited to the westerly portion of

the Diocese's parking lot;

- A set-back enhances Sunrise Highway;
- The lane along the southerly side of the elevated railroad structure is retained.

The site of the parking garage includes the two municipal parking lots within the block (Nos. 9 and 19), plus approximately 100 x 200 feet of the Diocese's parking lot, and a three foot strip of the adjoining lane. The site extends for approximately 400 feet along the lane while the frontage along Sunrise Highway is about 180 feet. Width of the property along the narrower section is 103 feet, along the wider section it is 203 feet. These dimensions allow the design of an economical and well functioning parking garage. The creation of a small shopping mall, however, limits the design options for the layout of the garage and its circulation pattern.

A five story parking garage, as shown on Figures 8, 9, 10, 11, 12 and 13, would provide 717 parking spaces, and 17,000 square feet of ground level commercial space, with an indoor pedestrian walk (mall) connecting Sunrise Highway with the railroad station. Approximately 165 surface parking spaces would be lost by the construction of the

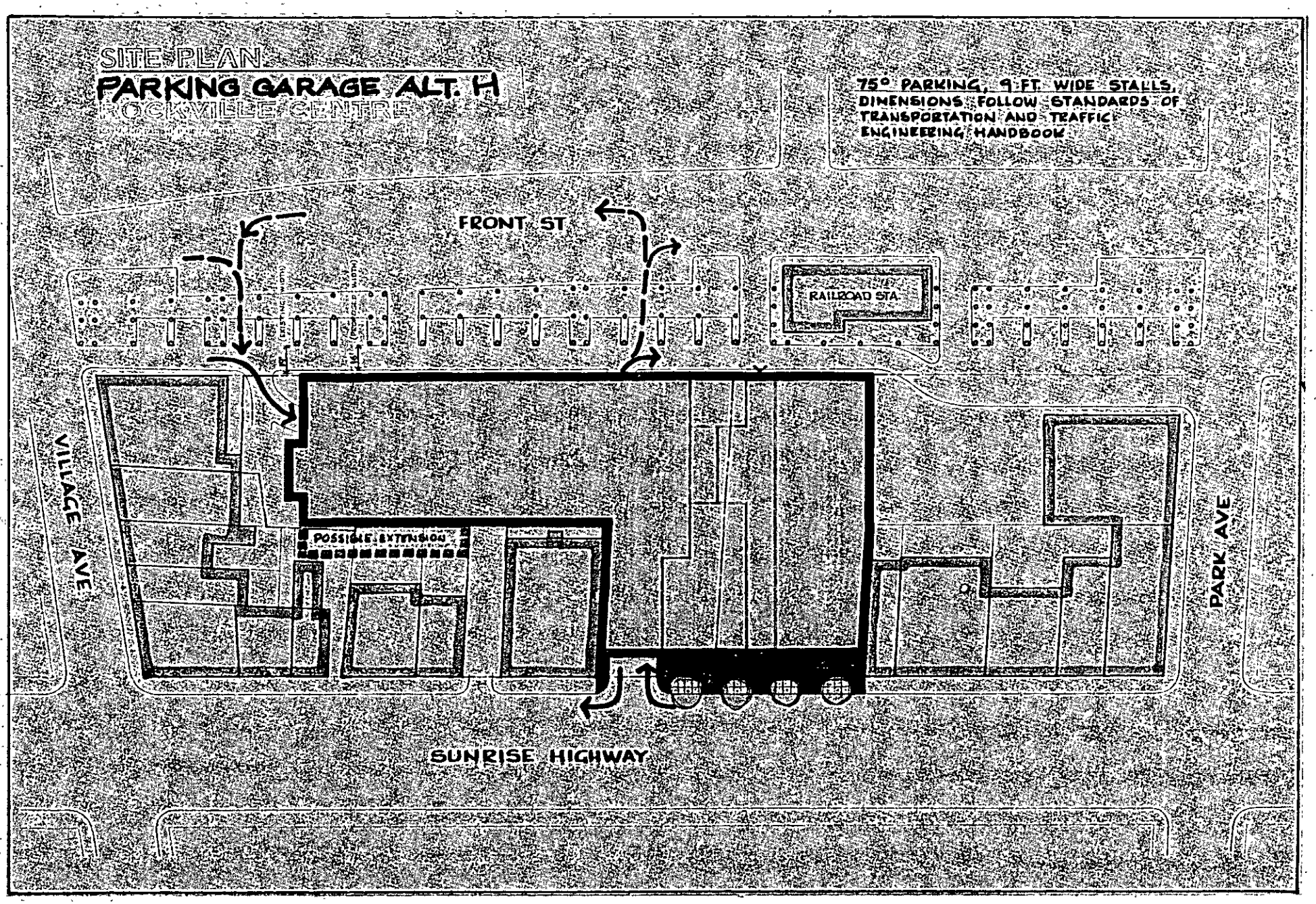

SITE PLAN
PARKING GARAGE ALT. H
ROCKVILLE CENTRE
75° PARKING, 9 FT. WIDE STALLS, DIMENSIONS FOLLOW STANDARDS OF TRANSPORTATION AND TRAFFIC ENGINEERING HANDBOOK
FRONT ST
RAILROAD STA.
VILLAGE AVE
PARK AVE
POSSIBLE EXTENSION
SUNRISE HIGHWAY

FIG. 8

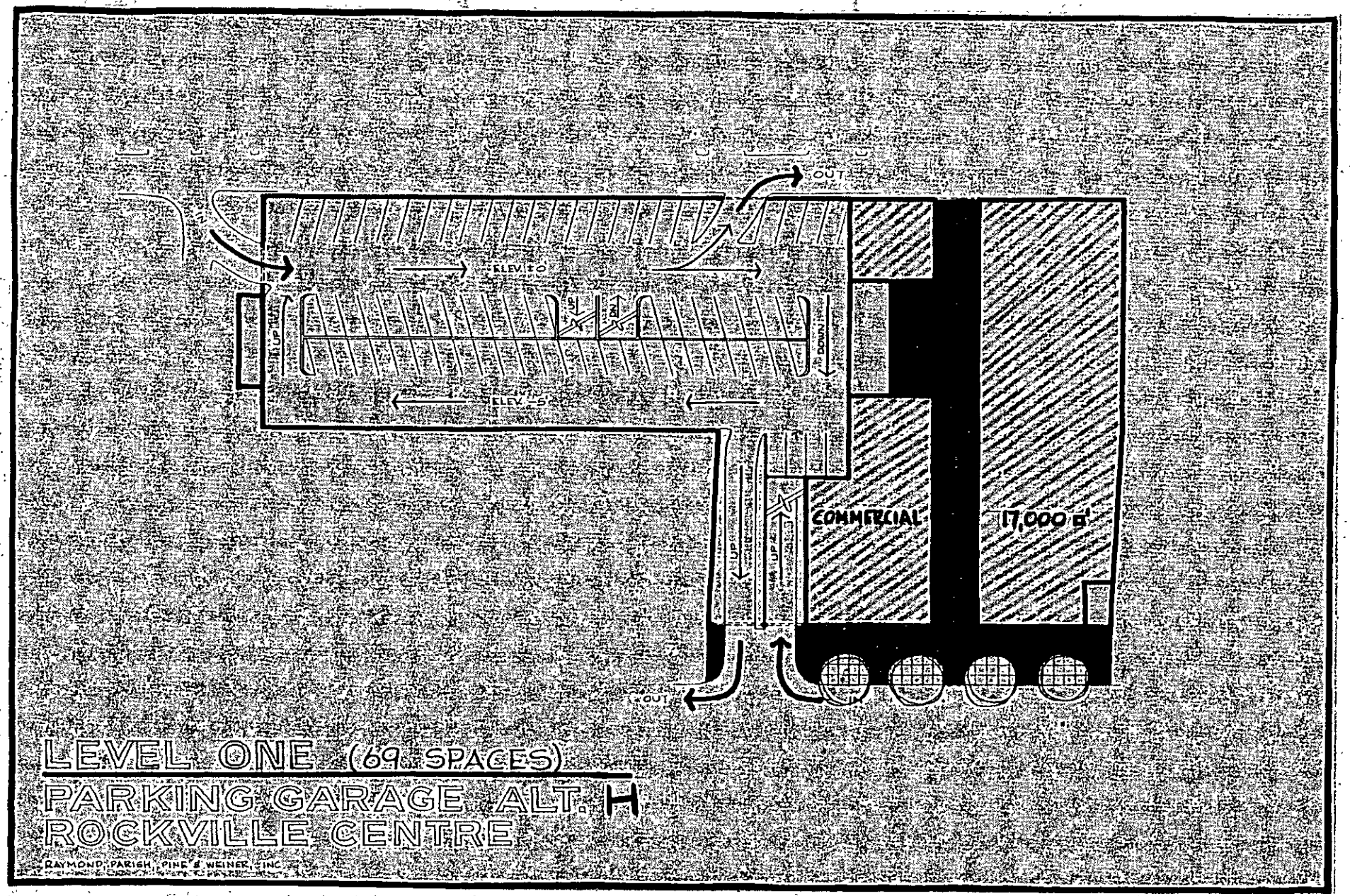

OUT
ELEV. 10
UP
DN
DOWN
ELEV. 5
COMMERCIAL
17,000 ft²
UP
UP
OUT
LEVEL ONE (69 SPACES)
PARKING GARAGE ALT. H
ROCKVILLE CENTRE
RAYMOND, PARISH, PINE & WEINER, INC.

FIG. 9

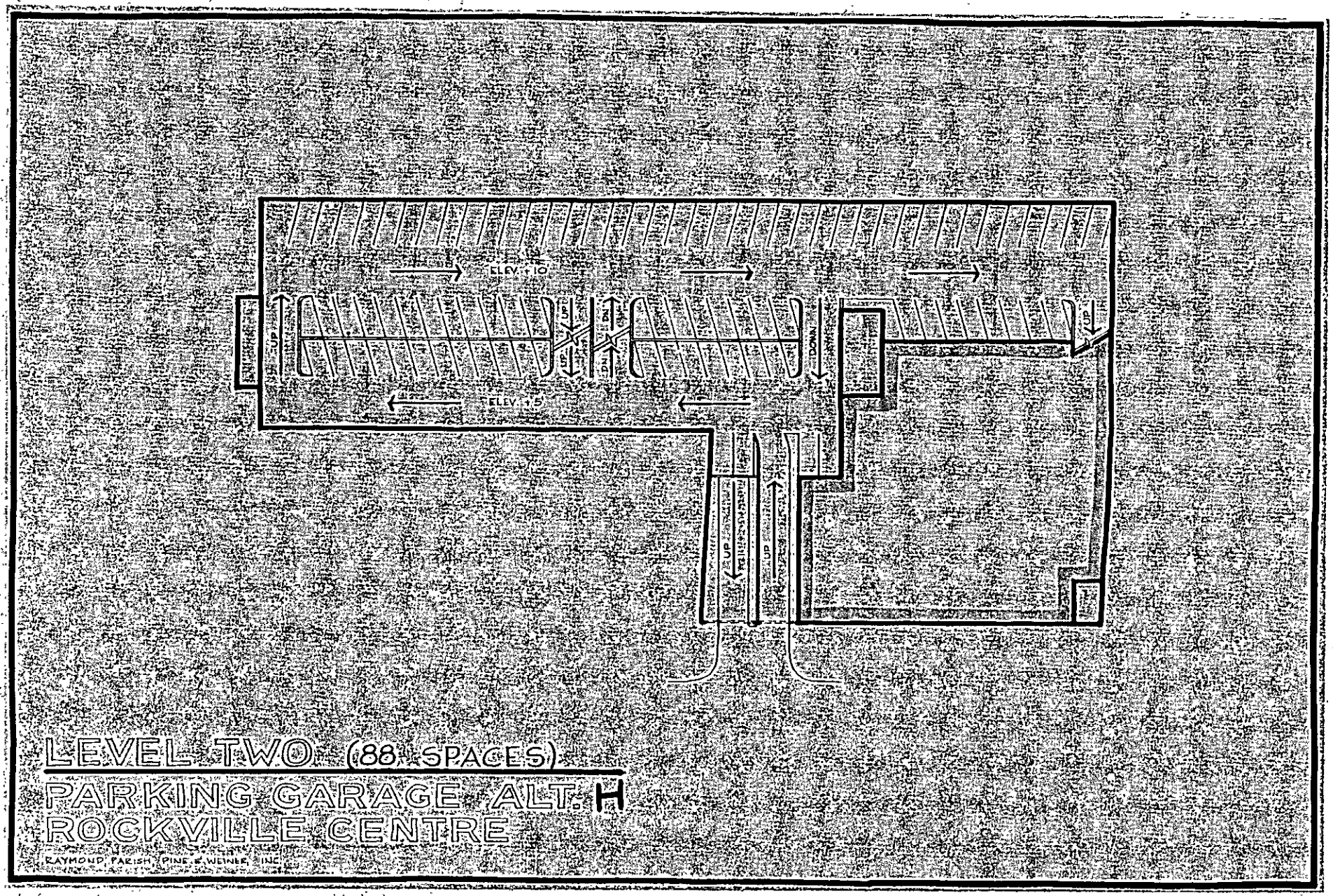

ELEV. +10
ELEV. +5'
UP
DN
DOWN
LEVEL TWO (88 SPACES)
PARKING GARAGE ALT. H
ROCKVILLE CENTRE
RAYMOND, PARISH, PINE & WEINER, INC.

FIG. 10

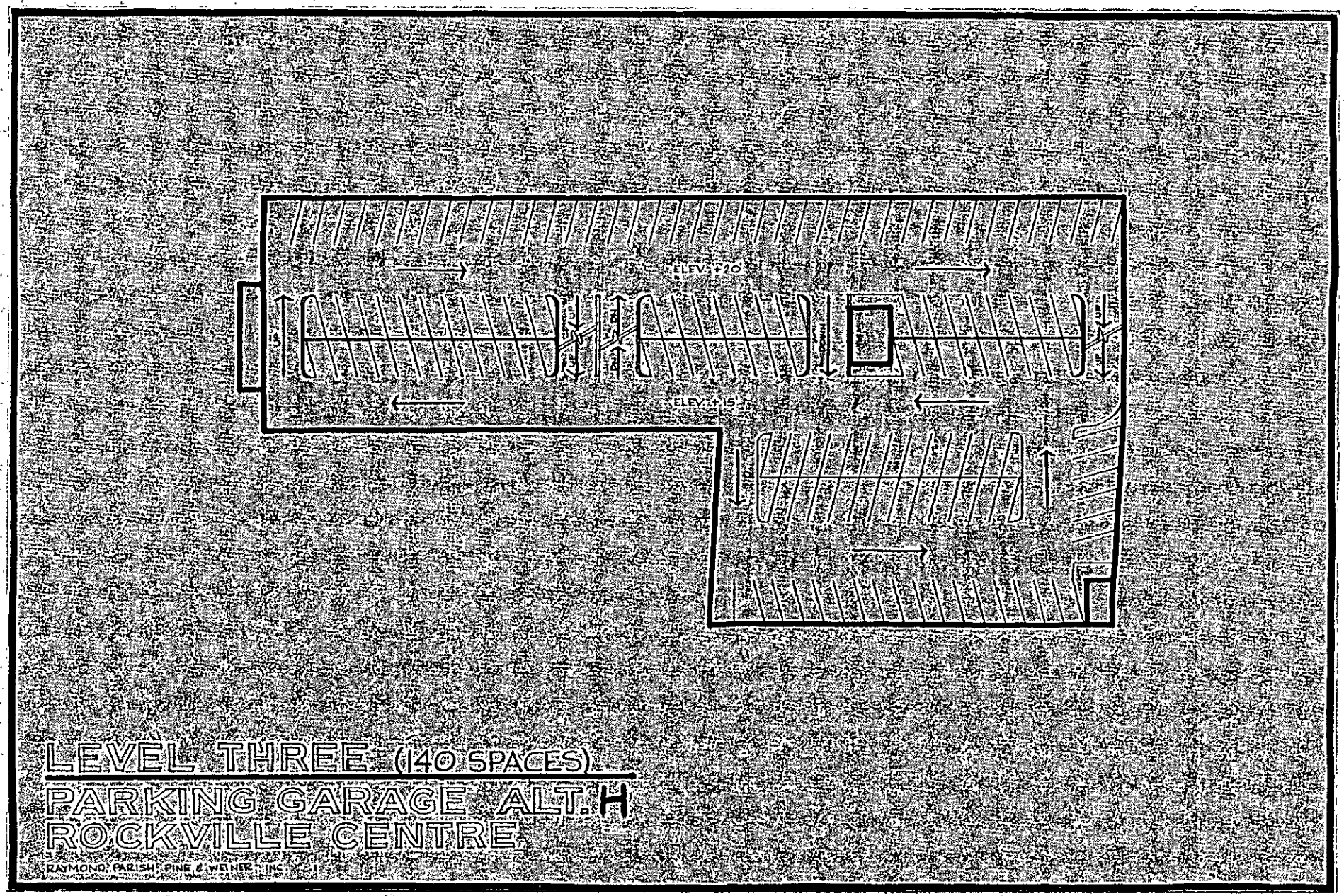

ELEV. +20
ELEV. +15
LEVEL THREE (140 SPACES)
PARKING GARAGE ALT. H
ROCKVILLE CENTRE
RAYMOND, PARISH, PINE & WEINER, INC.

FIG. 11

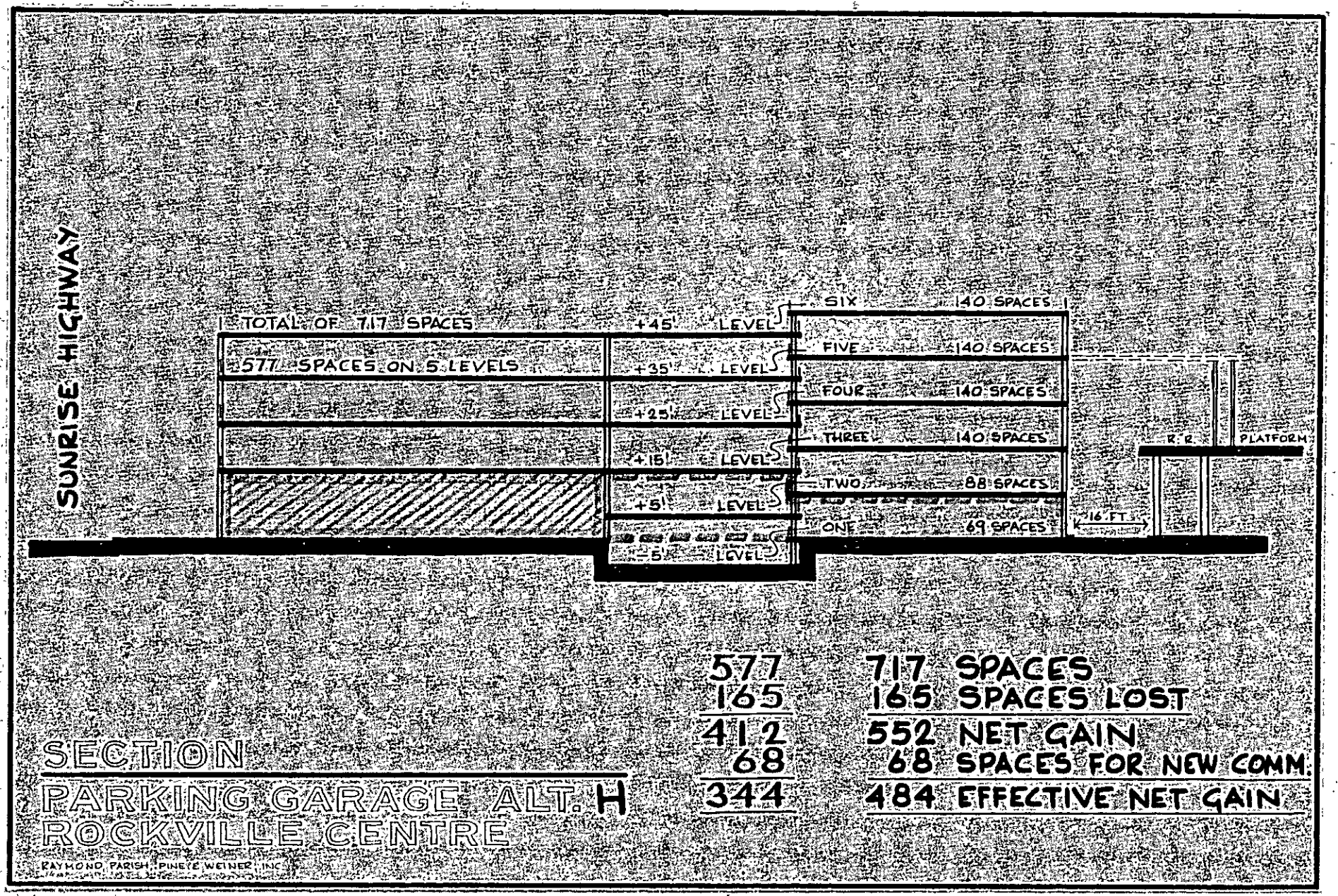

SUNRISE HIGHWAY
TOTAL OF 717 SPACES
577 SPACES ON 5 LEVELS
+45' LEVEL
+35' LEVEL
+25' LEVEL
+15' LEVEL
+5' LEVEL
-5' LEVEL
SIX 140 SPACES
FIVE 140 SPACES
FOUR 140 SPACES
THREE 140 SPACES
TWO 88 SPACES
ONE 69 SPACES
16 FT
R.R.
PLATFORM
577
165
412
68
344
717 SPACES
165 SPACES LOST
552 NET GAIN
68 SPACES FOR NEW COMM.
484 EFFECTIVE NET GAIN
SECTION
PARKING GARAGE ALT. H
ROCKVILLE CENTRE
RAYMOND, PARISH, PINE & WEINER, INC.

FIG. 12

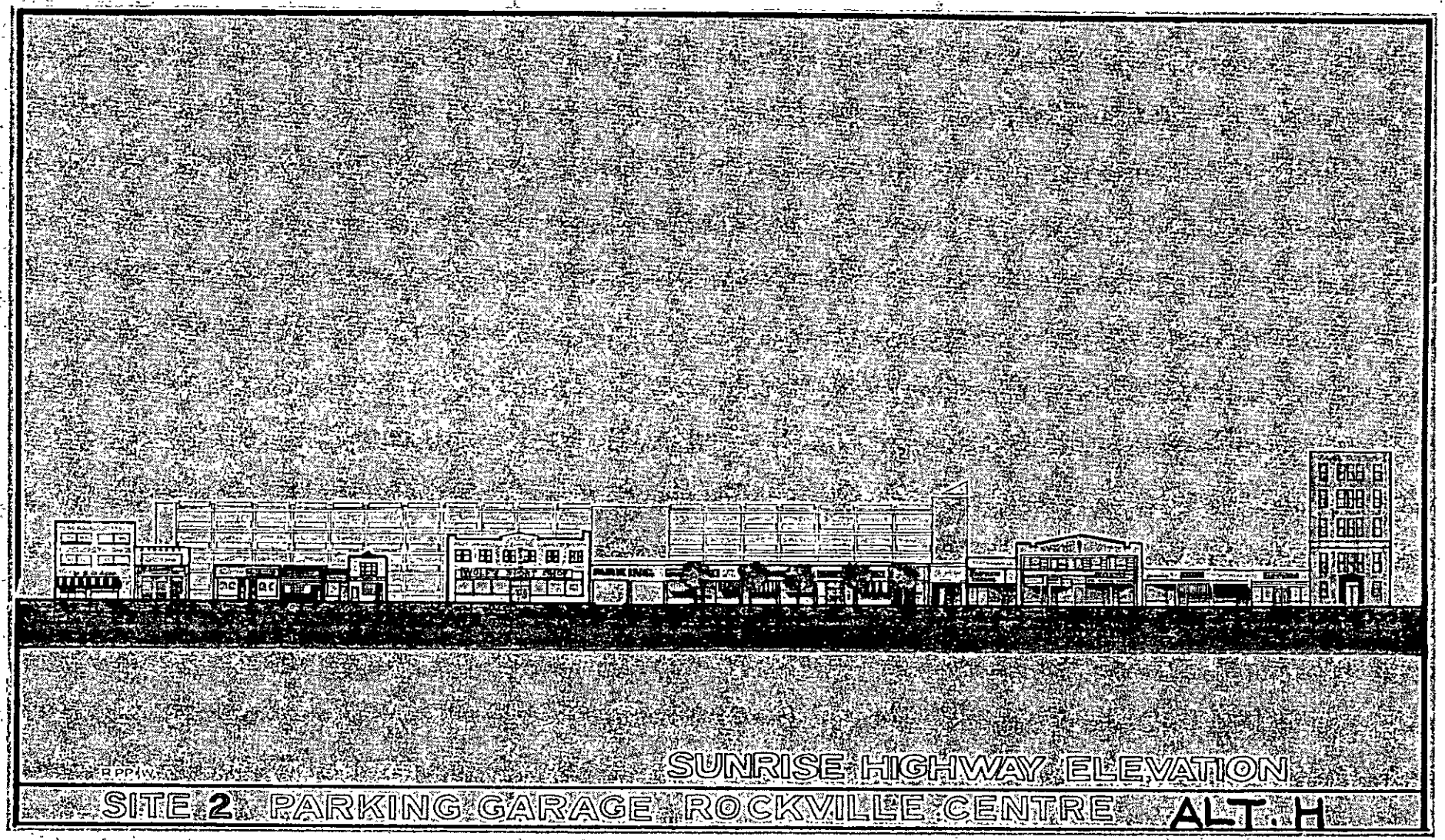

SUNRISE HIGHWAY ELEVATION
SITE 2 PARKING GARAGE ROCKVILLE CENTRE
ALT. H

FIG. 13

new structure, leaving a net gain of 552 spaces. The new 17,000 square feet commercial space would require 68 parking spaces for efficient operation. Thus the effective net gain would be 484 parking spaces. The structure along Sunrise Highway would appear as a four story building; with stores on the first level and parking on the next three levels and on the roof.

A one story reduction in the height of the building would reduce the total number of spaces to 577, with a net gain of 412, and an effective net gain of 344.

A garage entrance would be located on Sunrise Highway for those who travel westbound, and from the lane, entering from North Village Avenue. Cars could exit to Sunrise Highway to travel westbound or through the lane to Front Street and North Park Avenue.

A garage with "sloping roof" design would function well at this location (see Figures 45 and 46 in Appendix B). However, since the commercial space occupies a large portion of the ground floor, the remaining area is not sufficient for the space requirements of such a design. Instead, a "split level" operation with 75° angle parking was designed. This solution is compatible

with the amenities of the garage and with the general circulation pattern, and it serves both long and short term parking needs in a satisfactory manner.

Due to its central location, this garage could be attractive for commuters, office workers and shoppers. In addition, the structure could provide a small attractive shopping mall, and would complete the street frontage on Sunrise Highway, thus providing an important esthetic improvement to the street scene (see Figure 13). On the other hand, the garage would require the acquisition of private land and it would affect the passenger, auto and bus traffic around the railroad area. The increase in the peak hour traffic volume, however, would not be appreciable, and the buses that now pass through the municipal parking lot (No. 19) can be rerouted to Front Street (see Appendix C).

Garage Site 3

Site 3 is the present municipal parking lot No. 1, in the center of the block bounded by South Park Avenue, Sunrise Highway, Morris Avenue and Merrick Road. The site is approximately 700 feet long, and 130 feet wide.

Only a one story parking deck would be built at this location. The one story deck as shown on Figure 14 would have 220 parking spaces. The main entrance and exit onto and from the deck would be at the easterly end of the existing parking lot. About 20 surface parking spaces would be lost, for a net gain of 200 spaces. For trucks, a 12-15 foot clearance would be provided under the deck. There are two reasons for designing only a one story garage at this location. (1) The demand on Site 3 would not be as great as on Site 2. The 200 additional spaces on the upper level would be sufficient for long term parkers in the area and for a limited number of commuters. (2) There might be a resistance on environmental/esthetic grounds against a tall deck in the middle of this block. It should be noted, however, that a single level deck would be largely invisible from the surrounding streets.

An important advantage of this location is that the spaces would be provided in an area with a strong need for short term parking, and with minimal disruption to the existing parking facility. On the other hand, the deck would not be centrally located, and would not provide enough parking spaces to reduce the parking shortage to any considerable extent.

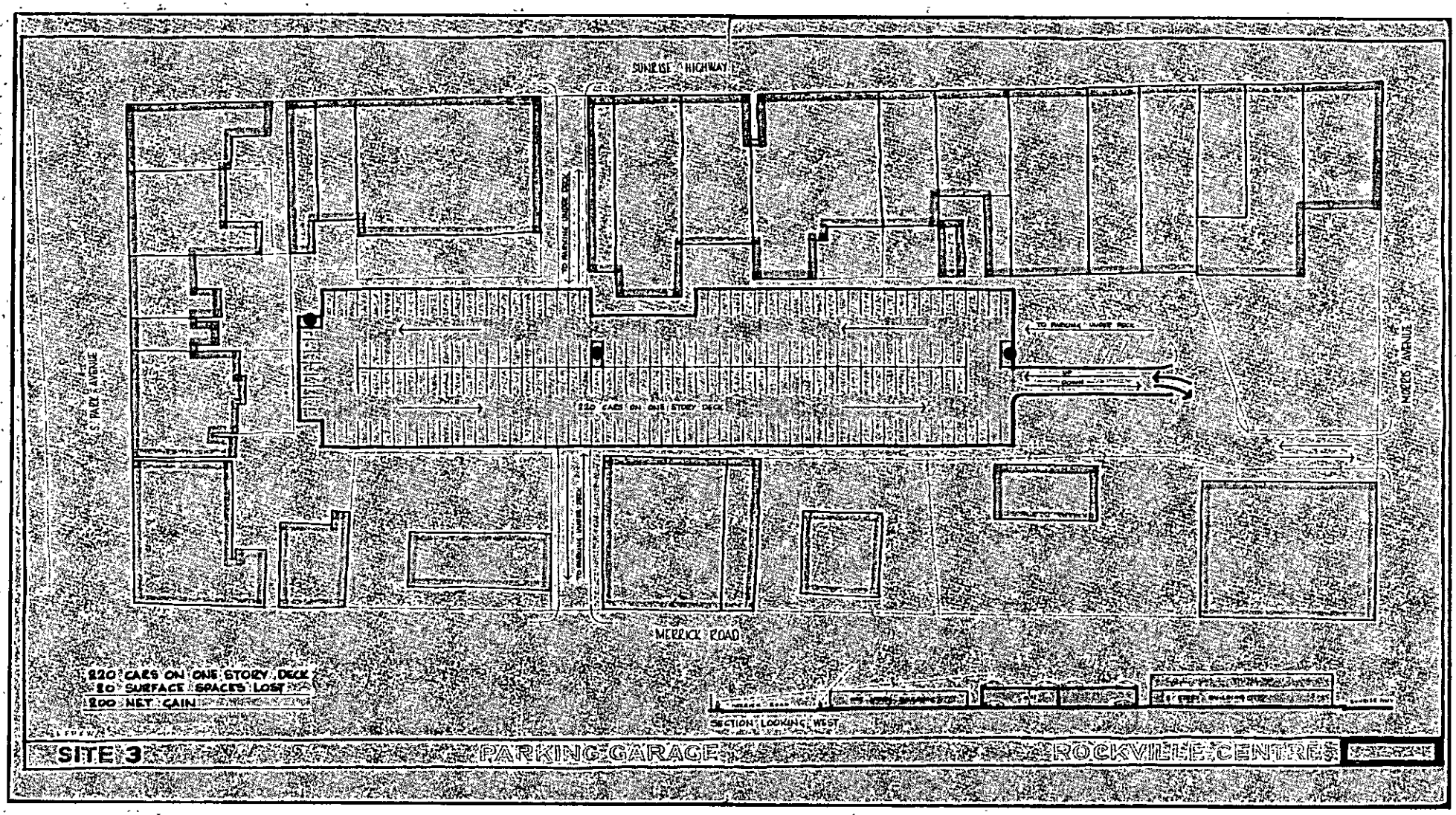

SUNRISE HIGHWAY
TO PARKING UNDER DECK
TO PARKING UNDER DECK
TO PARKING UNDER DECK
220 CARS ON ONE STORY DECK
S. PARK AVENUE
NORTH AVENUE
MERRICK ROAD
220 CARS ON ONE STORY DECK
20 SURFACE SPACES LOST
200 NET GAIN
SECTION LOOKING WEST
SITE 3
PARKING GARAGE
ROCKVILLE CENTRE

FIG. 14

FINANCIAL ANALYSIS OF A NEW GARAGE

A financial analysis of construction and operating costs is provided for a parking garage, in this case based upon the recommended plan presented as alternate H for Site 2. The construction of this garage appears to be the most appropriate action to ease the parking shortage. The parking spaces provided in this garage would help commuters, office workers and shoppers as well. It should be noted, however, that the design of this project might have to be changed to resemble one of the other alternate solutions presented for Site 2 (see Appendix B). Results of negotiations for the Diocese's property and availability of funds might necessitate such a change. In any event, the financial analysis will not be substantially affected by variations in design.

This analysis is based on a five-level garage providing a total of 577 spaces, with a net area of about 232,000 square feet. The portion of the building devoted to commercial development constitutes about 43,000 square feet. In this analysis the commercial portion, (both costs and revenues) has been excluded in order to isolate the financial feasibility of the parking structure itself.

(In general, the commercial area can be expected to pay for itself or return a slight profit; it therefore would not affect the financial picture of the garage in any significant way).

The costs of the parking garage include both the construction costs and the costs of maintenance and operation of the facility.

Construction Cost

The cost of construction of the garage portion of the structure is estimated at $3,600,000. This amounts to a unit cost of $6,250 per space or, at about 400 square feet per space, $15.63 per square foot. The costs are based on estimated 1980 price levels, and include items such as engineering and architecture, supervision of construction, related legal and administration expenses, and a contingency allowance.

On an annual basis, using an interest rate of six percent and a 20-year financing period, the capitalized annual cost of construction would be $314,000. This would equate to an annual capital cost of $544 per space.

Maintenance and Operations Costs

These costs cover the day-to-day operation of the garage. They include such items as payroll (including taxes and benefits), utilities, repairs and maintenance, supplies, snow removal, insurance, security, and management and/or administration. If the garage is controlled by parking meters, the cost of patrol and enforcement also would be included.

For this garage, it is estimated that the maintenance and operation costs would amount to about $175 per year per space, or $100,000 per year total for the facility.

Total Annual Costs

The total annual costs of the garage, including both capitalized construction and maintenance and operation, are estimated at $414,000 or $719 per space.

Revenue Analysis

In order for the garage to break even, it will be necessary for each space to generate income of $719 per space per year. Assuming 310 revenue days per year (revenues from Sunday operation probably would not be significant), a daily revenue of $2.32 would be required. This is more than the garage can reasonably be expected to produce.

Studies at garages in other similar areas have indicated that a parking space will be occupied for between 7 and 8 hours per day, including evening operation. If the prevailing short term meter rate of 10 cents per hour were used, each space would generate aobut 75 cents per day or $233 per year (a deficit of $486 per space per year). This is significantly below the break even point. Note, however, that this revenue covers the costs of maintenance and operation of the facility. This shortfall in revenues versus costs is typical of new garages. In general there are several routes which can be taken to deal with this problem:

1. Raise parking rates
2. Subsidize the capital costs of the garage
3. Subsidize operations of the garage
4. Combine these approaches

The methods are discussed below:

<u>Alternate 1. Increase the parking rates</u>. The prevailing rate of 10 cents per hour is low. Increasing the short-term rate to 15 or 20 cents per hour could increase revenues potentially by 50 and 100 percent respectively. There would be some offsetting reduction in usage, however, as some drivers would search for lower priced parking in the lots or at the curb.

On the other hand, if the curb and lot rates also were increased, close to the full potential of the higher garage rates could be realized.

Alternate 2. Apply other parking revenues towards the garage financing. At present meter revenues from the existing lots and on-street meters amount to about $150,000 per year. If this revenue were applied to the garage costs, it would go a considerable way towards meeting the capitalized construction costs. If the meter rates were increased, the additional revenue would be proportionately higher. (Note: increases beyond an additional 5 or 10 cents per hour would probably cause a diversion of parkers either to adjacent free streets or to other shopping areas).

Alternate 3. Assume certain operating costs under existing Village operations. The maintenance and operations costs included in the analysis are based on an assumption of a completely independent garage operation. To the extent that any of these operations and their costs can be assumed by operating Village agencies or departments, the cost applied to the garage could be reduced accordingly.

Alternate 4. Provide Community Development funds to "write down" a portion of the capital costs of the garage.

Alternate 5. Create a special beneift taxing district to help pay for the new garage.

Although the above measures will reduce the gap between revenues and costs, it still should be recognized that the garage cannot be a self-supporting facility financially. Some form of subsidy or supplementary income will be required. Once constructed, however, revenues could at least cover maintenance and operating costs.

APPENDIX A

SURVEY AND ANALYSES DATA

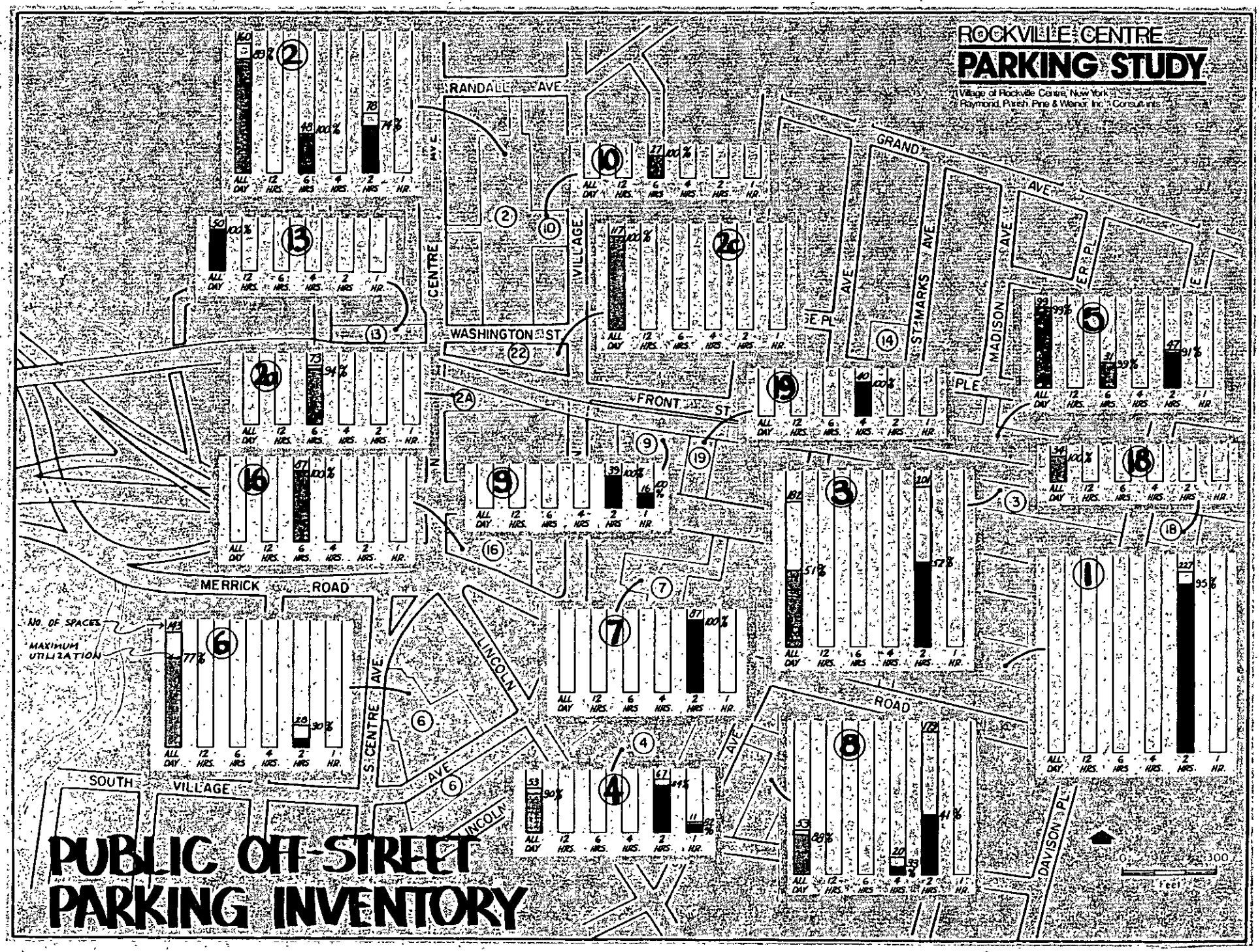
The following drawings and tables provide additional data to illustrate the existing parking situation and the need for additional spaces.

Figure 15 (PUBLIC OFF-STREET PARKING INVENTORY) is a graphic presentation of the number and type of parking spaces in the public lots, and shows the extent of maximum utilization on the survey days.

Figures 16-32 (PEAK PARKING ACCUMULATION & HOURLY PARKING ACCUMULATION) provide hourly data about the utilization of the individual public parking lots.

Figures 33-36 (PARKING TURNOVER) illustrate the parking turnover at selected public lots and the number of cars that park beyond the permitted time limits.

Figure 37 (REQUIRED PARKING) breaks down the parking need into short and long term spaces, and provides an alternate calculation for establishing the present parking need (excluding commuters).



PUBLIC OFF-STREET PARKING INVENTORY

FIG. 15

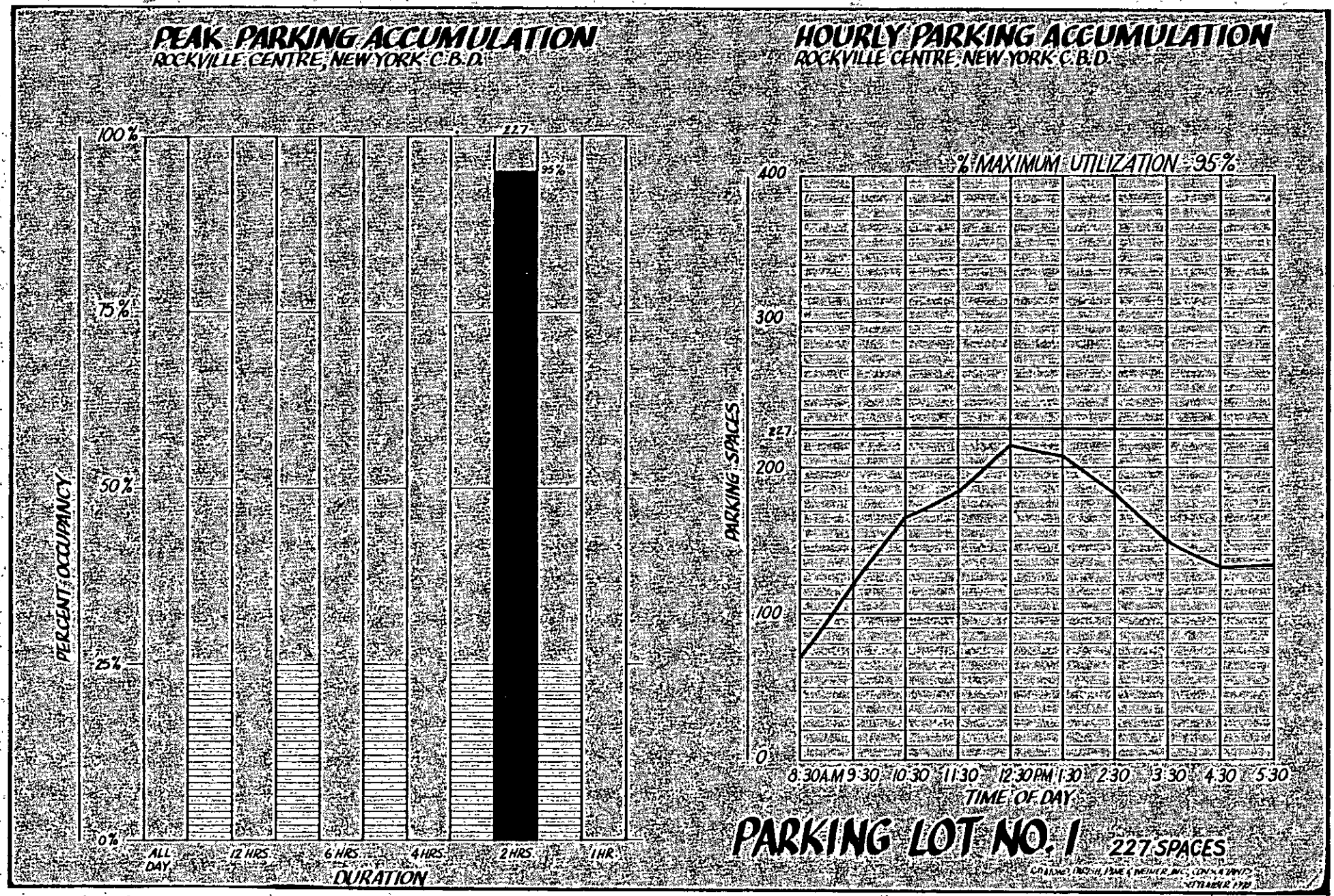

PEAK PARKING ACCUMULATION
ROCKVILLE CENTRE, NEW YORK C.B.D.
HOURLY PARKING ACCUMULATION
ROCKVILLE CENTRE, NEW YORK C.B.D.
% MAXIMUM UTILIZATION 95%
227
95%
100%
75%
50%
25%
0%
PERCENT OCCUPANCY
400
300
200
100
0
PARKING SPACES
ALL DAY
12 HRS.
6 HRS.
4 HRS.
2 HRS.
1 HR.
DURATION
8:30 A.M. 9:30 10:30 11:30 12:30 PM 1:30 2:30 3:30 4:30 5:30
TIME OF DAY
PARKING LOT NO. 1
227 SPACES

FIG. 16

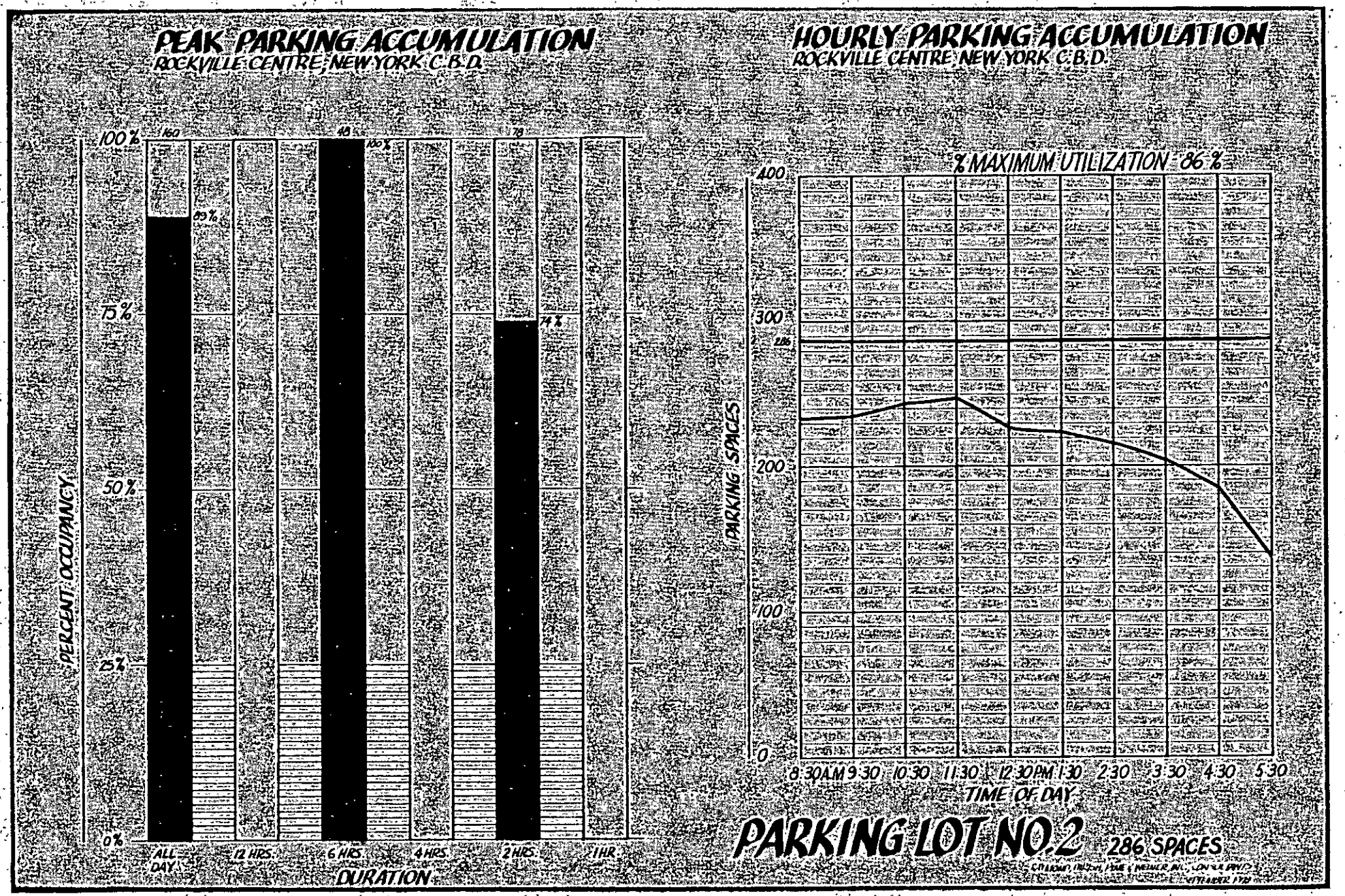

PEAK PARKING ACCUMULATION
ROCKVILLE CENTRE, NEW YORK C.B.D.
HOURLY PARKING ACCUMULATION
ROCKVILLE CENTRE NEW YORK C.B.D.
% MAXIMUM UTILIZATION 86%
PERCENT OCCUPANCY
100%
75%
50%
25%
0%
160
89%
90
100%
78
74%
ALL DAY
12 HRS.
6 HRS.
4 HRS.
2 HRS.
1 HR.
DURATION
PARKING SPACES
400
300
286
200
100
0
8:30AM 9:30 10:30 11:30 12:30PM 1:30 2:30 3:30 4:30 5:30
TIME OF DAY
PARKING LOT NO. 2
286 SPACES

FIG. 17

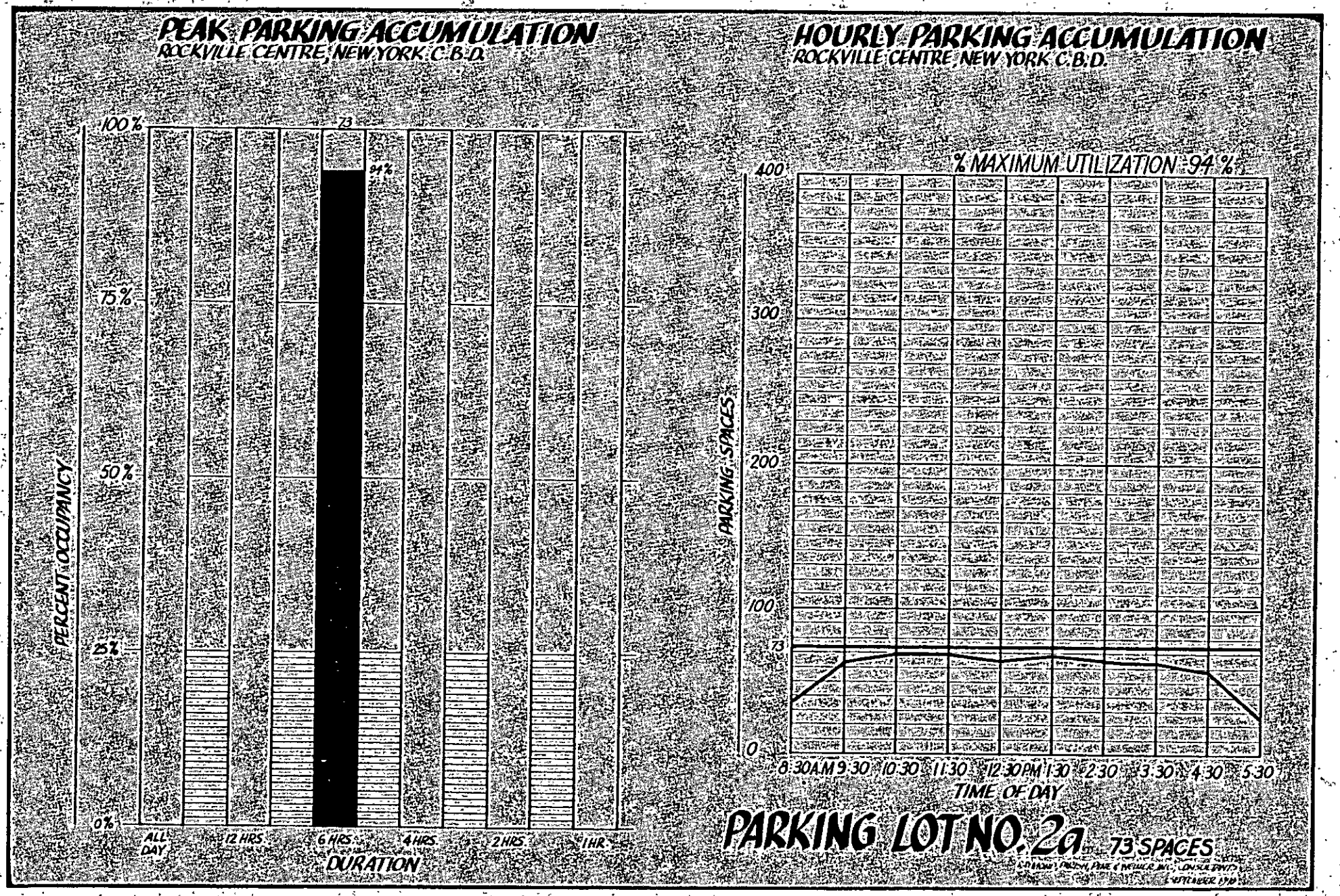

PEAK PARKING ACCUMULATION
ROCKVILLE CENTRE, NEW YORK C.B.D.
100%
75%
50%
25%
0%
PERCENT OCCUPANCY
73
94%
ALL DAY
12 HRS
6 HRS
4 HRS
2 HRS
1 HR
DURATION
HOURLY PARKING ACCUMULATION
ROCKVILLE CENTRE, NEW YORK C.B.D.
% MAXIMUM UTILIZATION 94%
400
300
200
100
73
0
PARKING SPACES
8:30 A.M
9:30
10:30
11:30
12:30 PM
1:30
2:30
3:30
4:30
5:30
TIME OF DAY
PARKING LOT NO. 2a
73 SPACES

FIG. 18

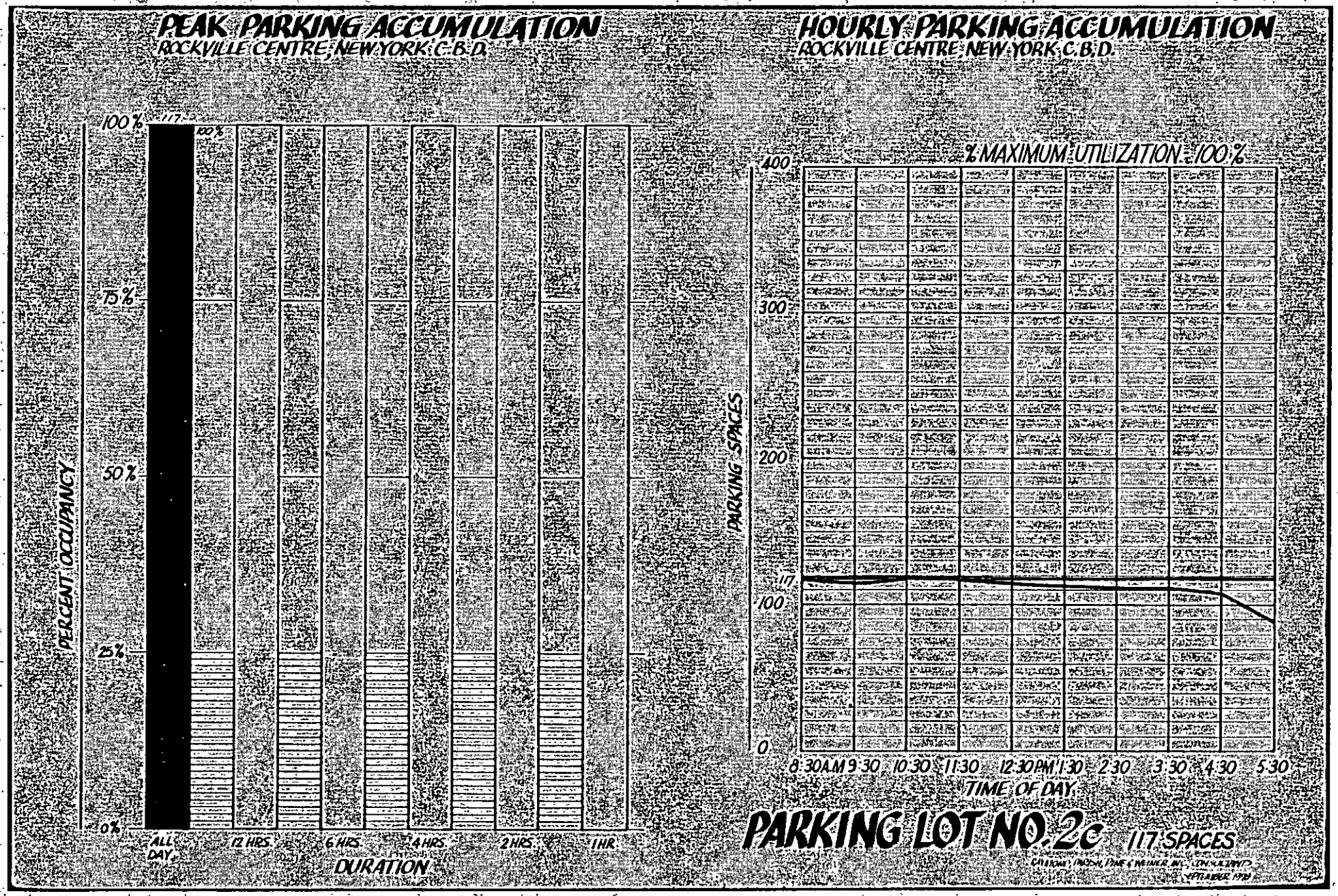

PEAK PARKING ACCUMULATION
ROCKVILLE CENTRE, NEW YORK, C.B.D.
HOURLY PARKING ACCUMULATION
ROCKVILLE CENTRE, NEW YORK, C.B.D.
% MAXIMUM UTILIZATION = 100%
PERCENT OCCUPANCY
100%
75%
50%
25%
0%
117
100%
ALL DAY
12 HRS.
6 HRS.
4 HRS.
2 HRS.
1 HR.
DURATION
PARKING SPACES
400
300
200
117
100
0
8:30 A.M.
9:30
10:30
11:30
12:30 P.M.
1:30
2:30
3:30
4:30
5:30
TIME OF DAY
PARKING LOT NO. 2c
117 SPACES

FIG. 19

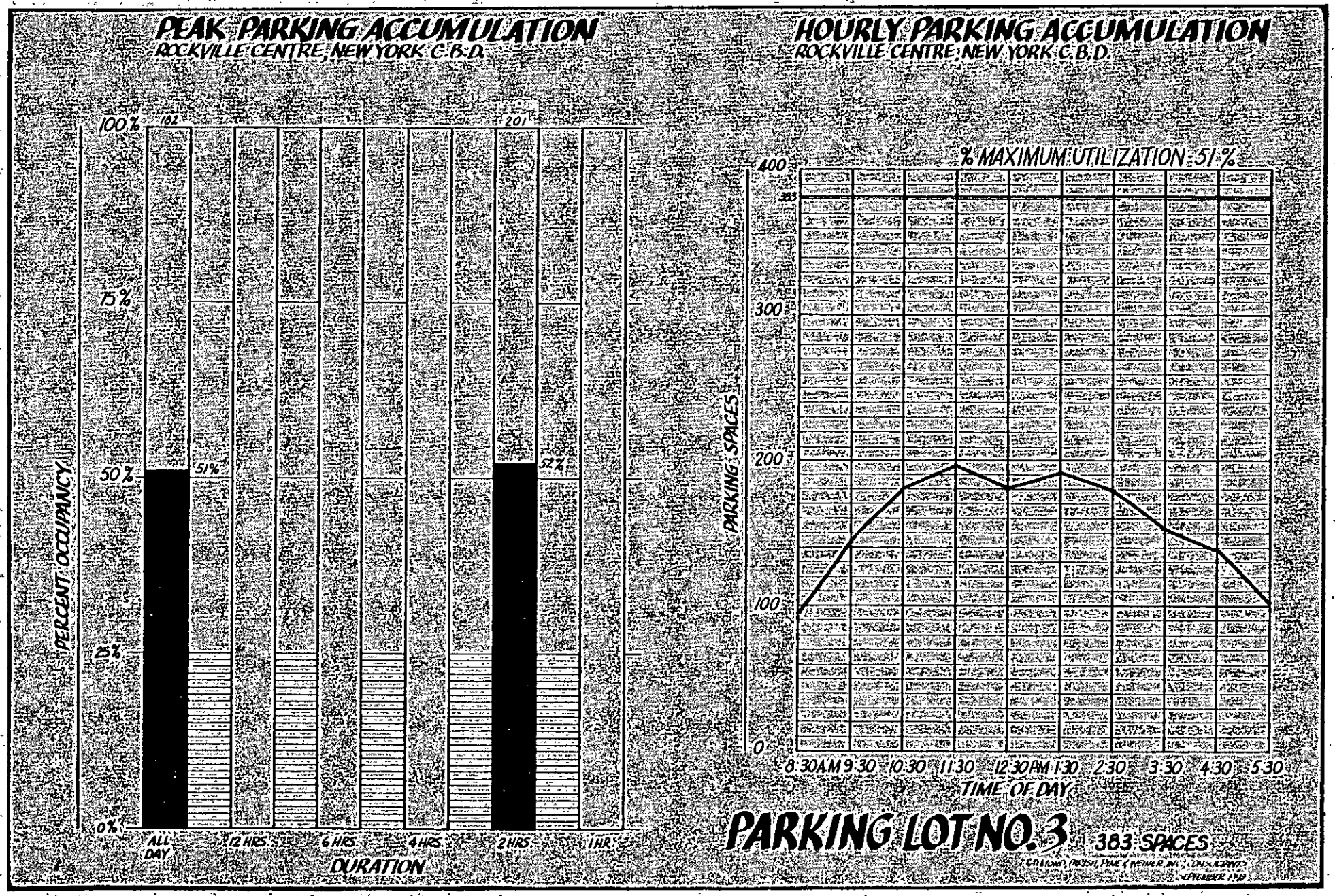

PEAK PARKING ACCUMULATION
ROCKVILLE CENTRE, NEW YORK C.B.D.
100%
75%
50%
25%
0%
PERCENT OCCUPANCY
182
51%
201
52%
ALL DAY
12 HRS
6 HRS
4 HRS
2 HRS
1 HR
DURATION
HOURLY PARKING ACCUMULATION
ROCKVILLE CENTRE, NEW YORK C.B.D.
% MAXIMUM UTILIZATION 51%
400
383
300
200
100
0
PARKING SPACES
8:30 A.M.
9:30
10:30
11:30
12:30 P.M.
1:30
2:30
3:30
4:30
5:30
TIME OF DAY
PARKING LOT NO. 3
383 SPACES

FIG. 20

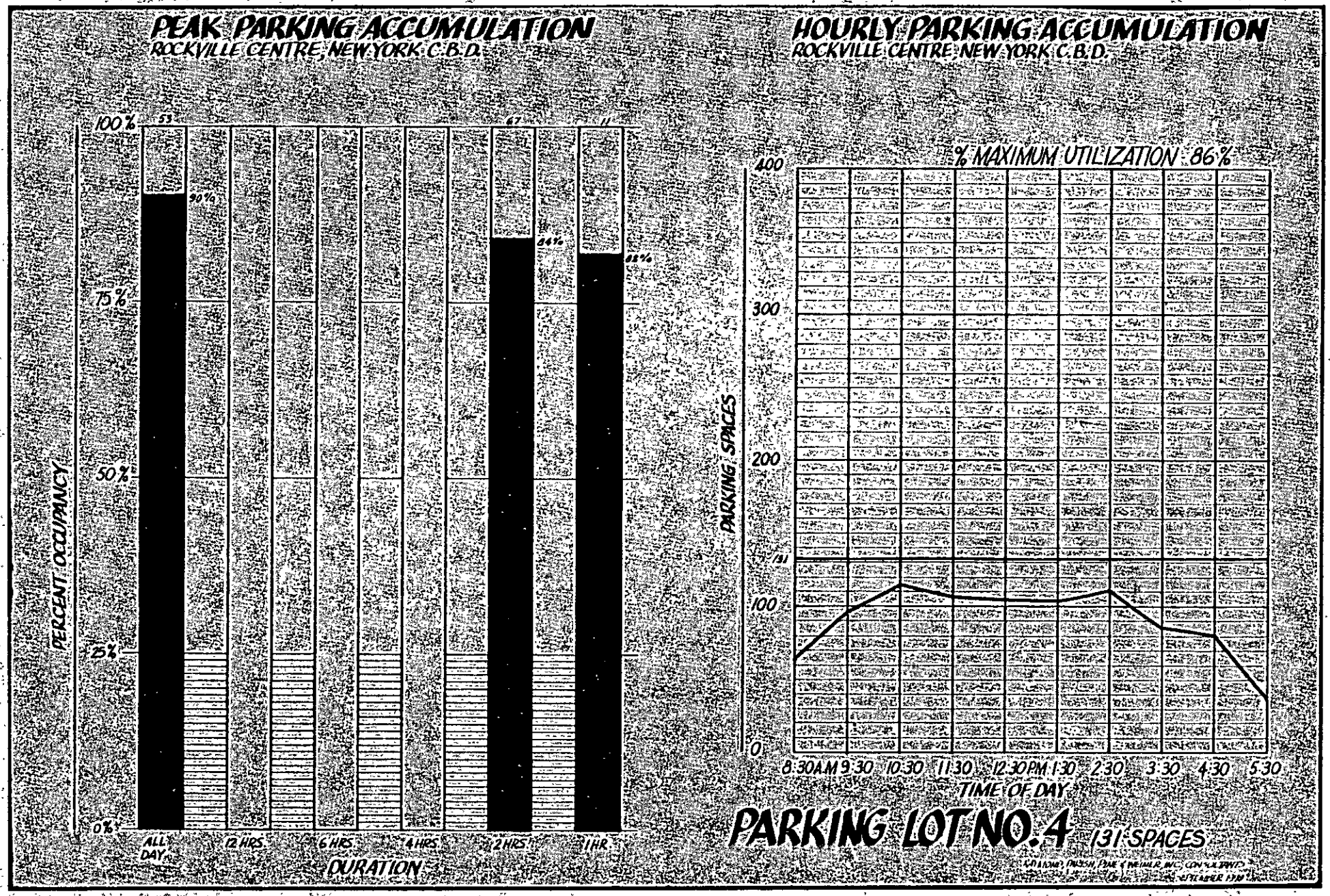

PEAK PARKING ACCUMULATION
ROCKVILLE CENTRE, NEW YORK C.B.D.
100%
75%
50%
25%
0%
PERCENT OCCUPANCY
53
90%
67
84%
11
82%
ALL DAY
12 HRS.
6 HRS.
4 HRS.
2 HRS.
1 HR.
DURATION
HOURLY PARKING ACCUMULATION
ROCKVILLE CENTRE, NEW YORK C.B.D.
% MAXIMUM UTILIZATION 86%
400
300
200
131
100
0
PARKING SPACES
8:30 A.M. 9:30 10:30 11:30 12:30 P.M. 1:30 2:30 3:30 4:30 5:30
TIME OF DAY
PARKING LOT NO. 4 131 SPACES

FIG. 21

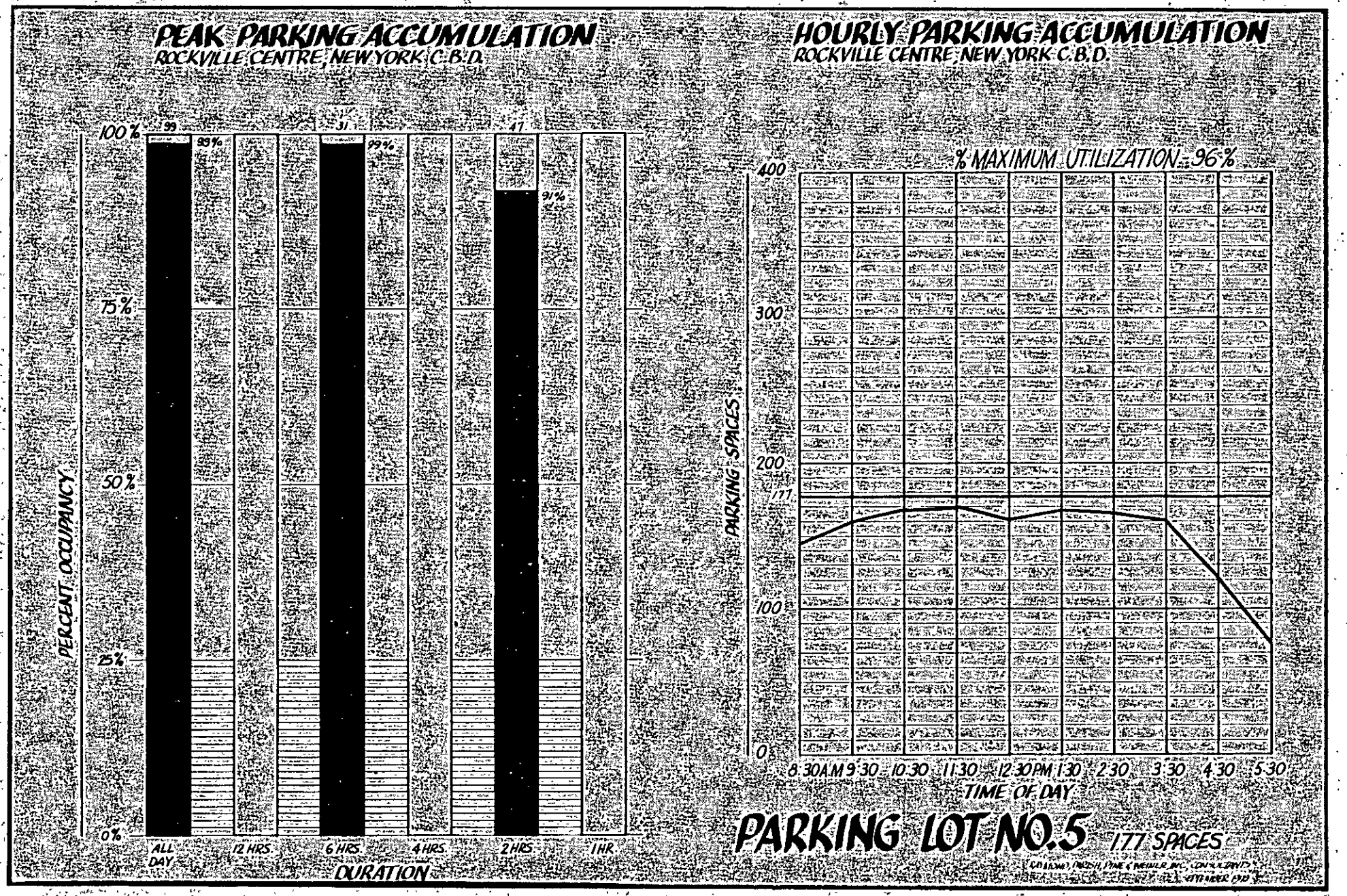

PEAK PARKING ACCUMULATION
ROCKVILLE CENTRE, NEW YORK C.B.D.
100%
75%
50%
25%
0%
PERCENT OCCUPANCY
99
99%
31
99%
47
91%
ALL DAY
12 HRS.
6 HRS.
4 HRS.
2 HRS.
1 HR.
DURATION
HOURLY PARKING ACCUMULATION
ROCKVILLE CENTRE, NEW YORK C.B.D.
% MAXIMUM UTILIZATION = 96%
400
300
200
177
100
0
PARKING SPACES
8:30 A.M. 9:30 10:30 11:30 12:30 P.M. 1:30 2:30 3:30 4:30 5:30
TIME OF DAY
PARKING LOT NO. 5
177 SPACES

FIG. 22

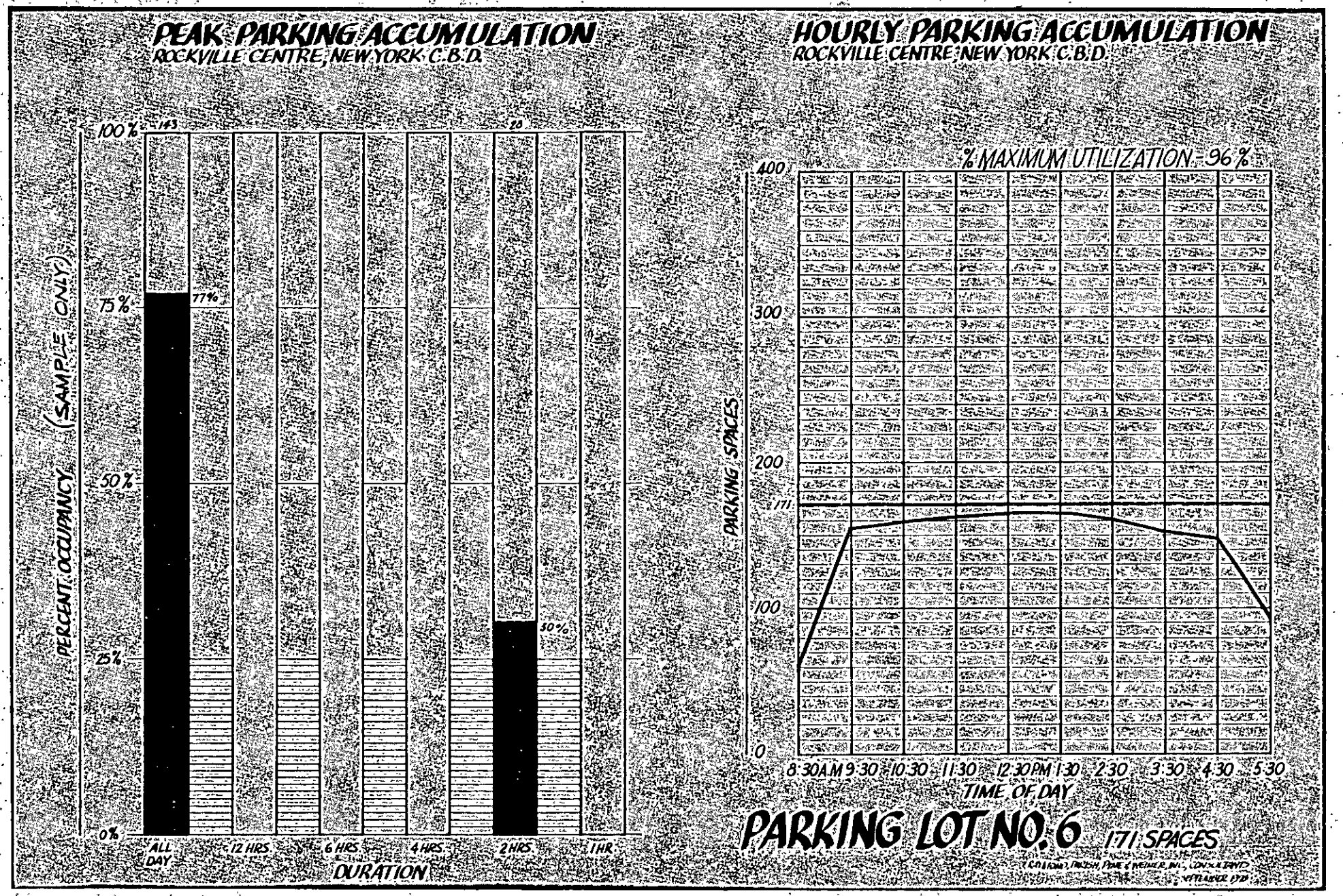

PEAK PARKING ACCUMULATION
ROCKVILLE CENTRE, NEW YORK C.B.D.
PERCENT OCCUPANCY (SAMPLE ONLY)
100%
75%
50%
25%
0%
143
77%
20
50%
ALL DAY
12 HRS.
6 HRS.
4 HRS.
2 HRS.
1 HR.
DURATION
HOURLY PARKING ACCUMULATION
ROCKVILLE CENTRE, NEW YORK C.B.D.
% MAXIMUM UTILIZATION = 96%
PARKING SPACES
400
300
200
171
100
0
8:30 A.M. 9:30 10:30 11:30 12:30 P.M. 1:30 2:30 3:30 4:30 5:30
TIME OF DAY
PARKING LOT NO. 6
171 SPACES

FIG. 23

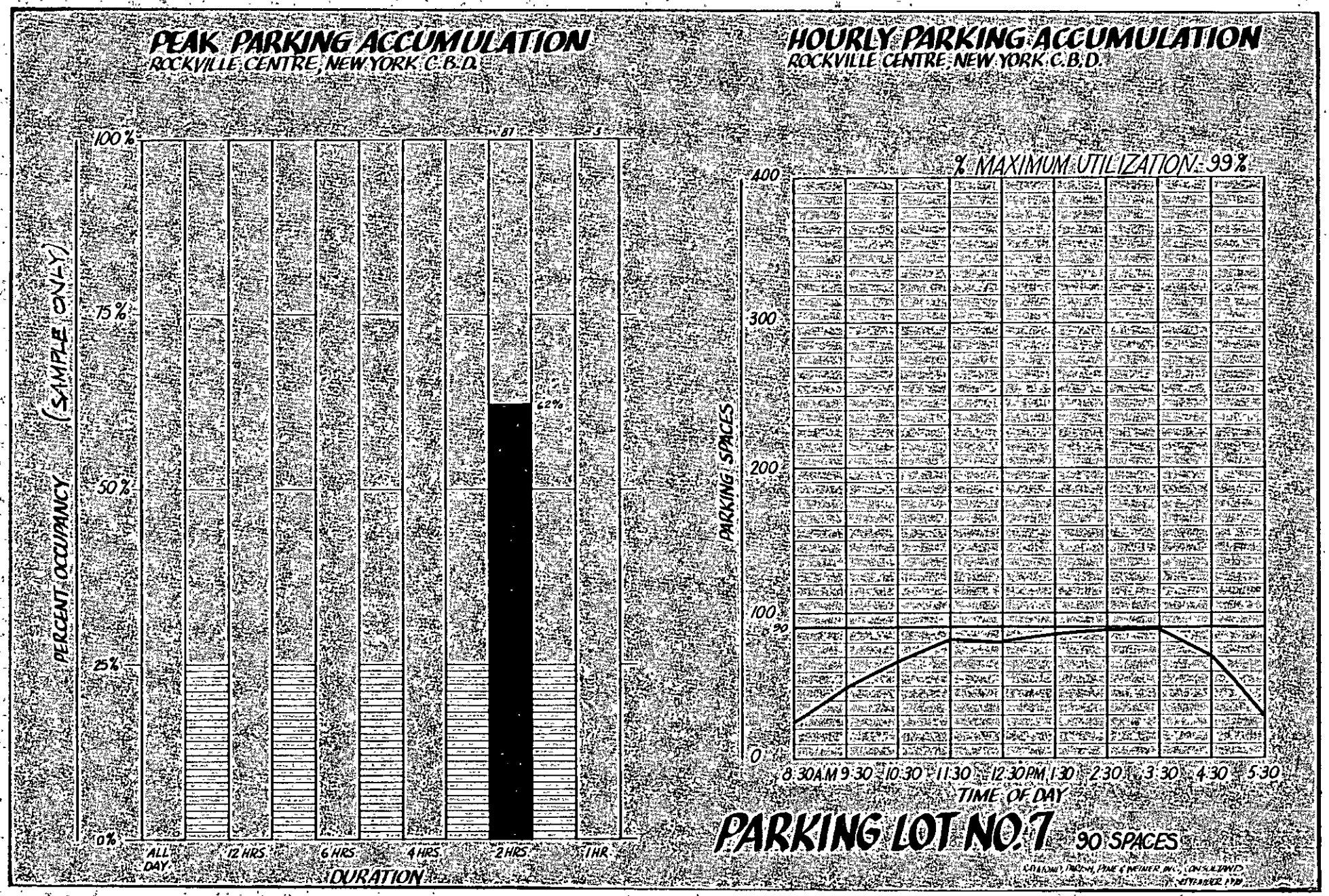

PEAK PARKING ACCUMULATION
ROCKVILLE CENTRE, NEW YORK C.B.D.
HOURLY PARKING ACCUMULATION
ROCKVILLE CENTRE, NEW YORK C.B.D.
PERCENT OCCUPANCY (SAMPLE ONLY)
100%
75%
50%
25%
0%
87
3
62%
ALL DAY
12 HRS.
6 HRS
4 HRS.
2 HRS.
1 HR.
DURATION
% MAXIMUM UTILIZATION - 99%
PARKING SPACES
400
300
200
100
90
0
8:30 A.M.
9:30
10:30
11:30
12:30 PM
1:30
2:30
3:30
4:30
5:30
TIME OF DAY
PARKING LOT NO. 7
90 SPACES

FIG. 24

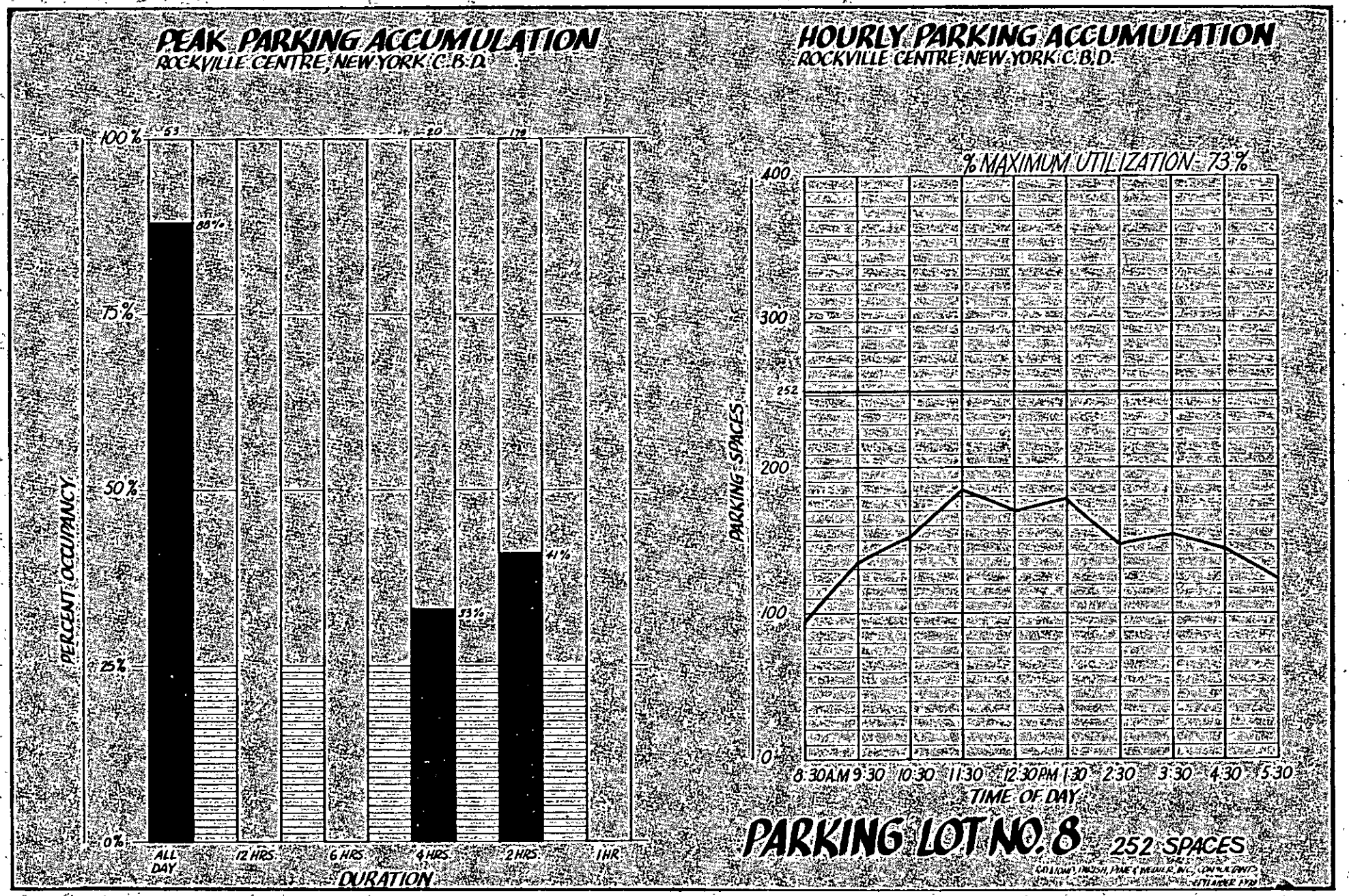

PEAK PARKING ACCUMULATION
ROCKVILLE CENTRE, NEW YORK C.B.D.
HOURLY PARKING ACCUMULATION
ROCKVILLE CENTRE, NEW YORK C.B.D.
% MAXIMUM UTILIZATION = 73%
PERCENT OCCUPANCY
100%
75%
50%
25%
0%
53
80
179
88%
53%
41%
ALL DAY
12 HRS
6 HRS
4 HRS
2 HRS
1 HR
DURATION
PARKING SPACES
400
300
252
200
100
0
8:30 A.M.
9:30
10:30
11:30
12:30 P.M.
1:30
2:30
3:30
4:30
5:30
TIME OF DAY
PARKING LOT NO. 8
252 SPACES

FIG. 25

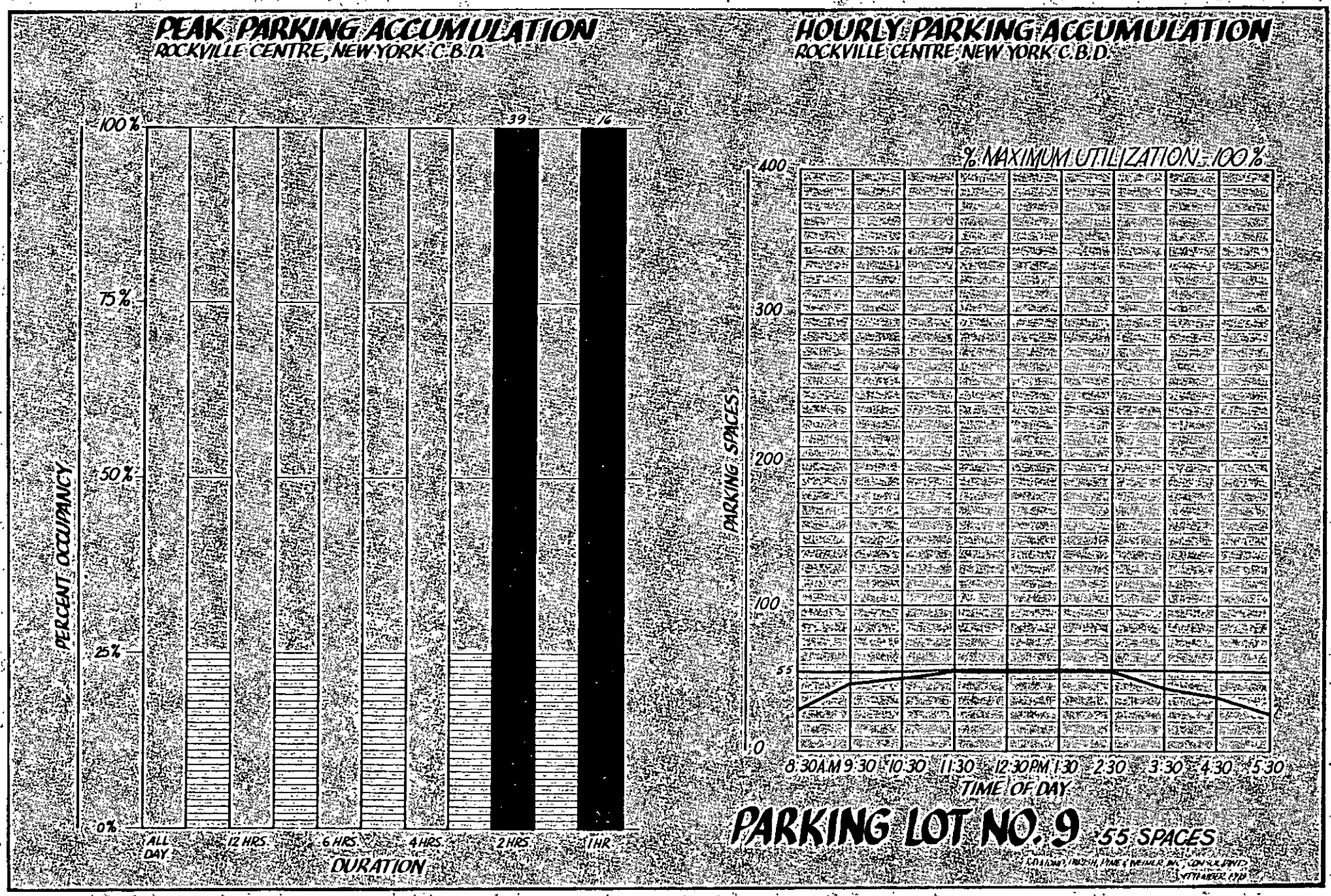

PEAK PARKING ACCUMULATION
ROCKVILLE CENTRE, NEW YORK C.B.D.
100%
75%
50%
25%
0%
PERCENT OCCUPANCY
39
16
ALL DAY
12 HRS.
6 HRS.
4 HRS.
2 HRS.
1 HR.
DURATION
HOURLY PARKING ACCUMULATION
ROCKVILLE CENTRE, NEW YORK C.B.D.
% MAXIMUM UTILIZATION = 100%
400
300
200
100
55
0
PARKING SPACES
8:30 A.M. 9:30 10:30 11:30 12:30 P.M. 1:30 2:30 3:30 4:30 5:30
TIME OF DAY
PARKING LOT NO. 9
55 SPACES

FIG. 26

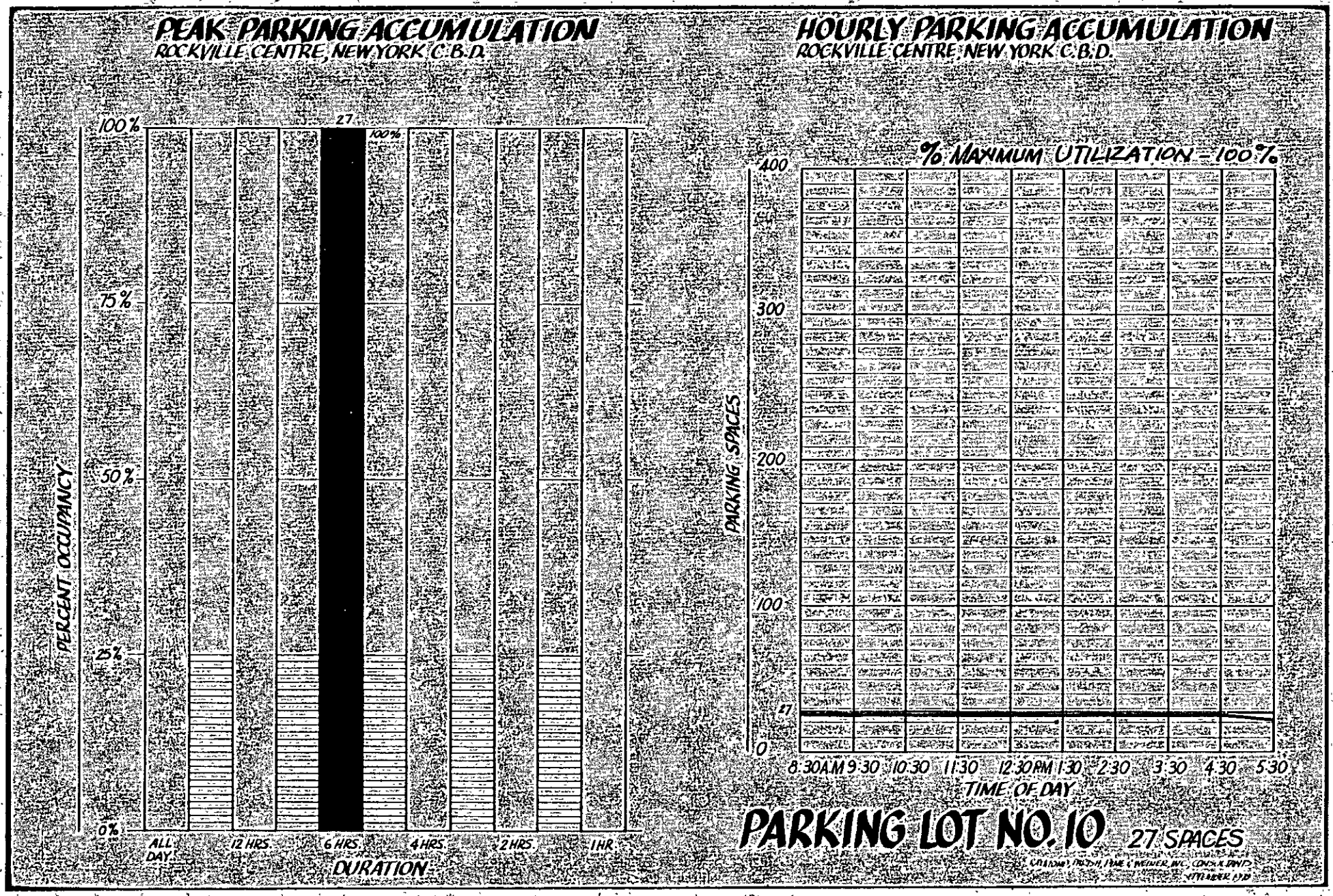

PEAK PARKING ACCUMULATION
ROCKVILLE CENTRE, NEW YORK C.B.D.
100%
75%
50%
25%
0%
PERCENT OCCUPANCY
27
100%
ALL DAY
12 HRS.
6 HRS.
4 HRS.
2 HRS.
1 HR.
DURATION
HOURLY PARKING ACCUMULATION
ROCKVILLE CENTRE, NEW YORK C.B.D.
% MAXIMUM UTILIZATION = 100%
400
300
200
100
27
0
PARKING SPACES
8:30 A.M.
9:30
10:30
11:30
12:30 P.M.
1:30
2:30
3:30
4:30
5:30
TIME OF DAY
PARKING LOT NO. 10
27 SPACES

FIG. 27

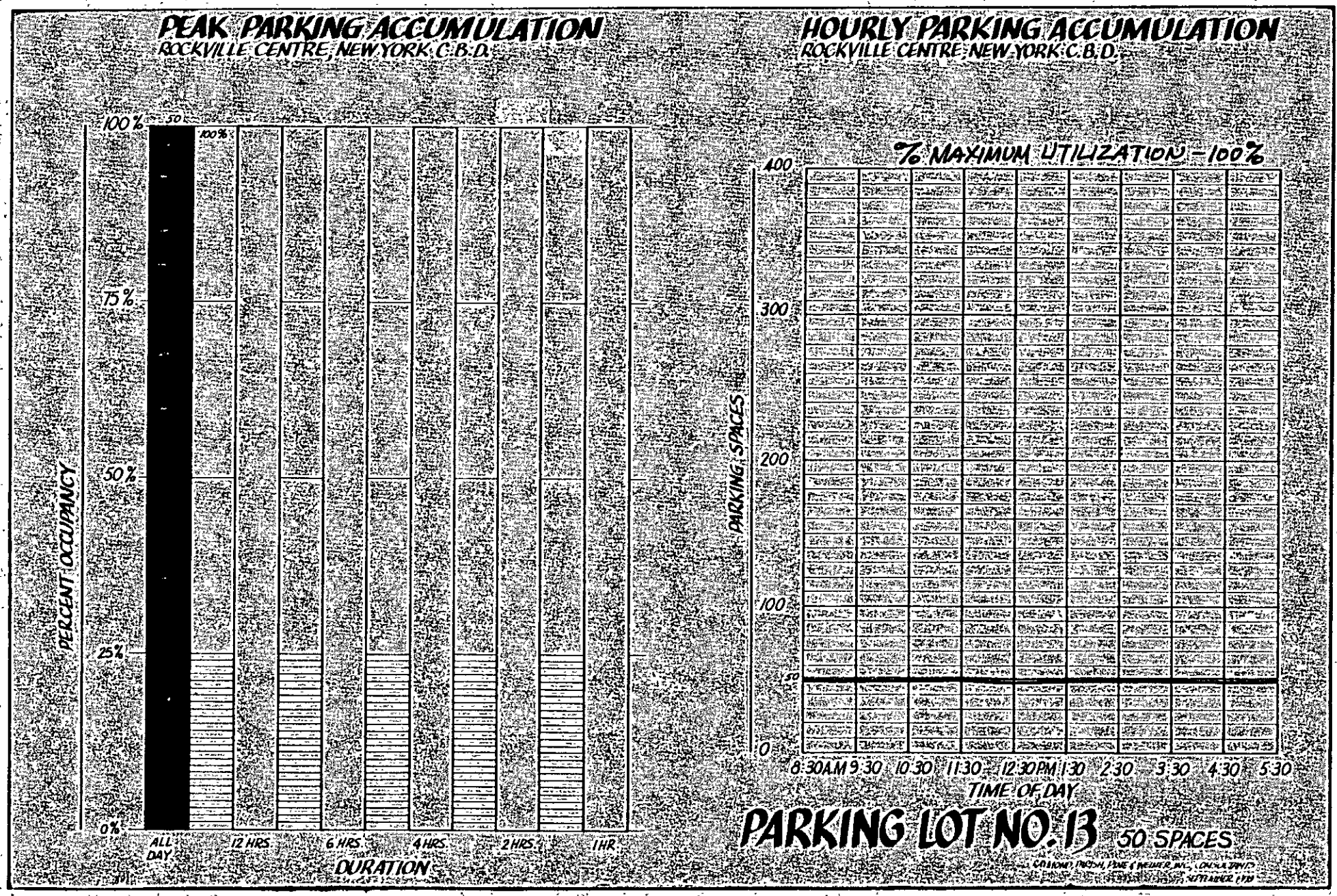

PEAK PARKING ACCUMULATION
ROCKVILLE CENTRE, NEW YORK C.B.D.
HOURLY PARKING ACCUMULATION
ROCKVILLE CENTRE, NEW YORK C.B.D.
% MAXIMUM UTILIZATION - 100%
PERCENT OCCUPANCY
100%
75%
50%
25%
0%
50
100%
ALL DAY
12 HRS.
6 HRS.
4 HRS.
2 HRS.
1 HR.
DURATION
PARKING SPACES
400
300
200
100
50
0
8:30 A.M.
9:30
10:30
11:30
12:30 P.M.
1:30
2:30
3:30
4:30
5:30
TIME OF DAY
PARKING LOT NO. 13
50 SPACES

FIG. 28

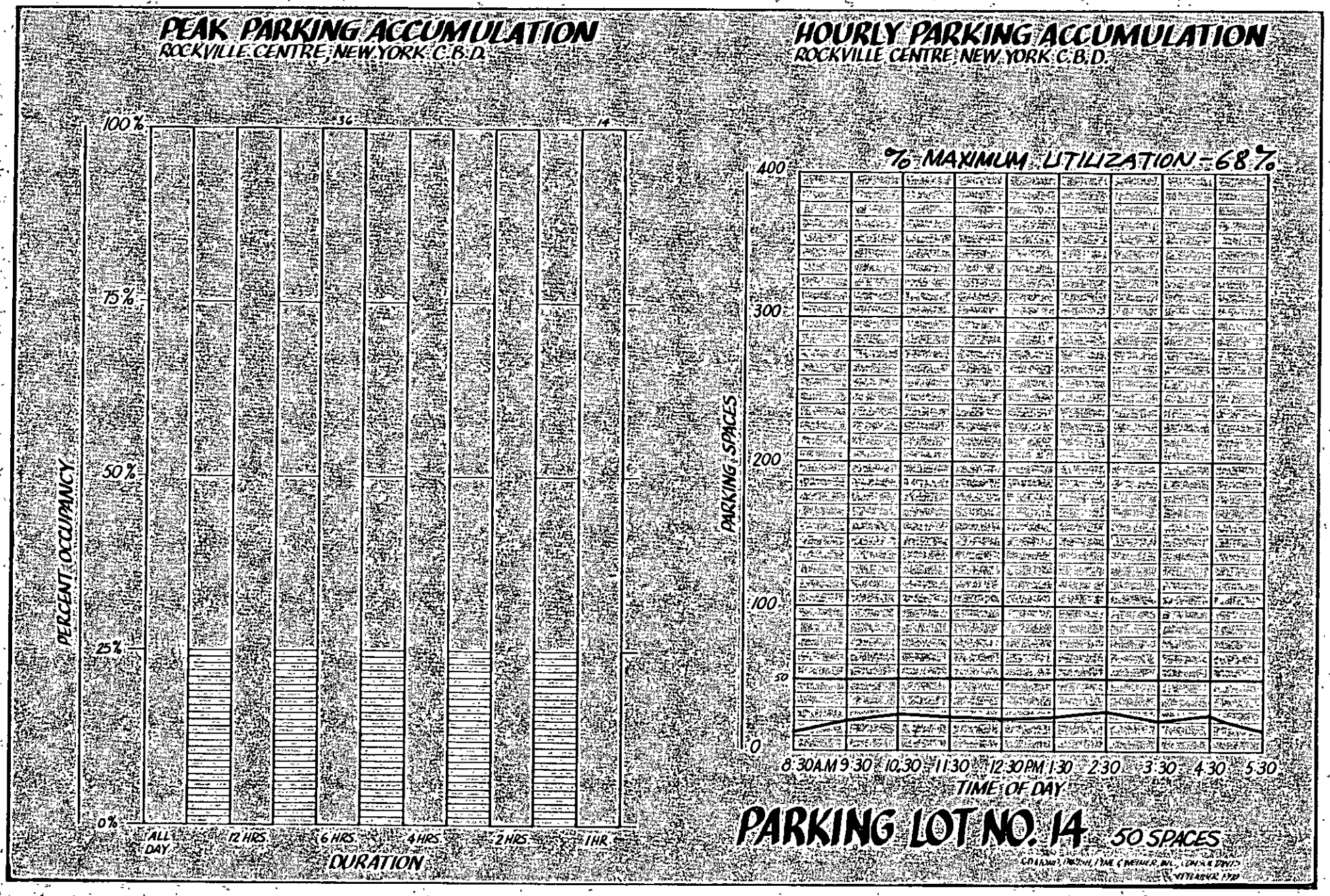

PEAK PARKING ACCUMULATION
ROCKVILLE CENTRE, NEW YORK C.B.D.
100%
75%
50%
25%
0%
PERCENT OCCUPANCY
36
14
ALL DAY
12 HRS.
6 HRS.
4 HRS.
2 HRS.
1 HR.
DURATION
HOURLY PARKING ACCUMULATION
ROCKVILLE CENTRE, NEW YORK C.B.D.
% MAXIMUM UTILIZATION = 68%
400
300
200
100
50
0
PARKING SPACES
8:30 A.M.
9:30
10:30
11:30
12:30 P.M.
1:30
2:30
3:30
4:30
5:30
TIME OF DAY
PARKING LOT NO. 14
50 SPACES

FIG. 29

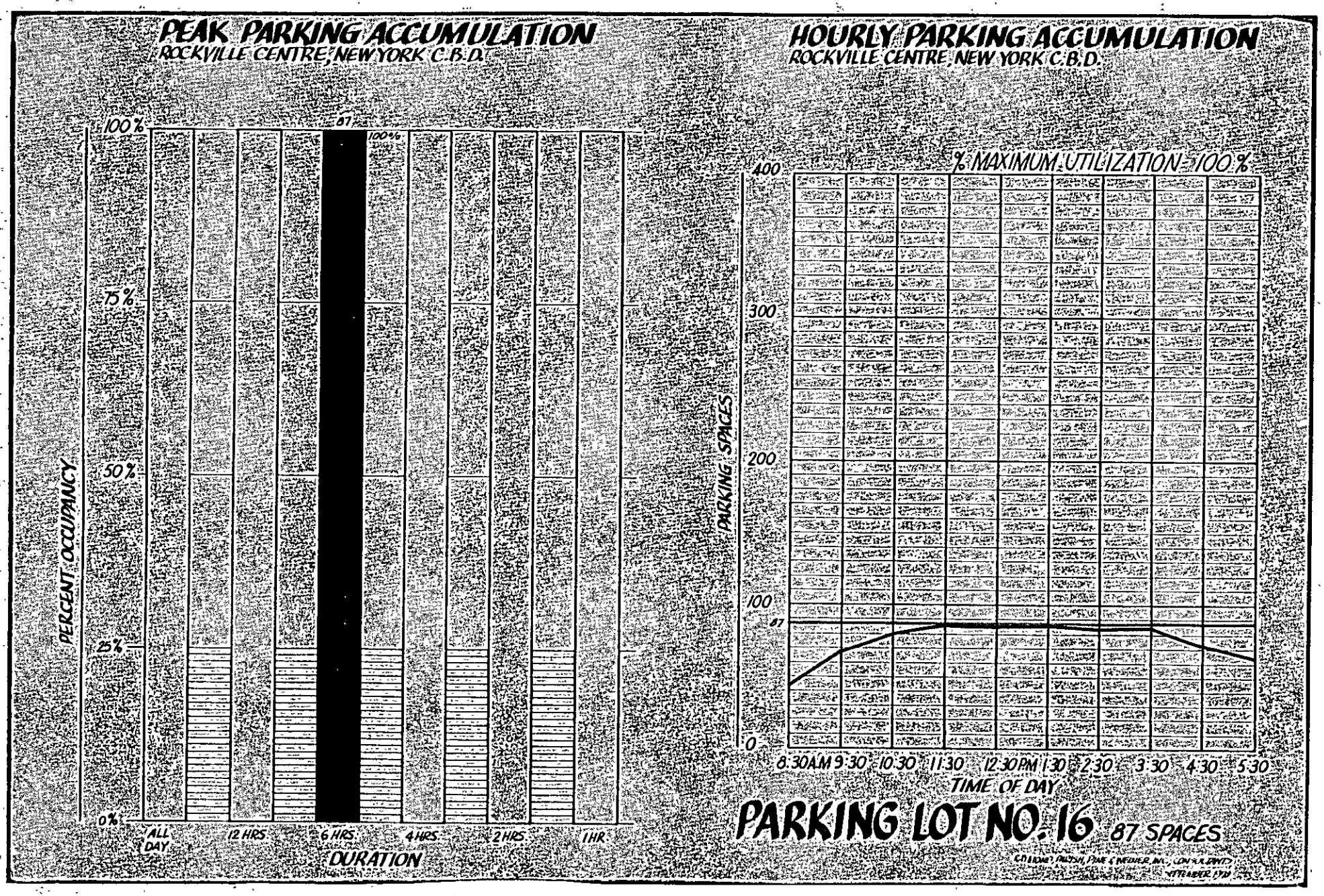

PEAK PARKING ACCUMULATION
ROCKVILLE CENTRE, NEW YORK C.B.D.
100%
75%
50%
25%
0%
PERCENT OCCUPANCY
87
100%
ALL DAY
12 HRS.
6 HRS.
4 HRS.
2 HRS.
1 HR.
DURATION
HOURLY PARKING ACCUMULATION
ROCKVILLE CENTRE, NEW YORK C.B.D.
% MAXIMUM UTILIZATION = 100%
400
300
200
100
0
PARKING SPACES
87
8:30 AM
9:30
10:30
11:30
12:30 PM
1:30
2:30
3:30
4:30
5:30
TIME OF DAY
PARKING LOT NO. 16
87 SPACES

FIG. 30

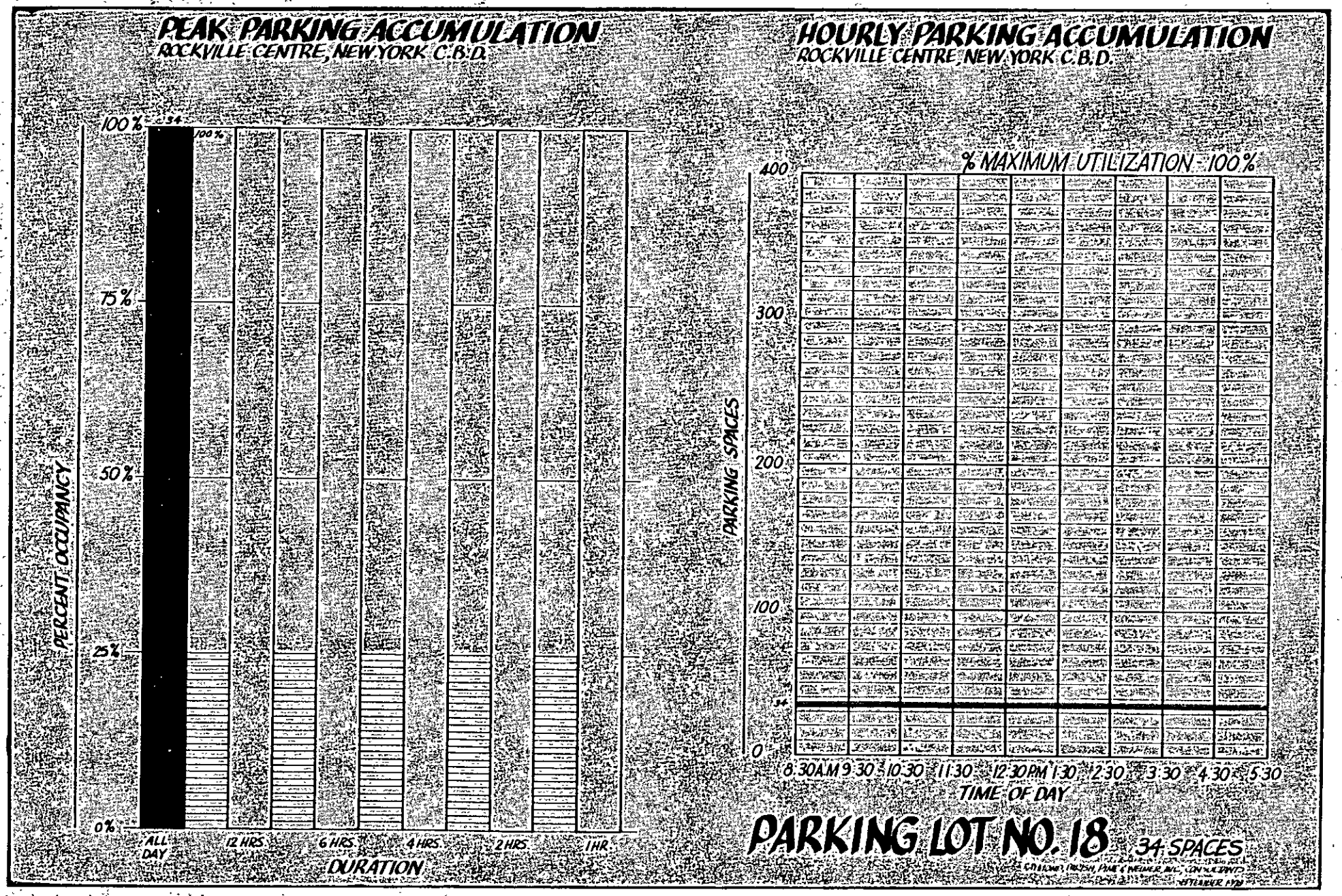

PEAK PARKING ACCUMULATION
ROCKVILLE CENTRE, NEW YORK C.B.D.
100%
75%
50%
25%
0%
PERCENT OCCUPANCY
34
100%
ALL DAY
12 HRS.
6 HRS.
4 HRS.
2 HRS.
1 HR.
DURATION
HOURLY PARKING ACCUMULATION
ROCKVILLE CENTRE, NEW YORK C.B.D.
% MAXIMUM UTILIZATION = 100%
400
300
200
100
34
0
PARKING SPACES
8:30 A.M. 9:30 10:30 11:30 12:30 P.M. 1:30 2:30 3:30 4:30 5:30
TIME OF DAY
PARKING LOT NO. 18
34 SPACES

FIG. 31

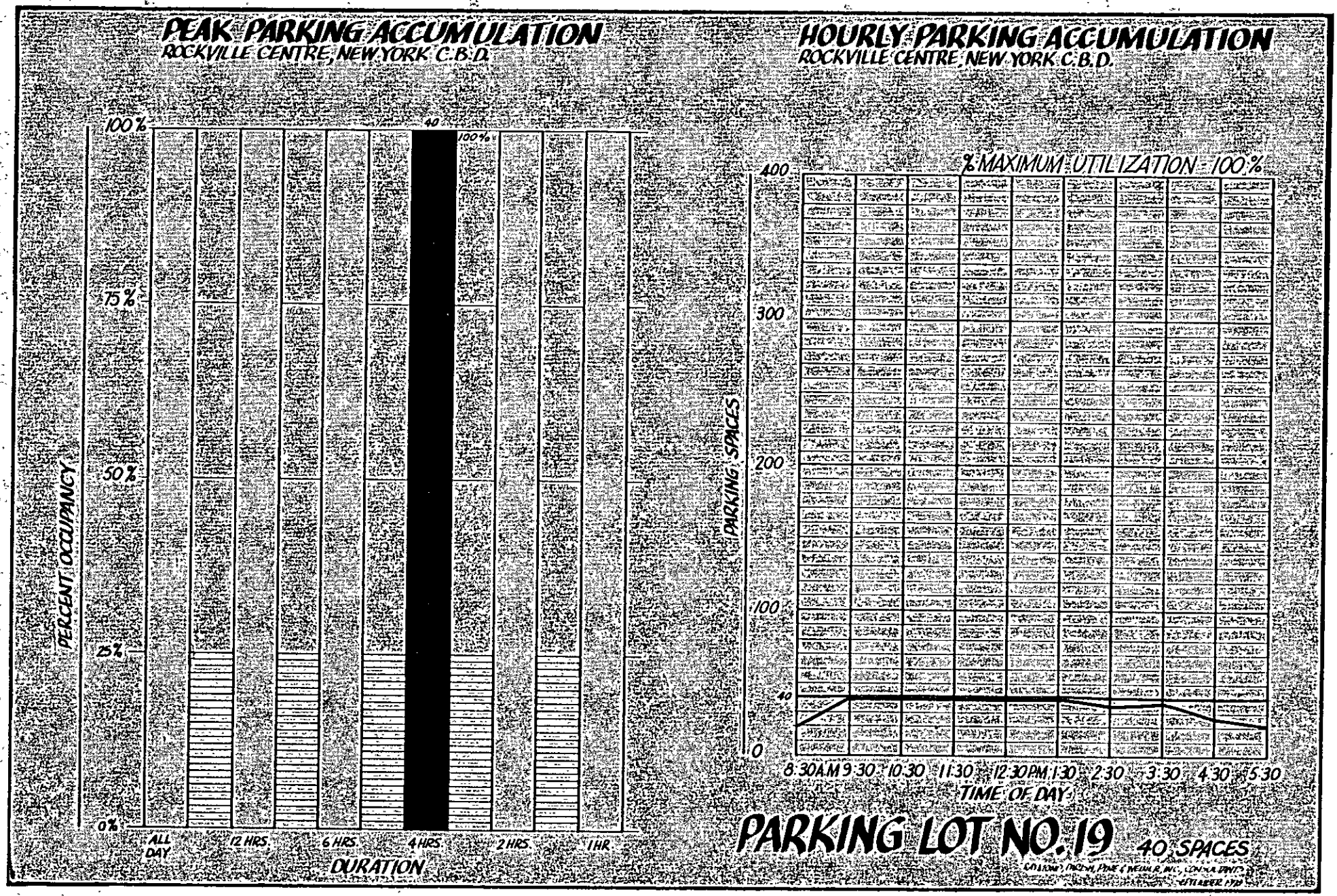

PEAK PARKING ACCUMULATION
ROCKVILLE CENTRE, NEW YORK C.B.D.
HOURLY PARKING ACCUMULATION
ROCKVILLE CENTRE, NEW YORK C.B.D.
PERCENT OCCUPANCY
100%
75%
50%
25%
0%
40
100%
ALL DAY
12 HRS.
6 HRS.
4 HRS.
2 HRS.
1 HR
DURATION
PARKING SPACES
400
300
200
100
40
0
% MAXIMUM UTILIZATION = 100%
8:30 A.M.
9:30
10:30
11:30
12:30 P.M.
1:30
2:30
3:30
4:30
5:30
TIME OF DAY
PARKING LOT NO. 19
40 SPACES

FIG. 32

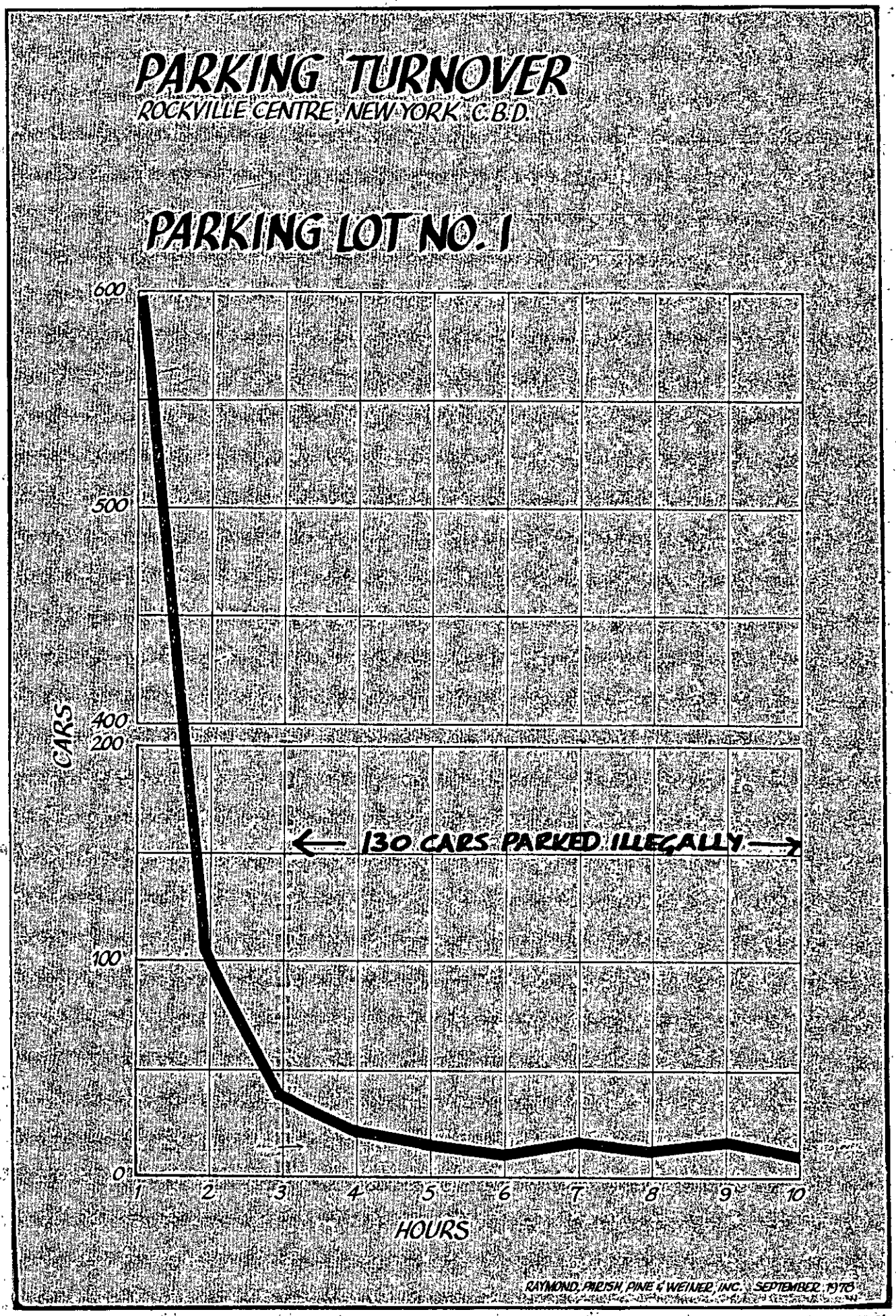

PARKING TURNOVER
ROCKVILLE CENTRE, NEW YORK C.B.D.
PARKING LOT NO. 1
600
500
400
200
100
0
CARS
← 130 CARS PARKED ILLEGALLY →
1
2
3
4
5
6
7
8
9
10
HOURS
RAYMOND, PARISH, PINE & WEINER, INC. SEPTEMBER 1978

FIG. 33

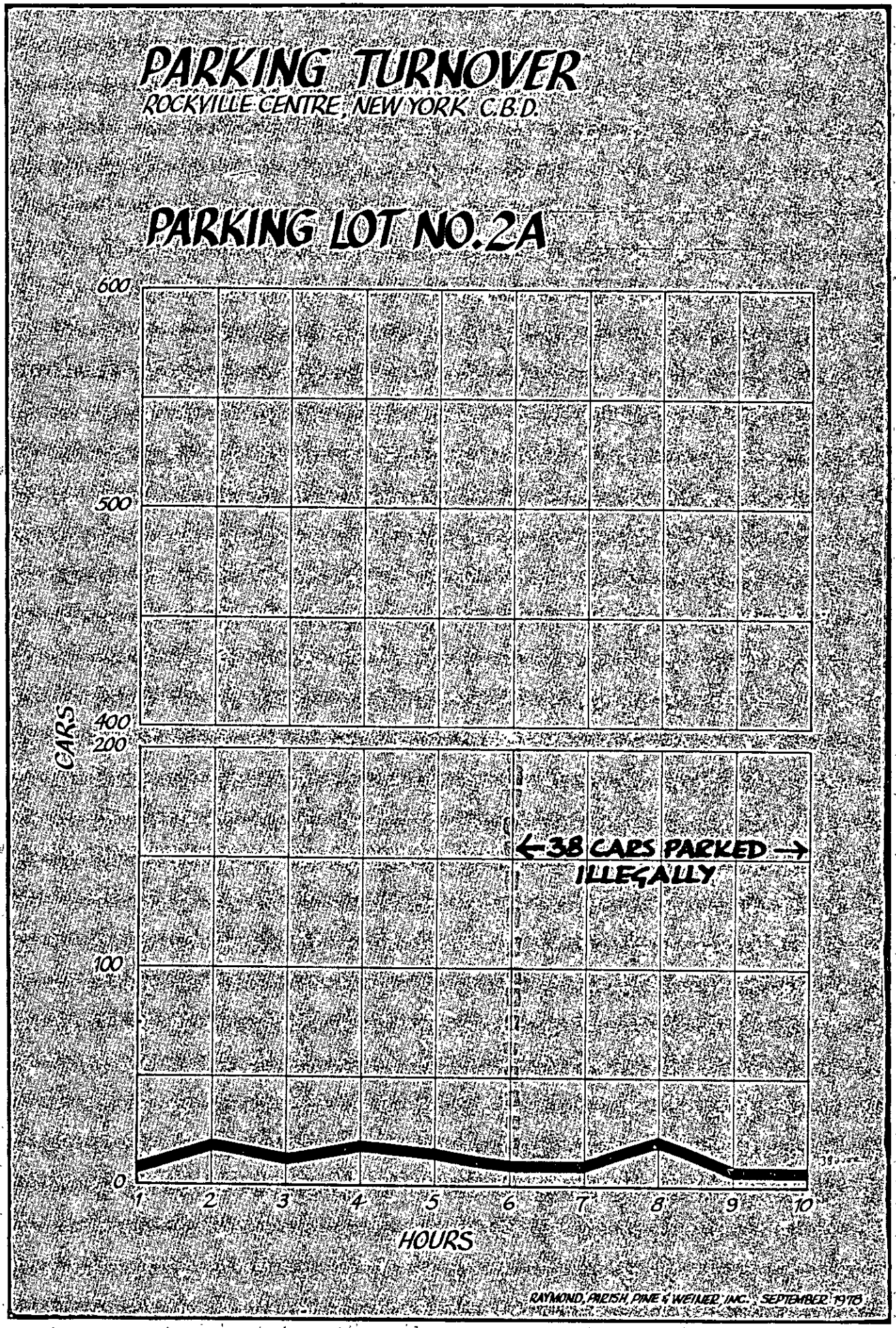

PARKING TURNOVER
ROCKVILLE CENTRE, NEW YORK C.B.D.
PARKING LOT NO. 2A
600
500
400
200
100
0
CARS
←38 CARS PARKED→
ILLEGALLY
1
2
3
4
5
6
7
8
9
10
HOURS
RAYMOND, PARISH, PAVE & WEINER, INC. SEPTEMBER 1970

FIG. 34

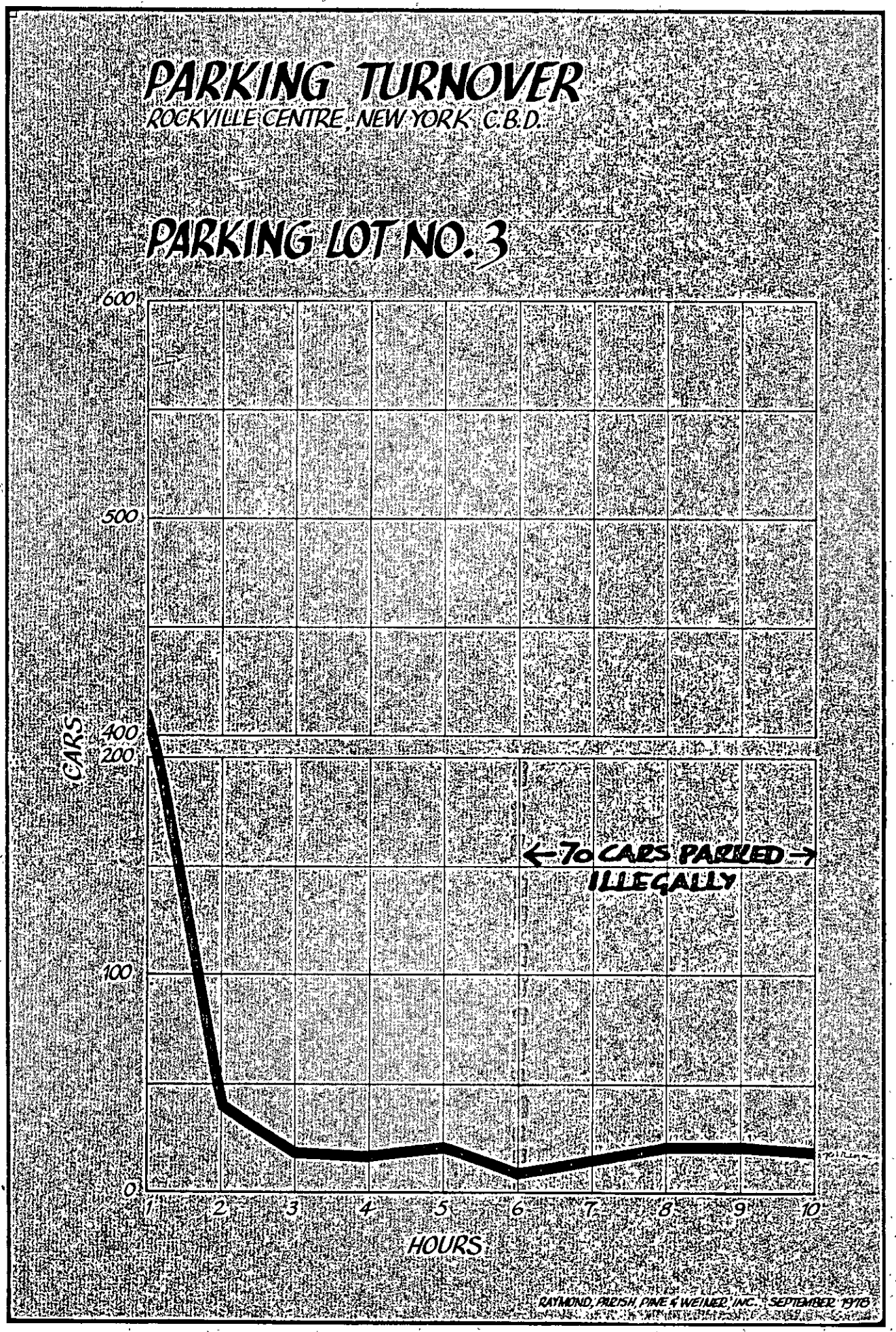

PARKING TURNOVER
ROCKVILLE CENTRE - NEW YORK C.B.D.
PARKING LOT NO. 3
600
500
400
200
100
0
CARS
← 70 CARS PARKED →
ILLEGALLY
1
2
3
4
5
6
7
8
9
10
HOURS
RAYMOND, PARISH, PINE & WEINER, INC. SEPTEMBER 1978

FIG. 35

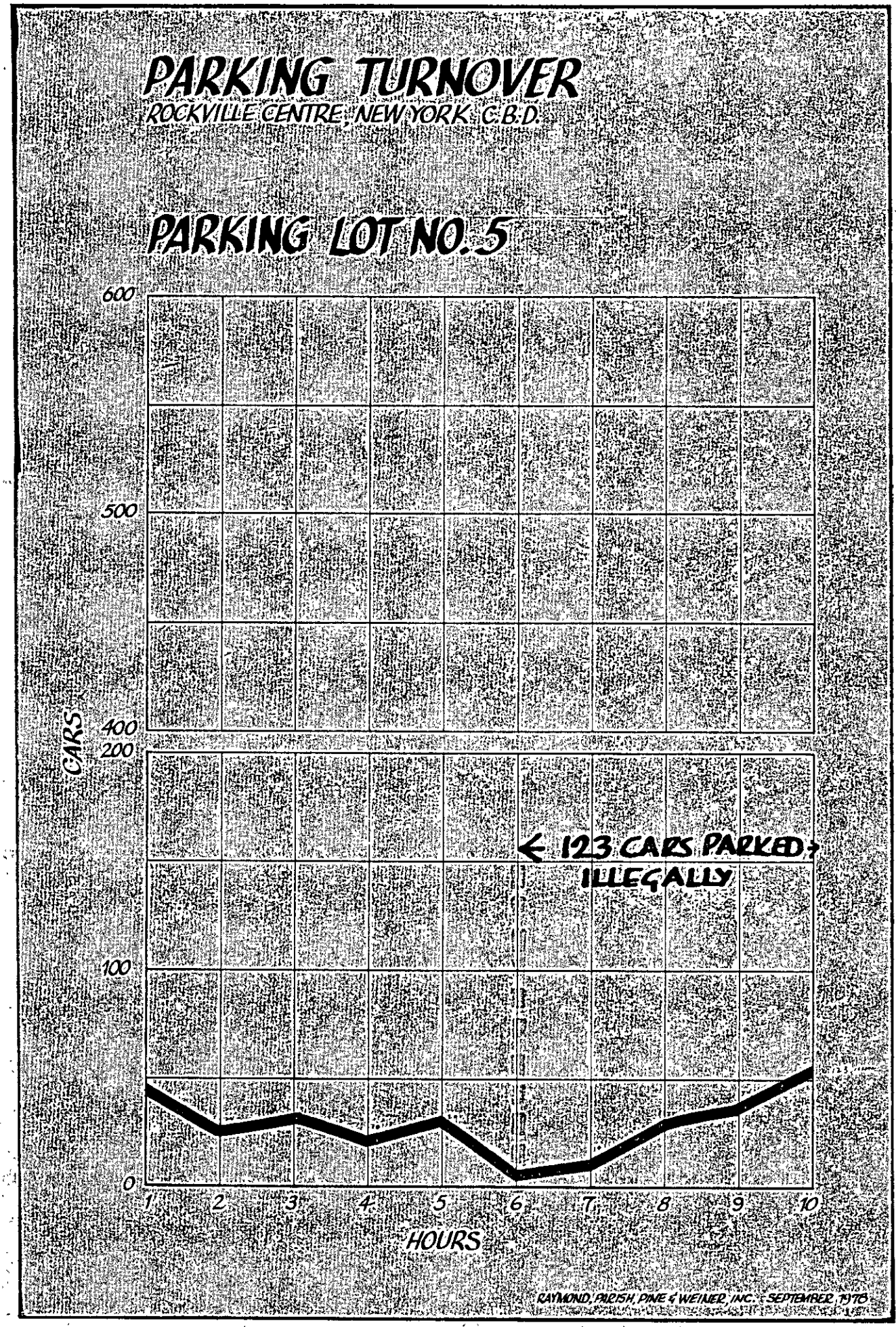

PARKING TURNOVER
ROCKVILLE CENTRE, NEW YORK, C.B.D.
PARKING LOT NO. 5
600
500
400
200
100
0
CARS
← 123 CARS PARKED ILLEGALLY →
1
2
3
4
5
6
7
8
9
10
HOURS
RAYMOND, PARISH, PINE & WEINER, INC. - SEPTEMBER, 1978

FIG. 36

① REQUIRED PARKING (EXCLUDING COMMUTERS)

	SHORT TERM	LONG TERM
720,000 S.F. COMMERCIAL @ 3/1000 S.T. + 1/1000 L.T.	2,160	720
233,000 S.F. OFFICE @ 3/1000	100	600
	2,260	1,320

TOTAL : 3,580

② PRESENT SUPPLY (EXCLUDING COMMUTERS)

SHORT TERM 1,120 PUBLIC LOTS
261 PRIVATE LOTS
643 STREETS

SHORT TERM TOTAL 2,024

LONG TERM 491 PUBLIC LOTS
261 PRIVATE LOTS

LONG TERM TOTAL 752

TOTAL 2,776

③ SHORT FALL (EXCLUDING COMMUTERS)

3,580 NEEDED
− 2,776 SUPPLY
804 OF WHICH 236 IS SHORT TERM
568 IS LONG TERM

④ ALTERNATIVE CALCULATION

OFF-STREET SPACES : 2,216
MAXIMUM % UTILIZATION : 82%
NUMBER OF SPACES UTILIZED : 1,817
REQUIRED SPACES FOR 60% OVERALL UTILIZATION : 3,028 (+814)
REQUIRED SPACES FOR 70% OVERALL UTILIZATION : 2,595 (+379)

FIG. 37

APPENDIX B

PARKING GARAGE ALTERNATES FOR SITE 2

PARKING GARAGE ALTERNATE PLANS FOR SITE 2.

In addition to the proposed parking garage (Alt. H, Figures 8-13), seven alternate plans were prepared to illustrate various design possibilities. The alternates involve different approaches to the following questions:

- Extent of private property acquisition;
- Elimination or retention of vehicular connection between Sunrise Highway and the railroad station through the municipal parking lot (No. 19);
- Retention, reduction in width, or elimination of the lane along the south side of the elevated railroad structure;
- Extent of set-back along Sunrise Highway;
- Provision of a shopping mall and/or retail space on the first floor of the garage;
- Type of desirable garage layout.

Alternate A (Figure 38) shows a garage located entirely on public property. A Vehicular connection between the railroad station and Sunrise Highway would be retained. On the other hand, the garage (along its full length) would occupy the lane. Vehicles entering the lane at North Village Avenue would have to pass through the garage

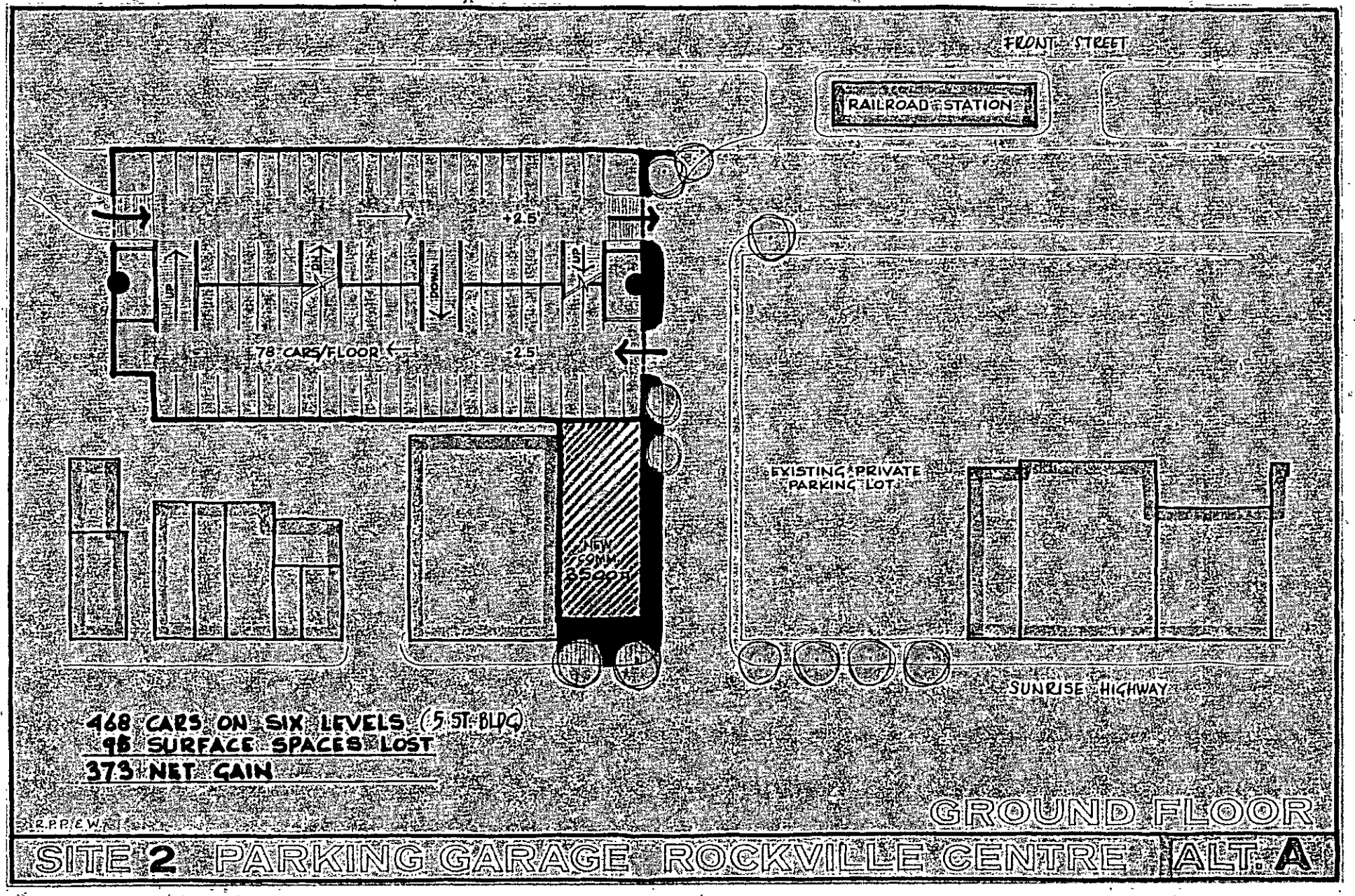

FRONT STREET
RAILROAD STATION
+2.5'
UP
DN
DOWN
UP
78 CARS/FLOOR
-2.5'
EXISTING PRIVATE PARKING LOT
NEW COMM. 3500
SUNRISE HIGHWAY
468 CARS ON SIX LEVELS (5 ST. BLDG)
95 SURFACE SPACES LOST
373 NET GAIN
R.P.P.E.W.
GROUND FLOOR
SITE 2 PARKING GARAGE ROCKVILLE CENTRE ALT. A

FIG. 38

to reach the railroad station. A five story building would provide a 468 car garage with a net increase of approximately 373 spaces. A small (3500 sq. ft.) retail floor area would extend to Sunrise Highway. Neither the parking spaces nor the garage's pedestrian entrance would have a direct connection to Sunrise Highway.

Alternate B (Figure 39) illustrates a garage similar to Alternate A. The major difference is that this garage is enlarged in the easterly direction. No vehicular connections would be provided between Sunrise Highway and the railroad station. A five story garage would provide about 610 parking spaces with a net gain of 515 spaces.

Alternate C (Figures 40, 41, 42) shows a garage built partially on the Diocese's parking lot. Vehicular connection between the lane and Sunrise Highway would be eliminated. Pedestrian connection, on the other hand, would be enhanced by a pedestrian walkway leading through a 22,000 sq. ft. retail area. Pedestrian access points would be conveniently located along Sunrise Highway and at the railroad station. A modest building set-back would be provided along Sunrise Highway on the ground

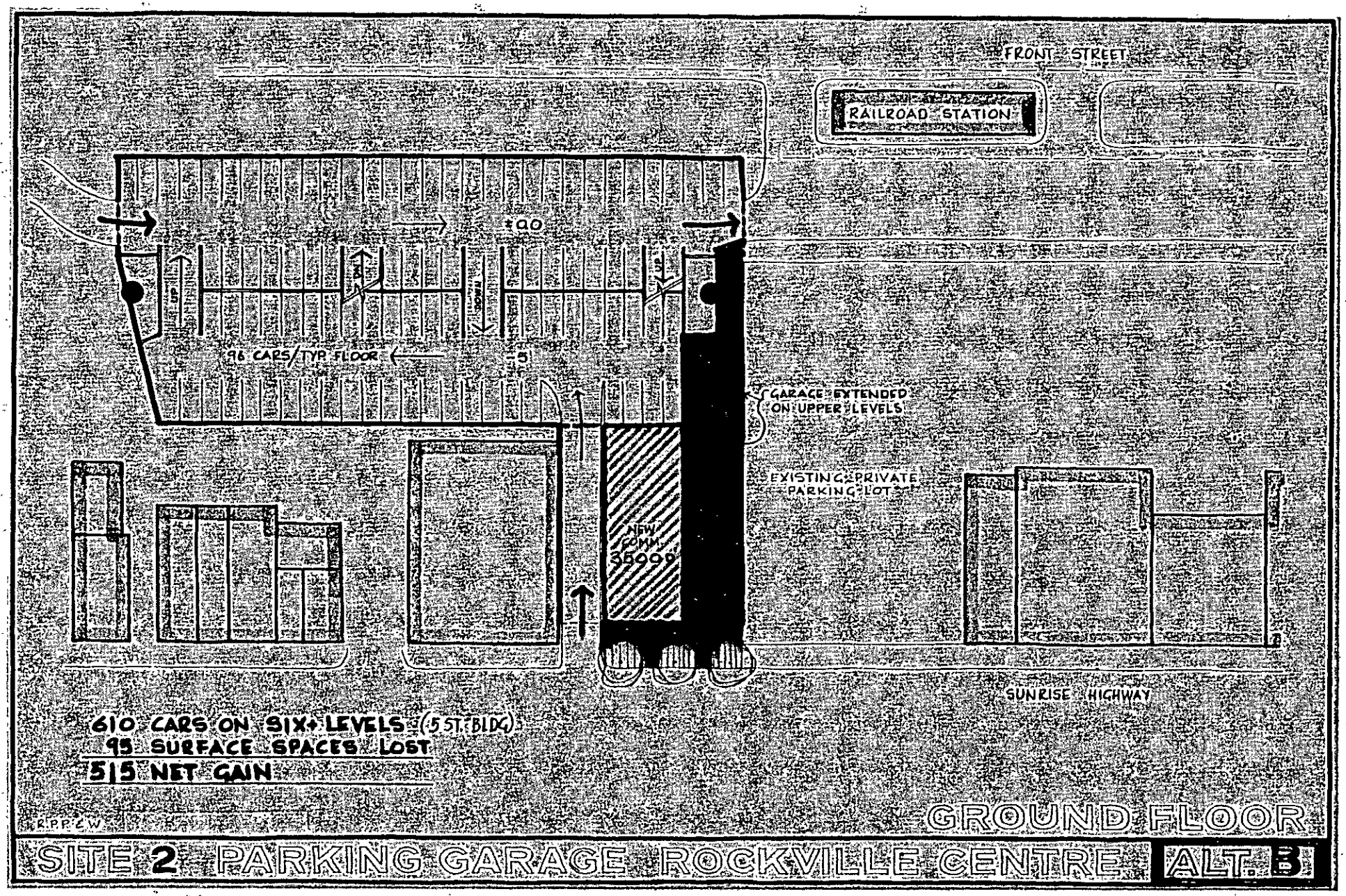

FRONT STREET
RAILROAD STATION
#90
UP
DOWN
UP
96 CARS/TYP FLOOR
-5
GARAGE EXTENDED ON UPPER LEVELS
EXISTING PRIVATE PARKING LOT
NEW COMM. 3590 D
SUNRISE HIGHWAY
610 CARS ON SIX+ LEVELS (5 ST. BLDG)
95 SURFACE SPACES LOST
515 NET GAIN
R.P.P.E.W.
GROUND FLOOR
SITE 2 PARKING GARAGE ROCKVILLE CENTRE
ALT. B

FIG. 39

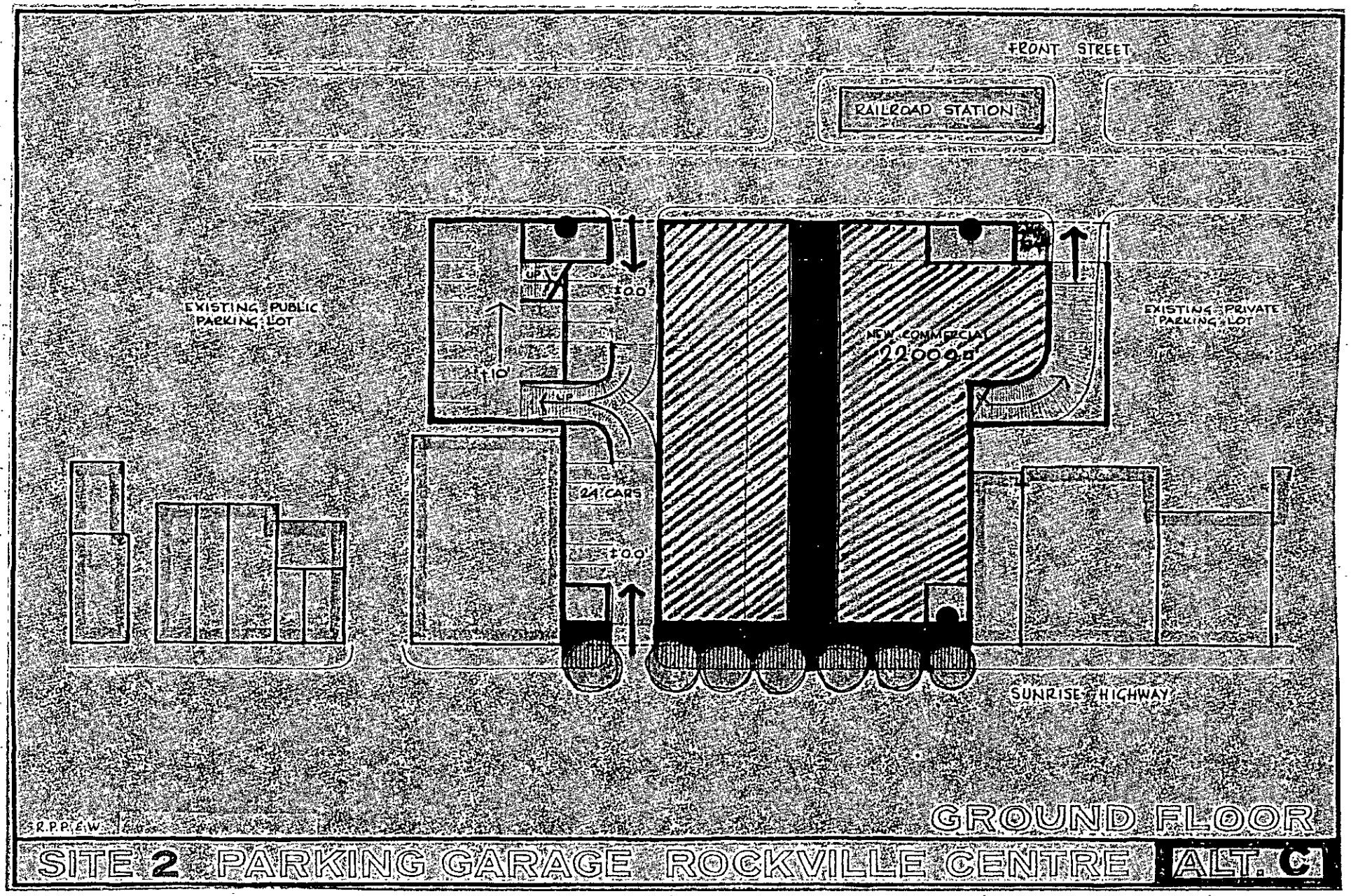

FRONT STREET
RAILROAD STATION
EXISTING PUBLIC PARKING LOT
UP
±0.0
+10'
UP
NEW COMMERCIAL
22000 □'
EXISTING PRIVATE PARKING LOT
24 CARS
±0.0'
SUNRISE HIGHWAY
S.R.P.P.E.W.
GROUND FLOOR
SITE 2 PARKING GARAGE ROCKVILLE CENTRE
ALT. C

FIG. 40

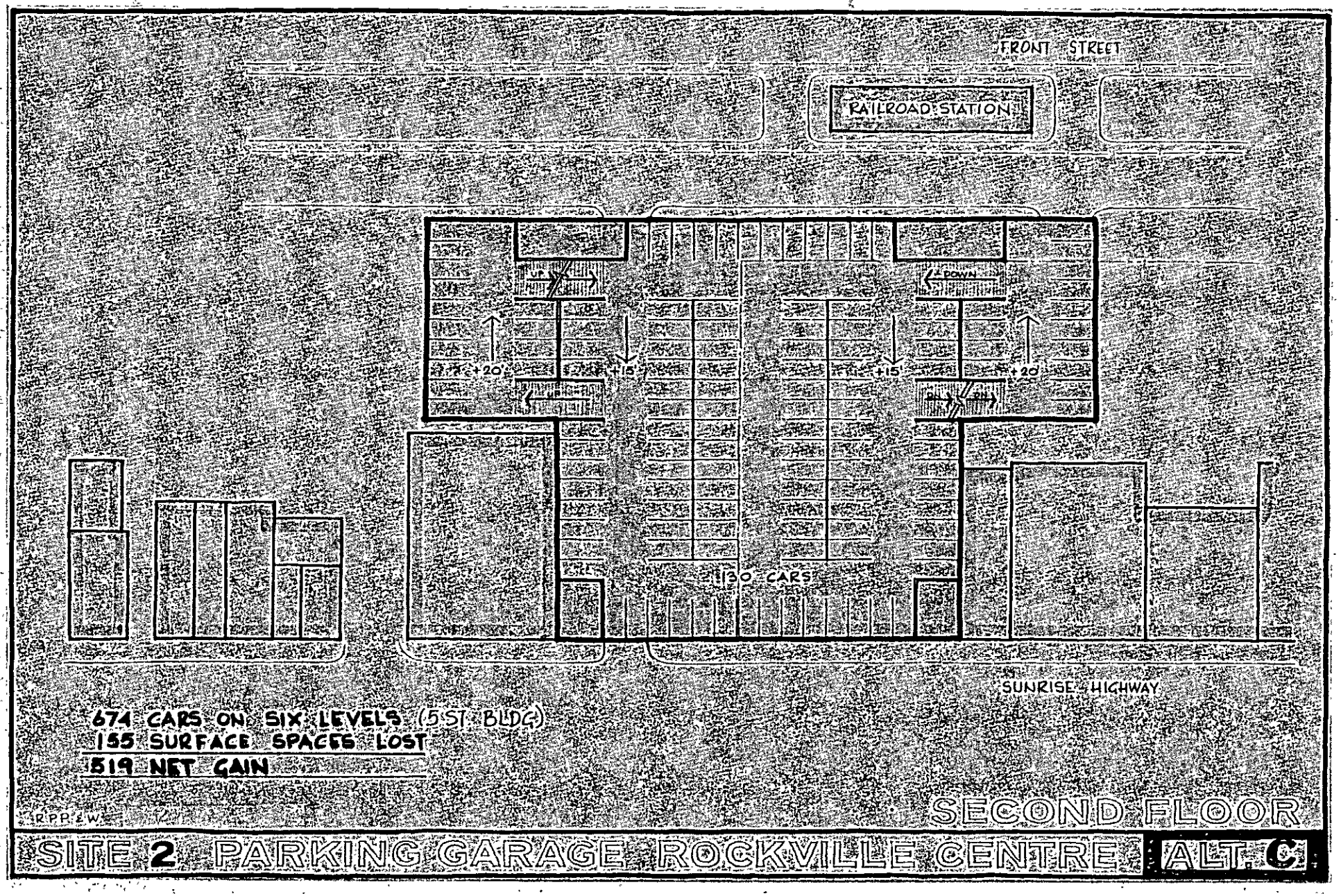

FRONT STREET
RAILROAD STATION
UP
DOWN
+20'
+15'
+15'
+20'
DN
DN
130 CARS
SUNRISE HIGHWAY
674 CARS ON SIX LEVELS (5 ST. BLDG)
155 SURFACE SPACES LOST
519 NET GAIN
RPP & W
SECOND FLOOR
SITE 2 PARKING GARAGE ROCKVILLE CENTRE
ALT. C

FIG. 41

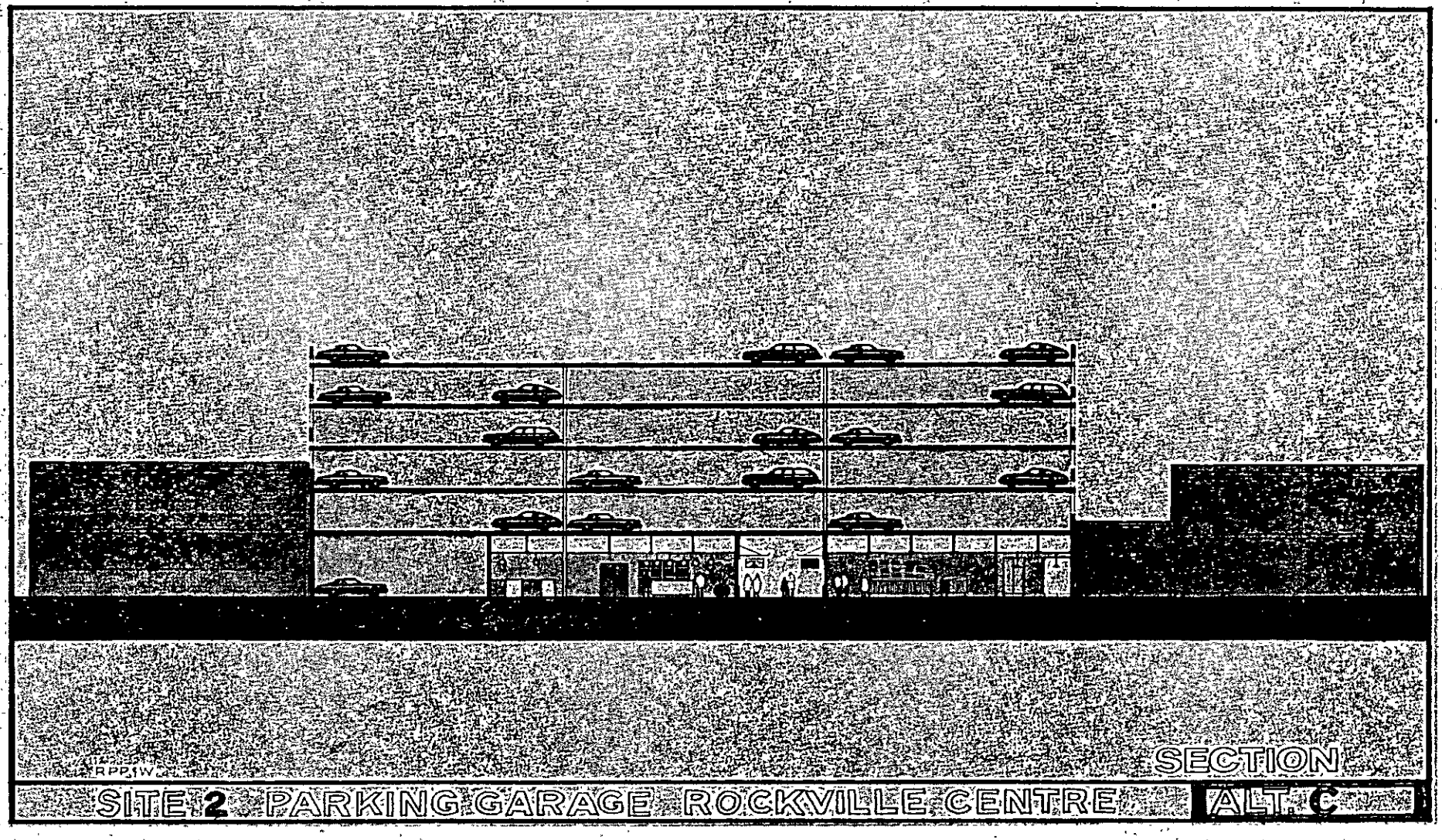
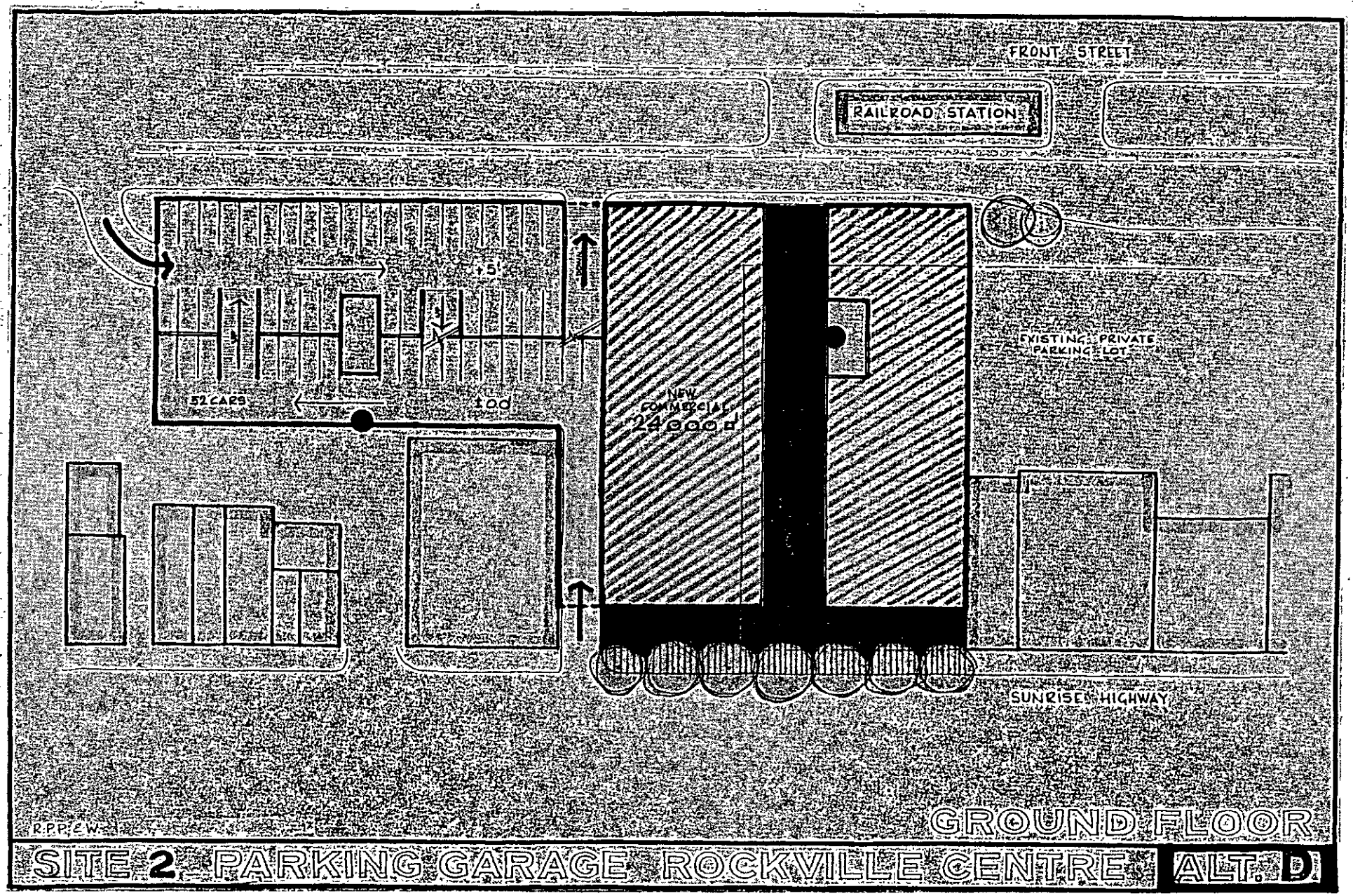


FIG. 42

level only. A five story building would provide 674 parking spaces with a net gain of 519 spaces.

Alternate D (Figures 43, 44) differs from Alternate C in that 1) it would occupy a smaller portion of the Diocese's property, 2) it would have a full set-back along Sunrise Highway, 3) it would extend further to the westerly portion of the present parking lot No. 19, and 4) it would have a somewhat different internal circulation pattern. A five story building would provide 772 spaces for a net gain of 617 spaces. The proposed retail space would be about 24,000 sq. ft.

Alternate E (Figures 45, 46) illustrates a sloped roof garage on the same area as Alternate D, plus the lane along the length of the garage. A pedestrian walk would be provided along the garage. Approximately 7,000 sq. ft. of retail space would be provided on Sunrise Highway with a small building set-back. An attractive feature of the plan is that the reduction of commercial floor space allows the design of the sloped floor system, favored by shoppers. This garage would have the greatest capacity; 976 parking spaces in a five story building with a net gain of 821 spaces.



SITE 2 PARKING GARAGE ROCKVILLE CENTRE ALT. D

FIG. 43

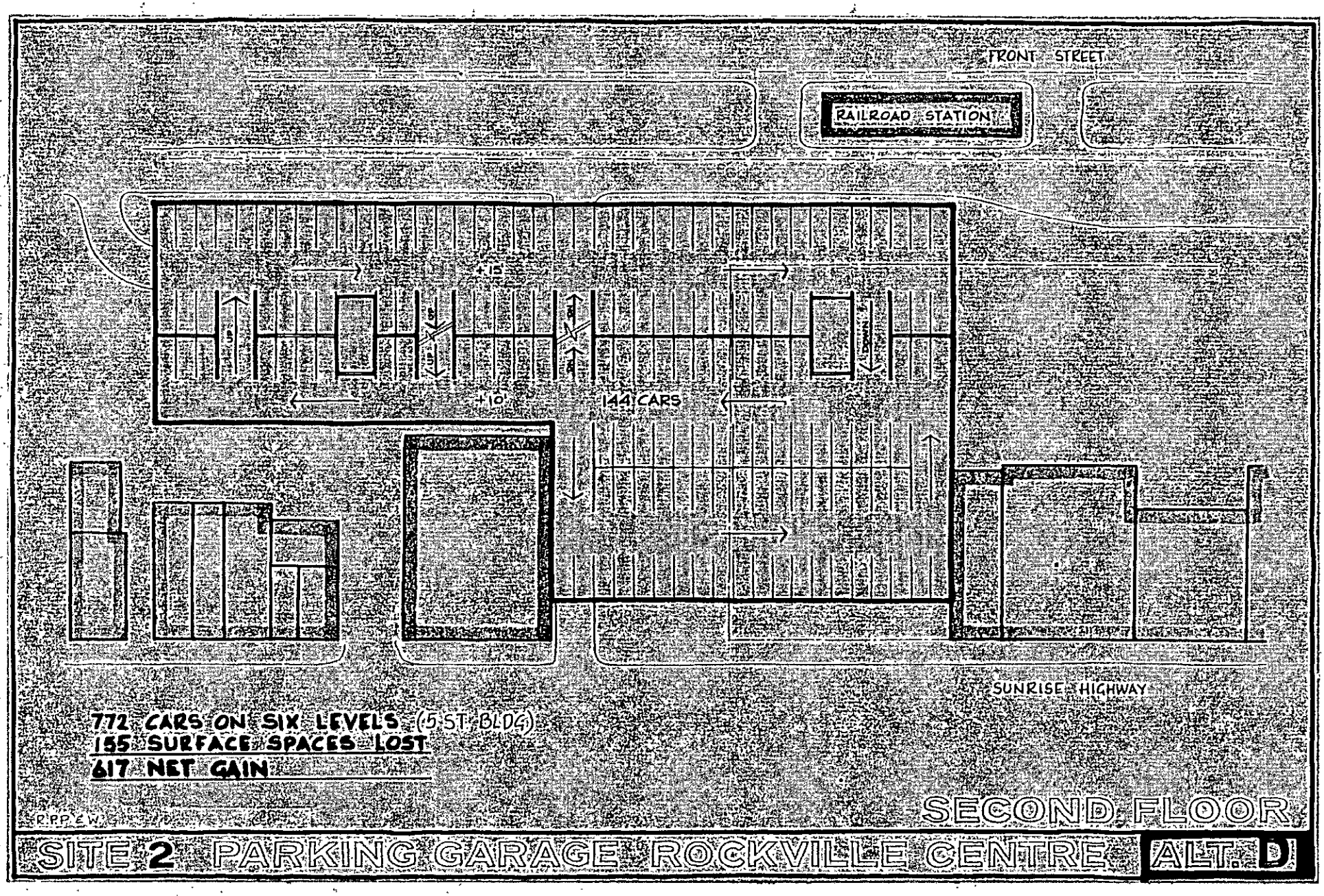

FRONT STREET
RAILROAD STATION
+15
+10
144 CARS
SUNRISE HIGHWAY
772 CARS ON SIX LEVELS (5 ST BLDG)
155 SURFACE SPACES LOST
617 NET GAIN
SECOND FLOOR
SITE 2 PARKING GARAGE ROCKVILLE CENTRE
ALT. D

FIG. 44

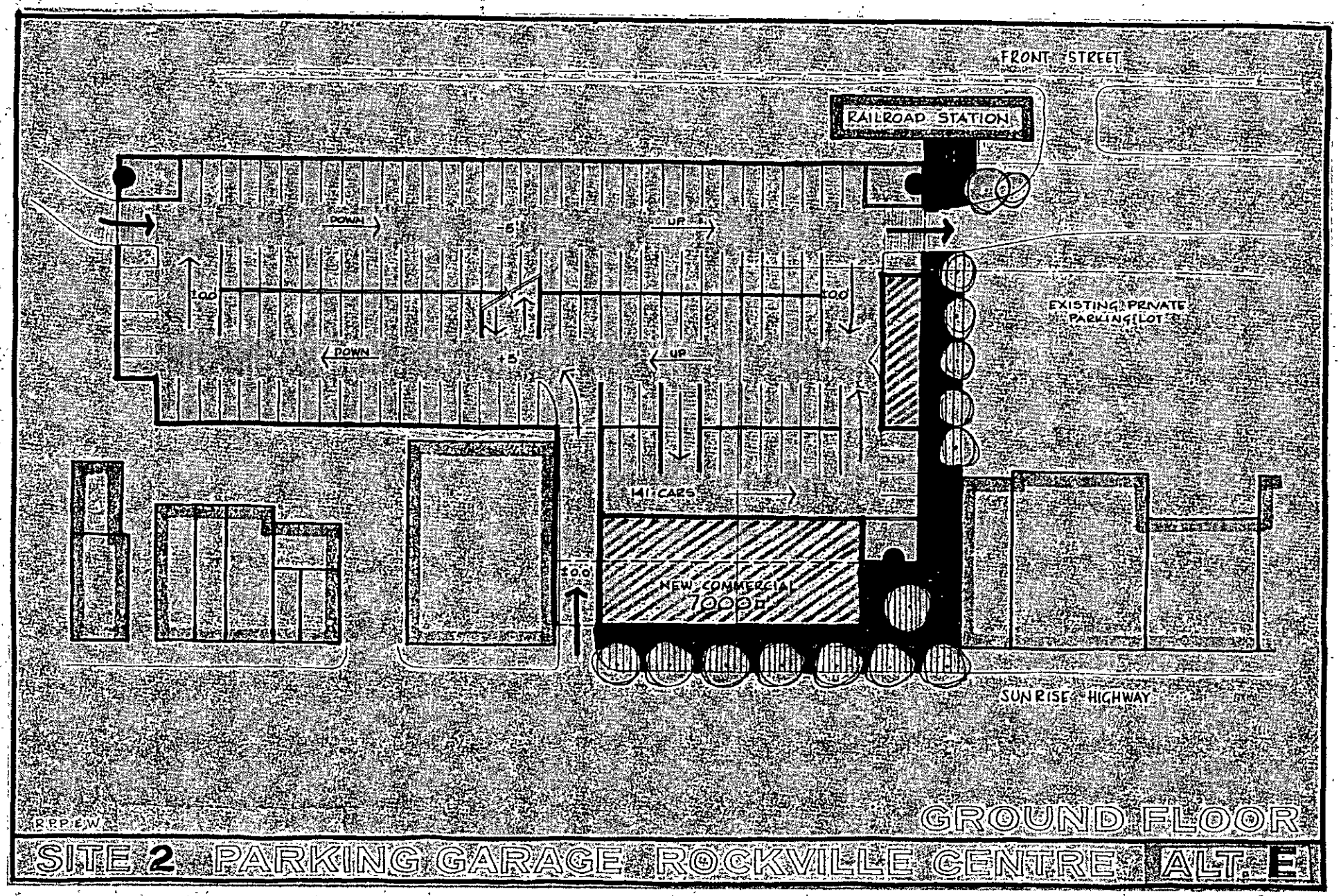

FRONT STREET
RAILROAD STATION
DOWN
UP
+5'
+0.0
DOWN
UP
+5'
+0.0
EXISTING PRIVATE PARKING LOT
141' CARS
+0.0
NEW COMMERCIAL 7000□'
SUNRISE HIGHWAY
R.P.P.E.W.
GROUND FLOOR
SITE 2 PARKING GARAGE ROCKVILLE CENTRE
ALT. E

FIG. 45

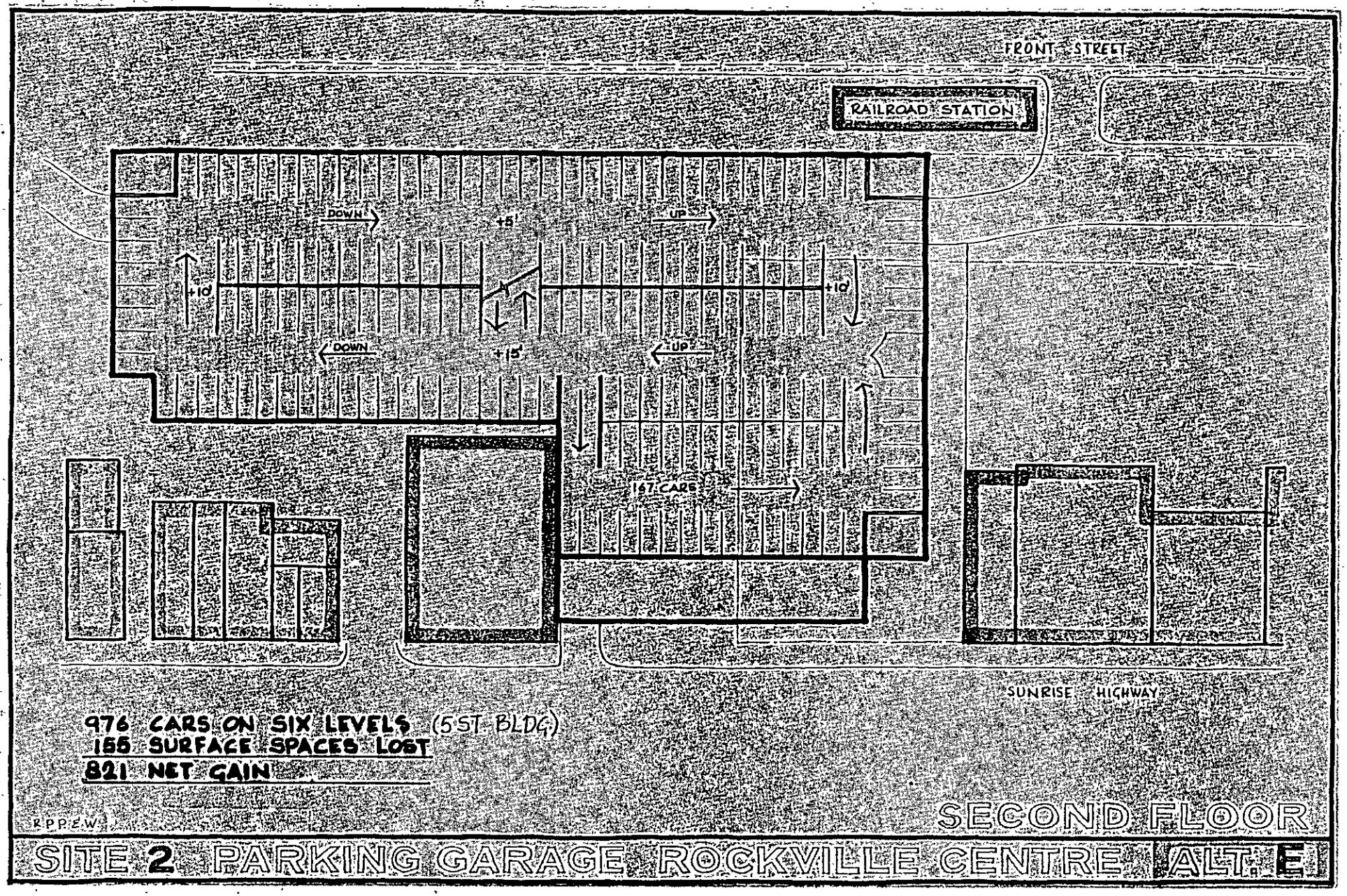

FRONT STREET
RAILROAD STATION
DOWN
UP
+5'
+10'
+10'
DOWN
+15'
UP
167 CARS
SUNRISE HIGHWAY
976 CARS ON SIX LEVELS (5 ST. BLDG.)
155 SURFACE SPACES LOST
821 NET GAIN
R.P.P.E.W.
SECOND FLOOR
SITE 2 PARKING GARAGE ROCKVILLE CENTRE ALT. E

FIG. 46

Alternate F (Figures 47,48) illustrates a garage on the area occupied by the municipal parking lots (No. 9 and 19), plus the property occupied by Wolf's Sport Shop. This design shows a pedestrian connection between the railroad station and Sunrise Highway, with a possibility of a vehicular connection as well. 8,000 sq. ft. of retail space is shown along Sunrise Highway, with a building setback. A five story building could provide 504 parking spaces, with a net gain of 409 spaces.

Alternate G (Figures 49, 50, 51, 52) shows a garage that is very similar to the selected plan, Alternate H. The basic difference is that on this plan, a nine foot strip of the lane's southerly side is added to the site (vs. three feet on Alternate H). The additional width allows a more economical layout of parking spaces, yielding 838 spaces (vs. 717 on Alternate H), with a net gain of 673 spaces (vs. 552). On the other hand, the width of the lane would be reduced to ten feet, an undesirable dimension for bus traffic. A pedestrian walk would lead through a 17,000 sq. ft. retail area. No building setback would be provided along Sunrise Highway. In case the buses would be rerouted from the lane, this design would be more desirable than the selected Alternate H.

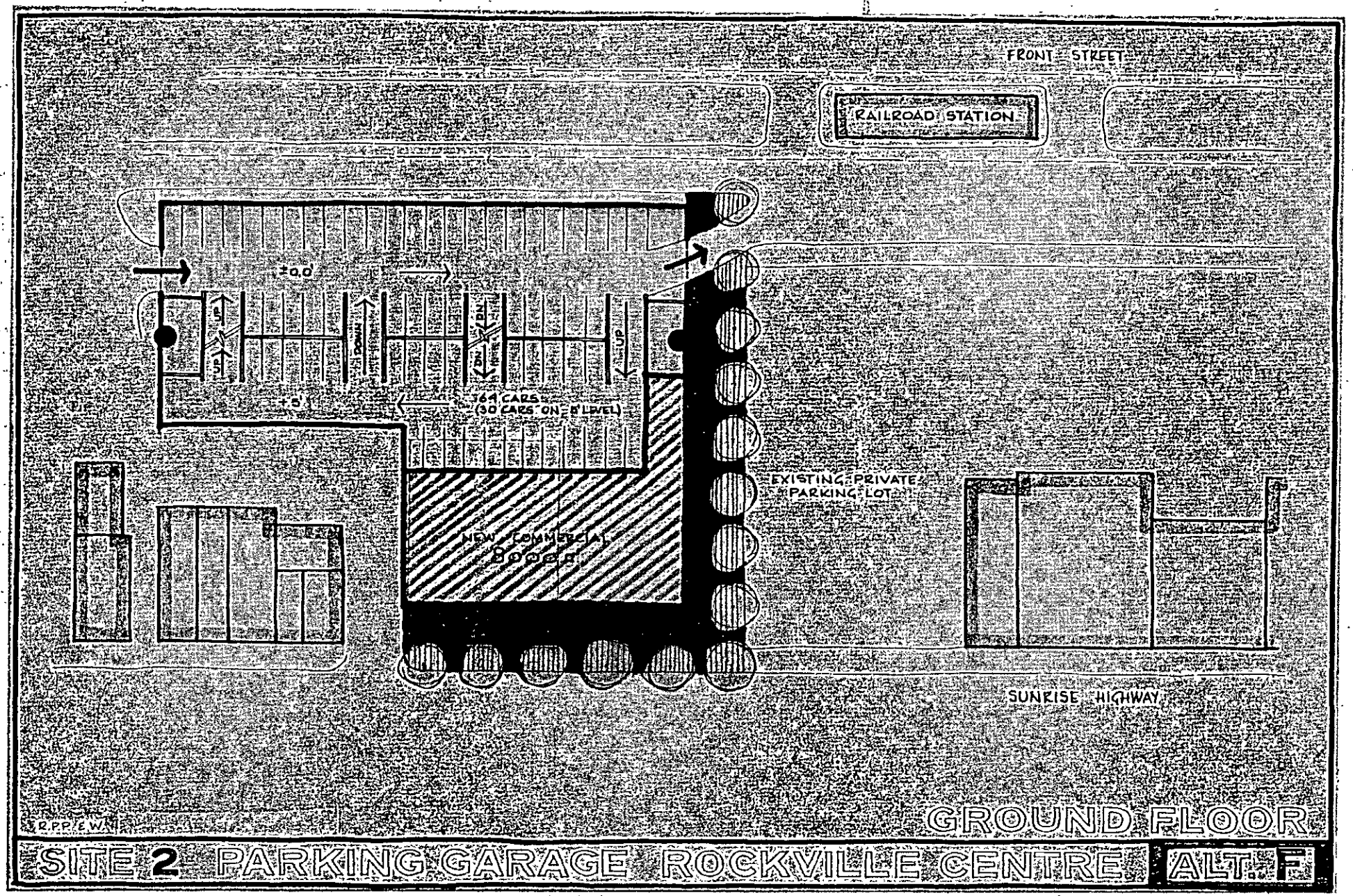

FRONT STREET
RAILROAD STATION
±0.0'
UP
UP
DOWN
DN
DN
UP
+8'
164 CARS
(30 CARS ON 8' LEVEL)
EXISTING PRIVATE
PARKING LOT
NEW COMMERCIAL
SUNRISE HIGHWAY
GROUND FLOOR
SITE 2 PARKING GARAGE ROCKVILLE CENTRE
ALT. F

FIG. 47

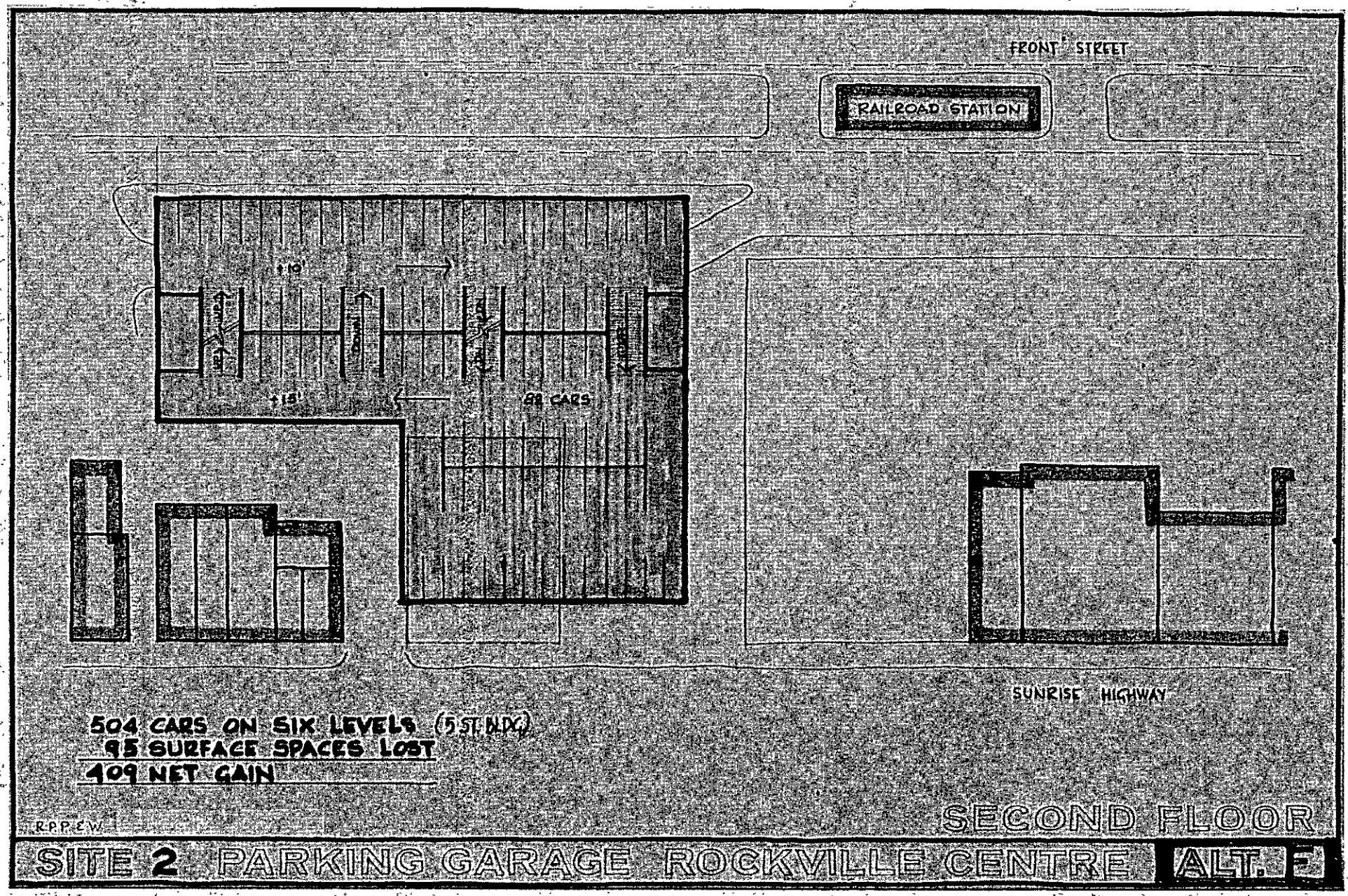

FRONT STREET
RAILROAD STATION
+10'
+15'
88 CARS
SUNRISE HIGHWAY
504 CARS ON SIX LEVELS (5 ST. NPC)
95 SURFACE SPACES LOST
409 NET GAIN
R.P.P.&W.
SECOND FLOOR
SITE 2 PARKING GARAGE ROCKVILLE CENTRE
ALT. -

FIG. 48

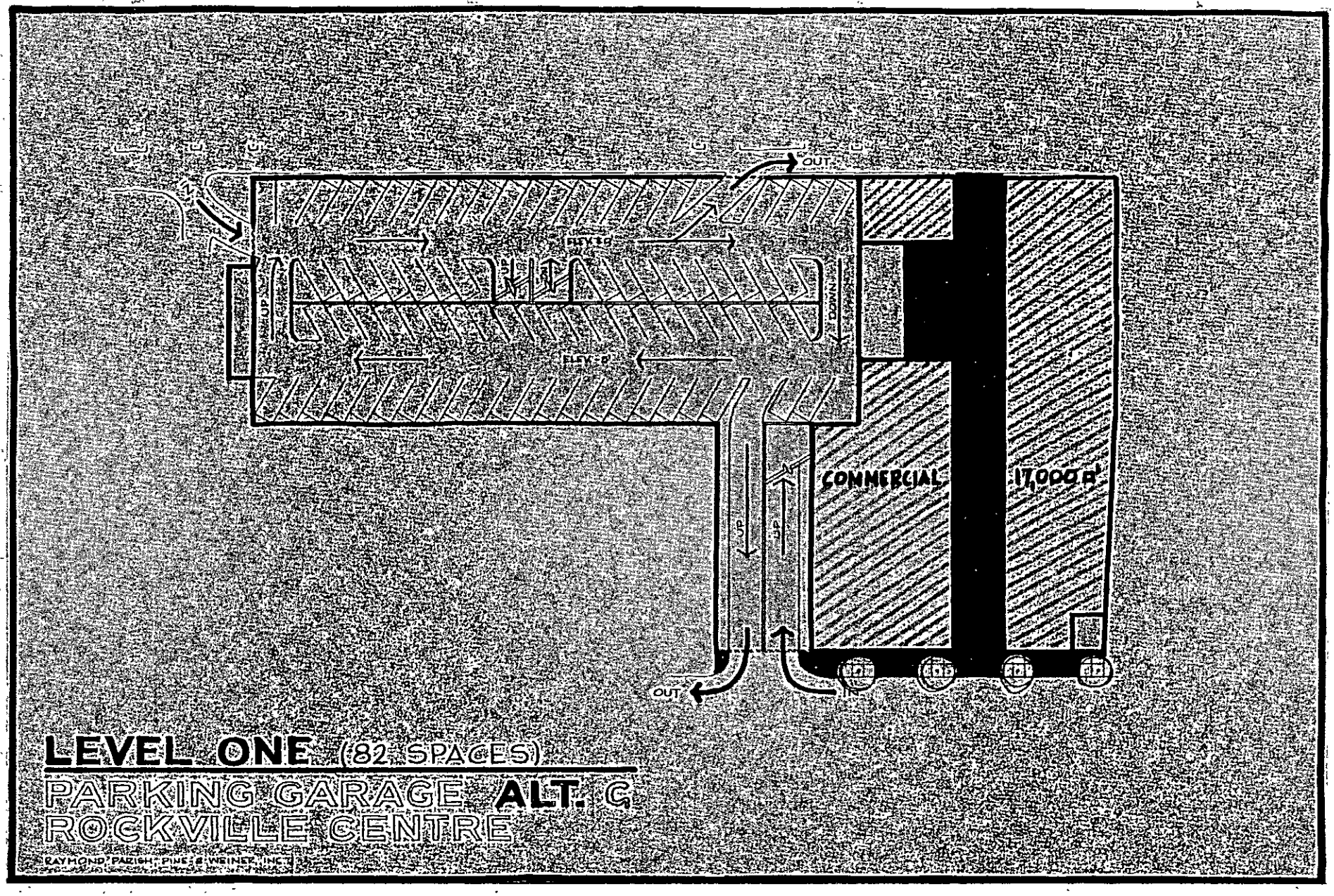

OUT
IN
UP
DOWN
FLEX-8'
FLEX-8'
COMMERCIAL
17,000 □'
UP
UP
OUT
IN
LEVEL ONE (82 SPACES)
PARKING GARAGE ALT. C
ROCKVILLE CENTRE
RAYMOND, PARISH, PINE & WEINER, INC.

FIG. 49

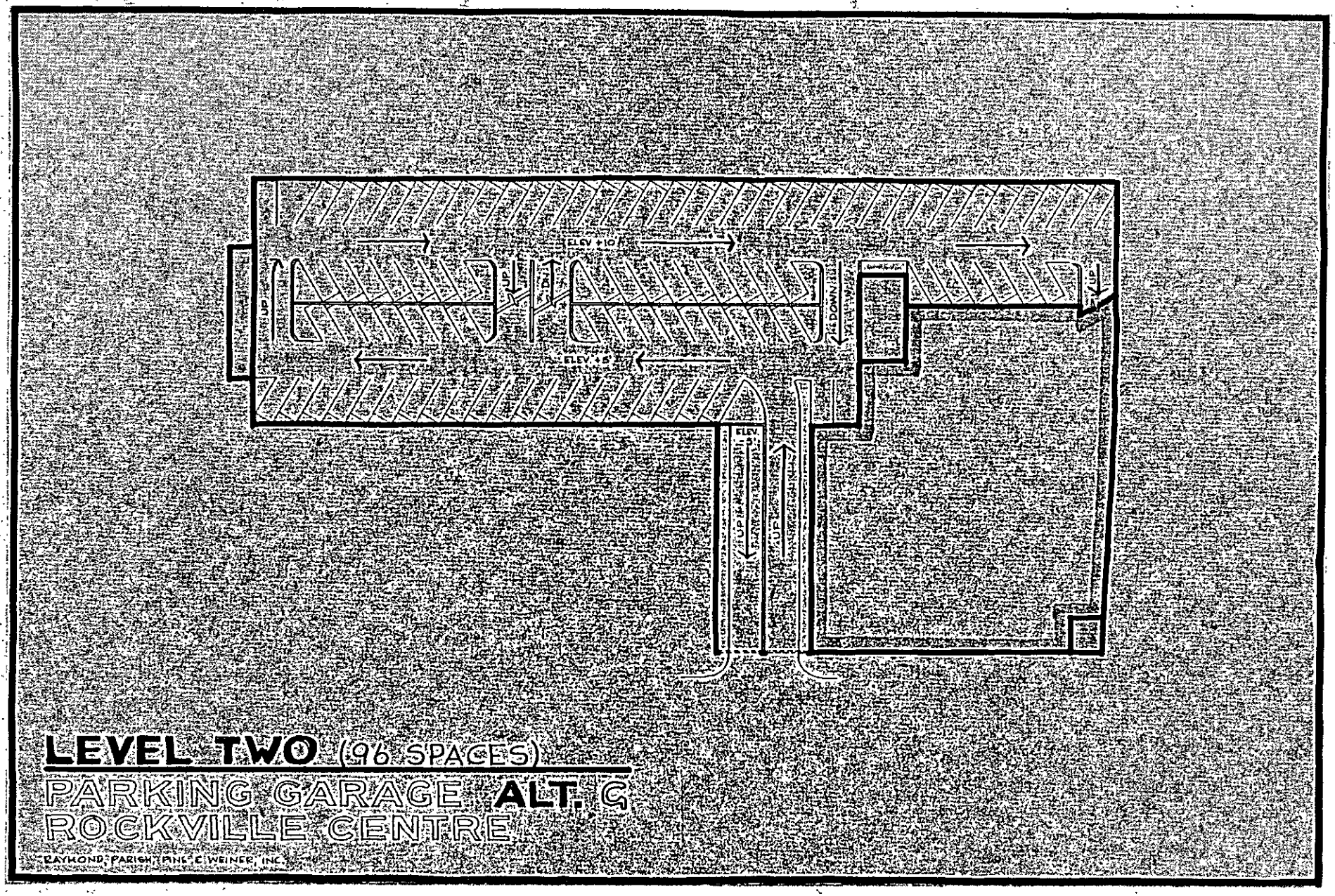

ELEV +10'
ELEV +5'
UP
DOWN
LEVEL TWO (96 SPACES)
PARKING GARAGE ALT. C
ROCKVILLE CENTRE
RAYMOND, PARISH, PINE & WEINER, INC.

FIG. 50

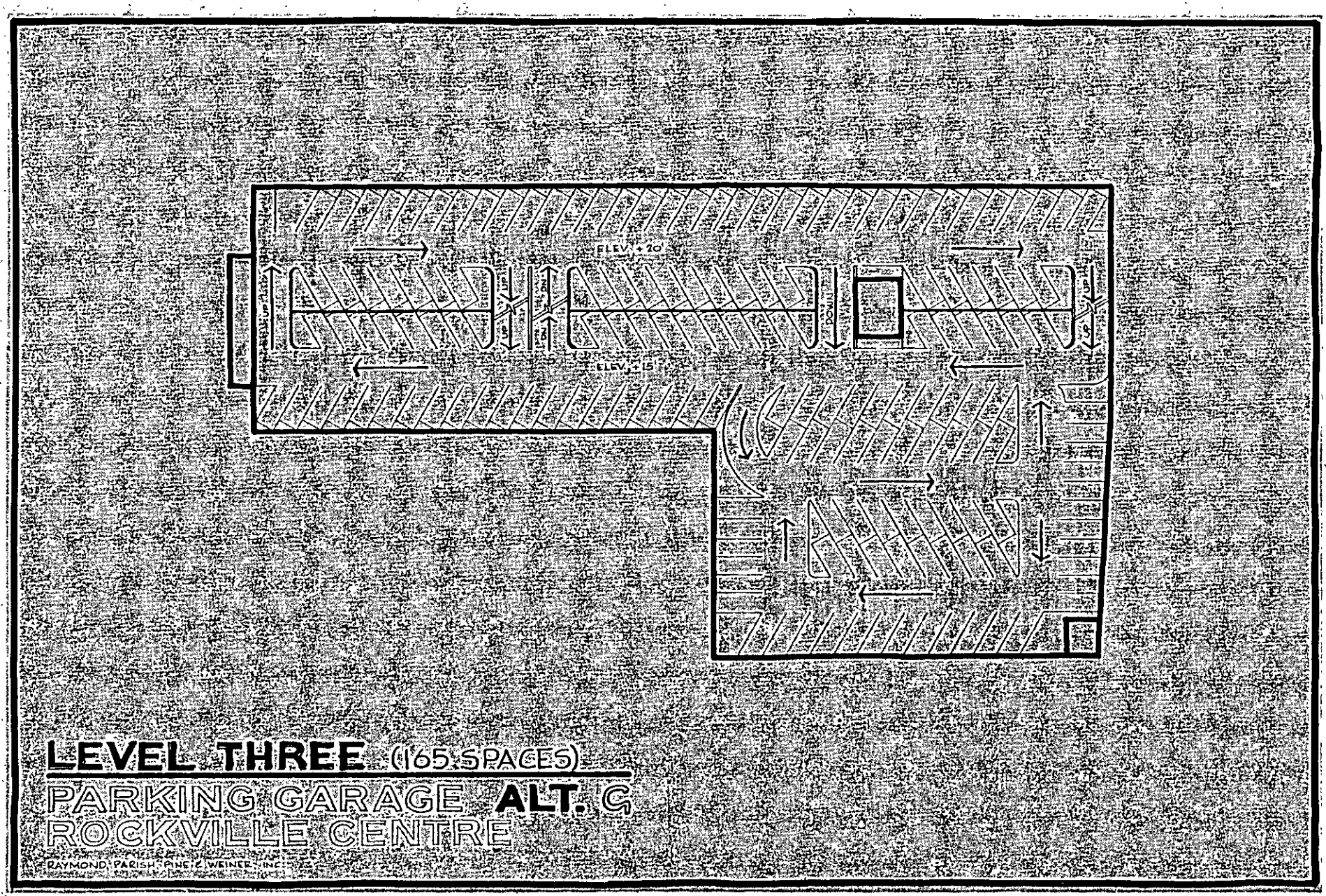

ELEV. +20'
ELEV. +15'
UP
DOWN
LEVEL THREE (165 SPACES)
PARKING GARAGE ALT. G
ROCKVILLE CENTRE
RAYMOND, PARISH, PINE & WEINER, INC.

FIG. 51

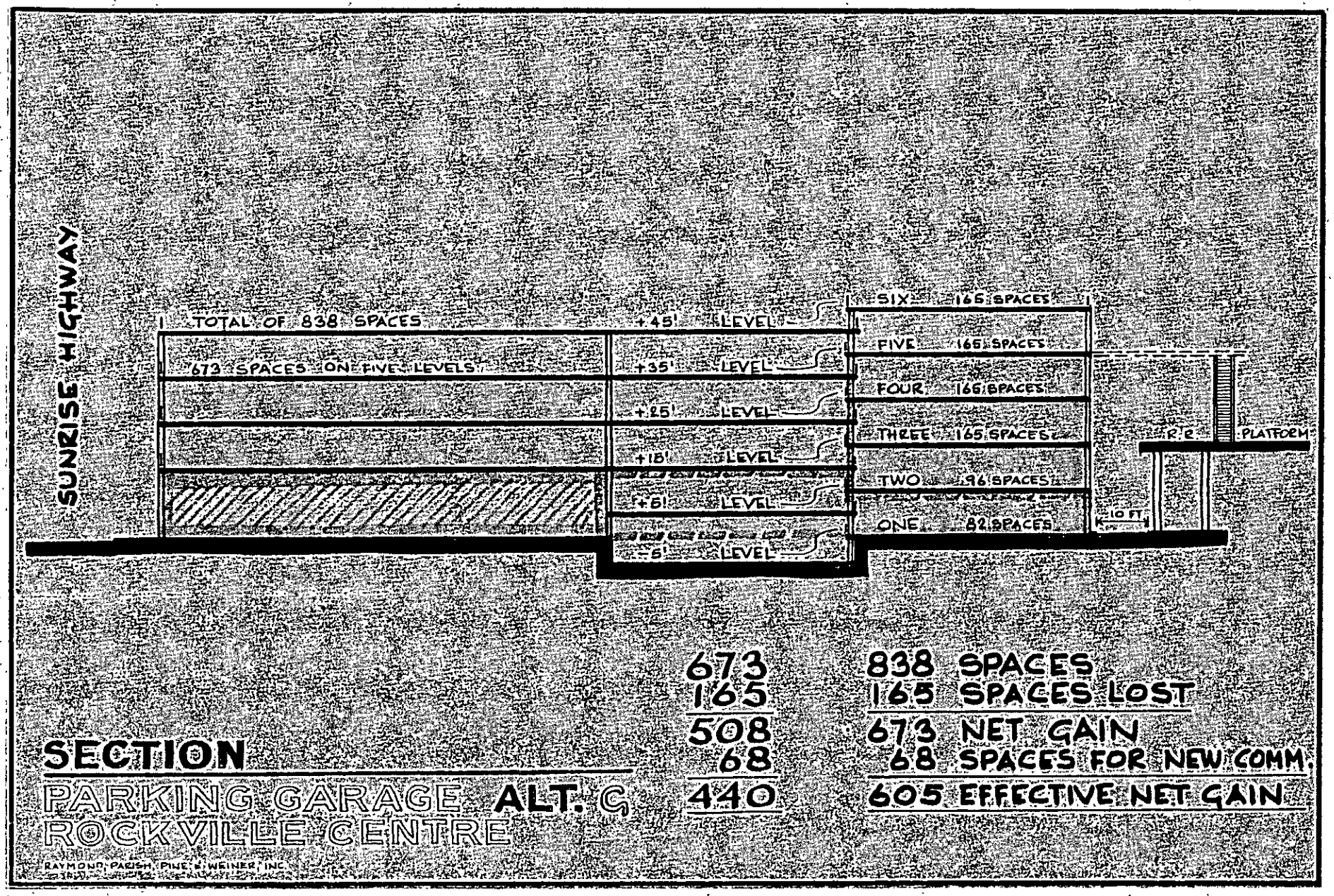

SUNRISE HIGHWAY
TOTAL OF 838 SPACES
673 SPACES ON FIVE LEVELS
+45' LEVEL
+35' LEVEL
+25' LEVEL
+15' LEVEL
+5' LEVEL
-5' LEVEL
SIX 165 SPACES
FIVE 165 SPACES
FOUR 165 SPACES
THREE 165 SPACES
TWO 96 SPACES
ONE 82 SPACES
R.R.
PLATFORM
10 FT
SECTION
PARKING GARAGE ALT. G
ROCKVILLE CENTRE
RAYMOND, PARISH, PINE & WEINER, INC.
673
165
508
68
440
838 SPACES
165 SPACES LOST
673 NET GAIN
68 SPACES FOR NEW COMM.
605 EFFECTIVE NET GAIN

FIG. 52

APPENDIX C

CIRCULATION ANALYSIS OF THE RAILROAD STATION AREA

CIRCULATION ANALYSIS OF THE RAILROAD STATION AREA

The selected parking garage (Alternate H) would provide approximately 500 additional parking spaces on Site 2. It is necessary to analyze the effect of these additional 500 parking spaces on the peak hour vehicular movements in the immediate vicinity of the proposed garage. Another circulation change would be caused by the proposed parking garage with the elimination of the existing vehicular movement through the present municipal parking lot (No. 19). It is also necessary to analyze the effect this change would have on the circulation pattern of the local bus system.

Peak Hour Traffic Volumes

Traffic counts were taken on Thursday evening December 14, 1978 from 4:00 PM - 7:00 PM, and on Friday morning December 15, 1978 from 7:00 AM - 10:00 AM. These counts were taken at the intersections of Sunrise Highway and N. Village Avenue, Sunrise Highway and North Park Avenue, Front Street and North Village Avenue and Front Street and N. Park Avenue.

A traffic count program was undertaken in order to analyze the existing traffic patterns which exist in the train station vicinity and to establish a basis from which additional traffic generated from the proposed parking structure could be redistributed and analyzed.

Within the peak periods of traffic, there are a number of additional peaks which occur when the Long Island Railroad stops at the Rockville Centre train station. These peaks, which last only a few minutes, create congestion around the station area, with slight delays at the intersection of Front Street and North Park Avenue and with North Park Avenue and the station access road. Figure 53 shows the existing AM and PM peak hour traffic turning movements.

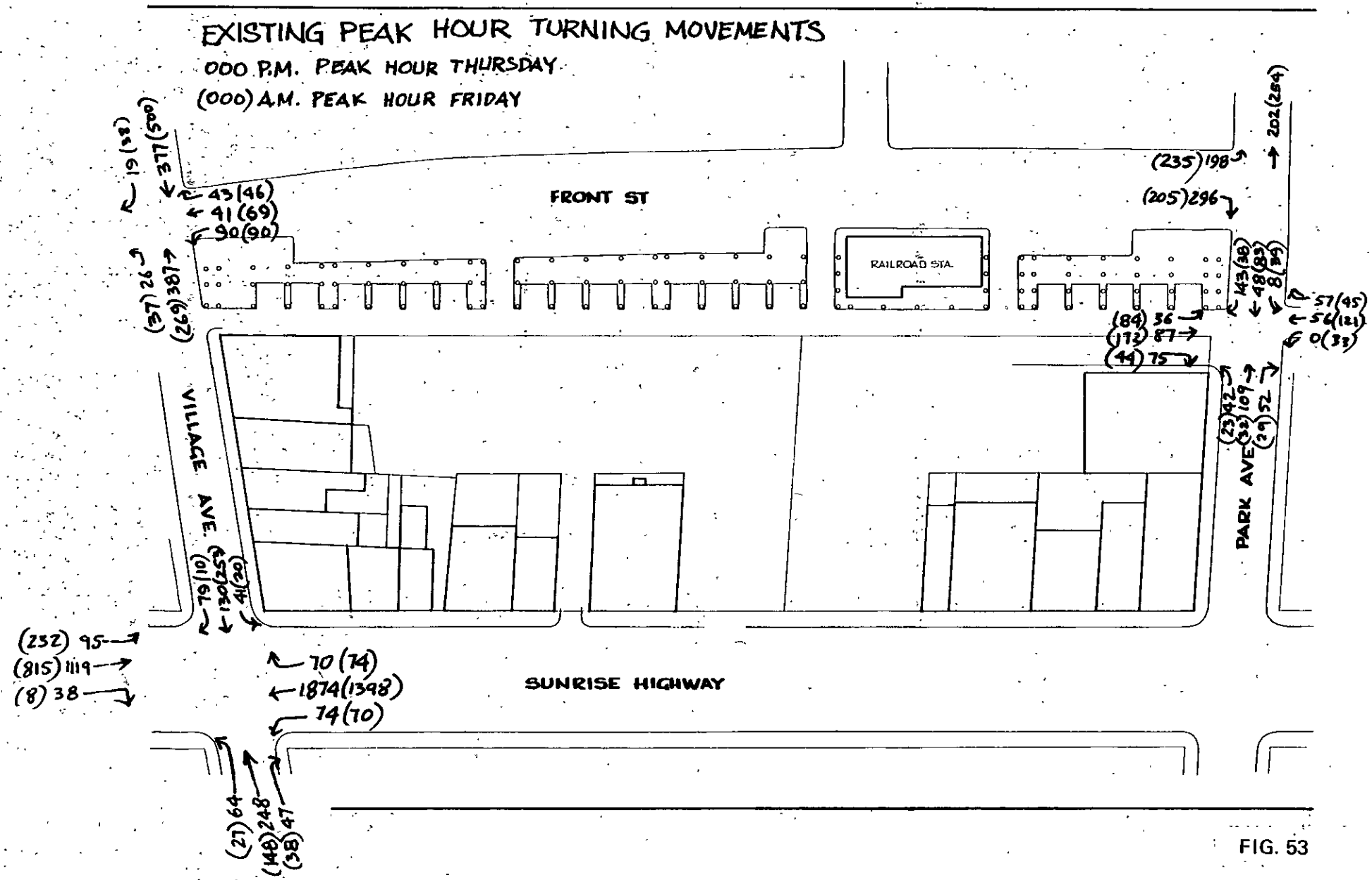

EXISTING PEAK HOUR TURNING MOVEMENTS
000 P.M. PEAK HOUR THURSDAY
(000) A.M. PEAK HOUR FRIDAY
FRONT ST
RAILROAD STA.
VILLAGE AVE.
PARK AVE
SUNRISE HIGHWAY
19(38)
377(500)
43(46)
41(69)
90(90)
(37)26
(269)387
(235)198
(205)296
202(254)
143(38)
48(83)
8(39)
57(45)
56(121)
0(33)
(84)36
(172)87
(44)75
(23)42
(32)109
(29)52
79(10)
130(253)
41(20)
(232)95
(815)1119
(8)38
70(74)
1874(1398)
74(70)
(27)64
(148)248
(38)47

FIG. 53

While the traffic counts were being taken, observations made of individuals traffic habits showed that many cars would arrive at the train station just before or as the train was arriving. They would wait on the corner of Front Street and North Park Avenue for their riders. Any congestion which did exist was the direct result of this standing and waiting. From a functional standpoint of sheer traffic volumes, however, no changes in the operations of the signalized intersections are necessary in order to carry present volumes.

Additional Volumes from the Garage

An analysis was performed in order to determine the potential impact of additional traffic which would be generated by the new parking structure. In the morning peak hour, there would be little or no effect on the surrounding street network since the garage would just be beginning to fill up.

In the evening peak however, it is assumed that the garage would be half filled, comprised of some shoppers but mostly commuters.

Existing traffic was distributed onto Sunrise Highway, Front Street and the railroad station access road. Figure 53 shows the distribution pattern. This additional traffic was then added to the existing evening peak hour traffic for analysis. A capacity analysis was performed on each intersection to determine the extent, if any, of the impact due to the additional traffic. Review of the analysis showed that there is adequate capacity to safely and properly carry the additional traffic.

Rerouting of Buses

There are presently three buses which stop at the Rockville Centre railroad station. The #14 bus services only Rockville Centre. It makes continual loops via North Park Avenue and Maple Avenue. When the bus returns to the railroad station, it is via Morris Avenue to the railroad station access road which runs between parking lots 3 and 5. The #15 and #16 buses begin in Long Beach and Silver Lake respectively, making a stop at the railroad station and then proceed to Mineola and Hempstead to the north. These buses also make a return trip which retraces their route from the north heading southward.

As these buses approach from the south, they proceed on South Park Avenue, cross Sunrise Highway and turn left into the railroad station area via the access road. As they exit, they pass through parking lot 19 to Sunrise Highway and proceed to North Centre Avenue. If a new garage is built on Site 2 the buses' travel pattern will have to be altered for buses arriving from the south.

Alternate 1 (See Figure 54). Since the building of the parking structure would preclude the #15 and #16 buses from using parking lot #19, a new route for exiting from the train station is needed. The present street system around the railroad station has Front Street one way eastbound from Clinton Street to North Park Avenue and one-way westbound from Clinton Street to North Village Avenue. Parallel curb parking exists on the north side of Front Street from Clinton Street to North Park Avenue.

Under Alternate 1 this parking would remain as is (see Figure 54). In order to allow the buses to make their scheduled stops at the railroad station, a bus contra-flow lane would be initiated from North Park Avenue to Clinton Street. The lane would be 15' wide and would widen to 20' wide in front of the railroad station plaza. The southwest corner would be

REROUTING OF BUSES ALT. 1.

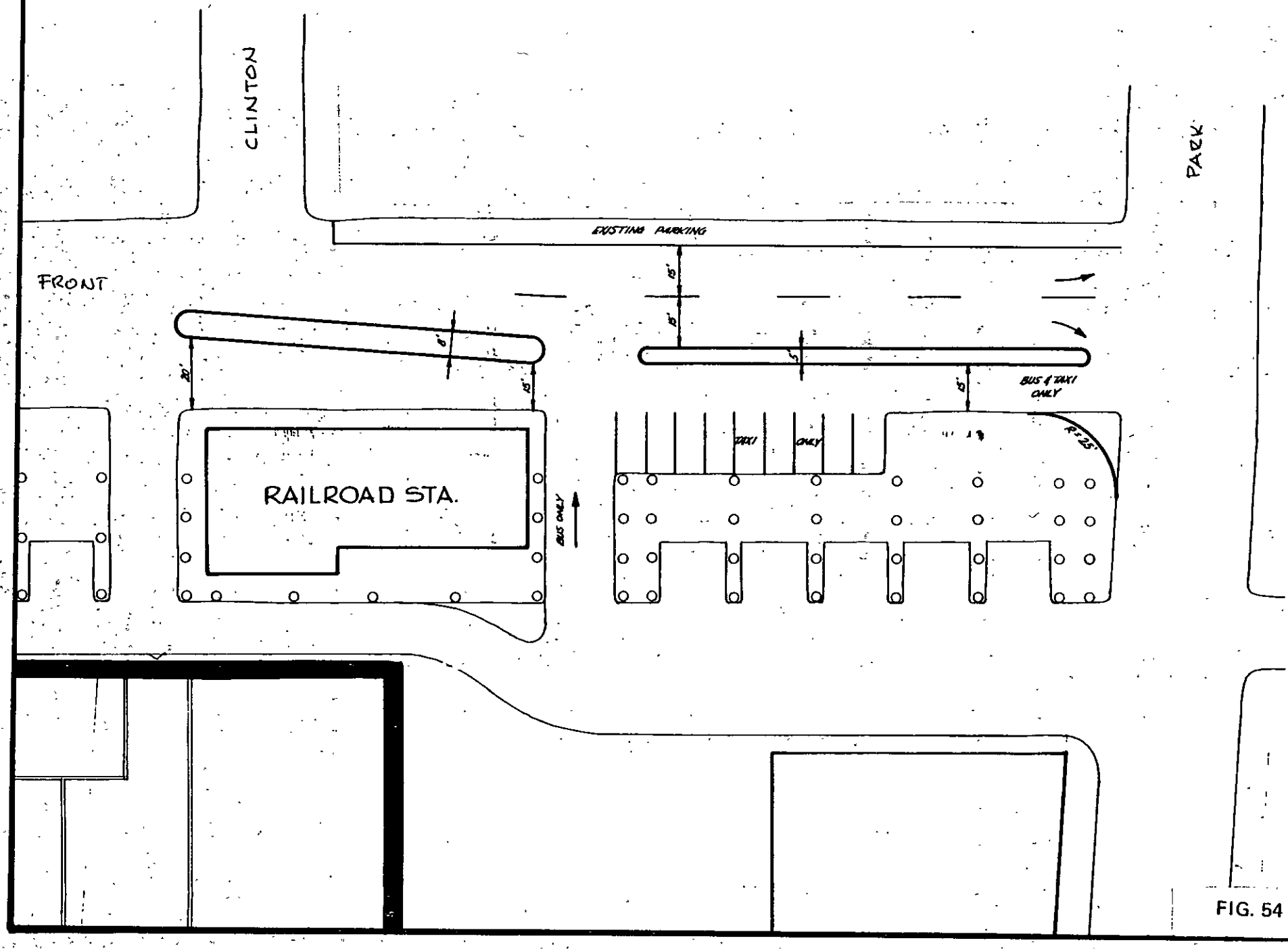


FIG. 54

REROUTING OF BUSES ALT. 2.

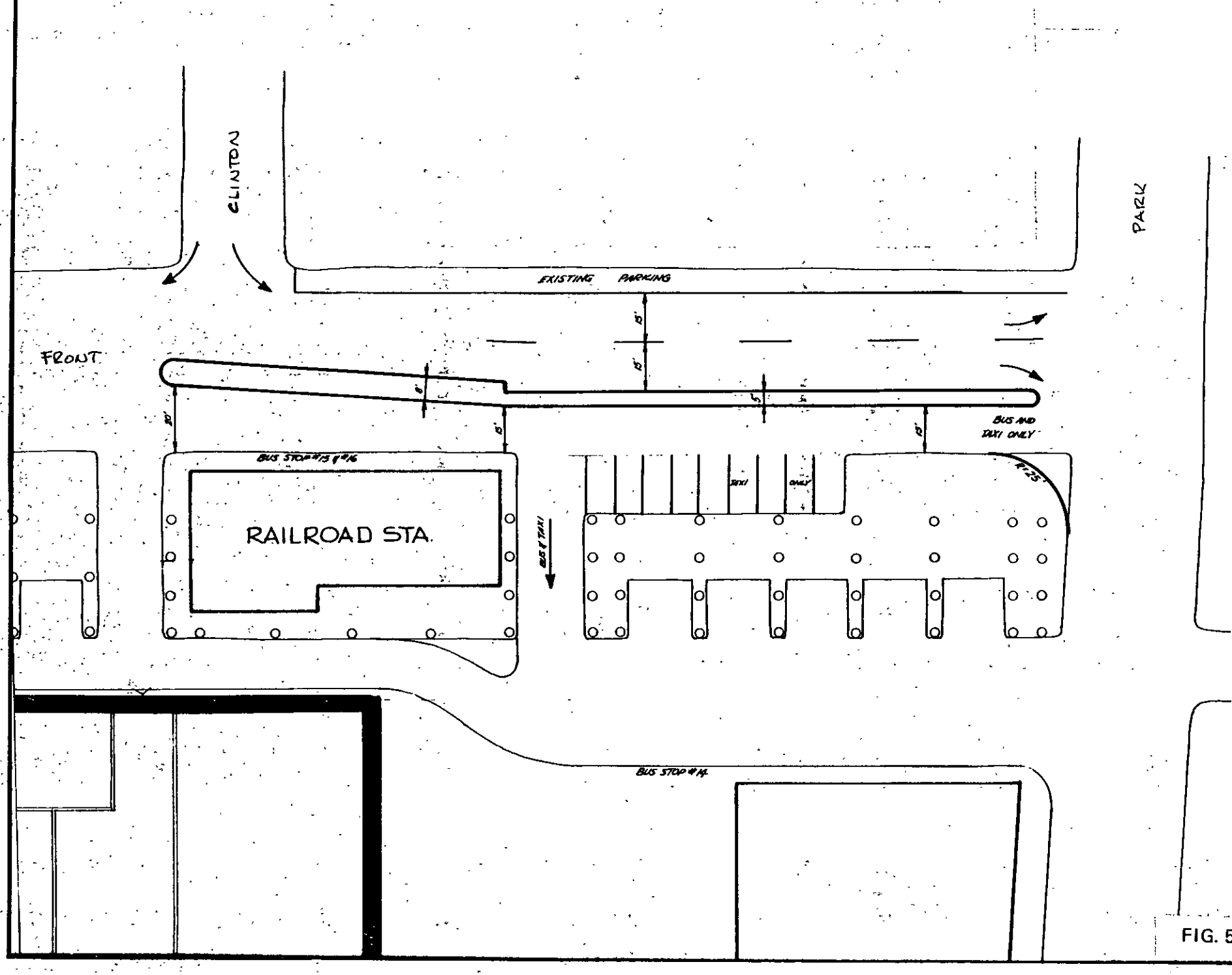


FIG. 55

widened in order to permit the buses to turn properly into this lane. A 5' wide median, which widens to 8' at the station plaza, would separate this bus lane from the regular traffic. Front Street between Clinton Street and North Park Avenue would then have two 15' wide lanes. Once the buses make their stop at the railroad station plaza, they could proceed along Front Street crossing North Village Avenue to North Centre Avenue. There they would turn north and continue on their regularly scheduled route.

Taxi cabs now park under the LIRR abutment opening next to the railroad station plaza. Under this plan, the taxis would be moved to a new location provided for them on Front Street. Taxis would also be aple to use the contra-flow lane. The opening under the railroad abutment would then become one way northbound, allowing the #14 or loop bus to continue making its present route without any interruption. An opening in the median would be provided for the bus to reach Front Street. Buses only will be allowed to use the opening under the railroad, which would be signed accordingly.

Alternate 2 (see Figure 55). This alternate is basically the same as #1 except that the median would be continuous. When the loop bus reaches North Park Avenue it would turn right and then left into the contra-flow lane. The opening under the railroad abutment would be one way southbound, allowing the bus to loop under the railroad. Taxis will also be permitted to use this route when they are leaving the station area with a fare or going to answer a call. No private autos would be allowed to use the contra-flow lane.