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High Intensity Housing

Barry R. Bruce

HIGH INTENSITY HOUSING - BRUCE

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INTRODUCTION

In today's residential market, there appears to be a certain dichotomy of alternatives for the individual family as to what particular living style it can choose. The two alternatives which are generally available to the family are: apartment living or detached-house living. Each of these living styles offers certain advantageous characteristics.

The detached house offers, in most cases, a higher degree of separation from neighboring residents and, as a consequence, a feeling of increased privacy and individuality results for the family as a whole and, to a certain extent, for the individual members of that family. With this type of development the family has direct access to at least partially private outdoor spaces and immediate access to the automobile. Since the lot is usually rather large, the resulting house is not overly restricted and has a large floor area. These amenities are often maintained at the cost of very inefficient land use. The average net density of a typical suburban subdivision is approximately 4 d.u./n.a.

In many instances the apartment project will offer just the reverse of the characteristics of the detached house. In high rise apartment developments, the land use efficiency becomes the major advantage. Obviousely, as the dwelling units are clustered and stacked, not only is the intensity of land use increasing, but a great deal of open space is released from development and, therefore, available for other usage within the project. Densities of 150 d.u./n.a. and over are not at all uncommon among high-riseapartment developments. However, this increased intensity of development is very often obtained at the expense of many of the advantages which are provided by the less efficient detached-house project. Although a great deal of open space is released for such uses as recreational activity for the apartment resident, in a majority of the cases the private outdoor space is almost completely eliminated, as are most of the other advantages of direct ground-level access. The loss of these amenities, which are, after a while, taken for granted by the suburbanite, result in the resistance to this type of high intensity living. This resistance

is especially strong among families with children. There is much greater acceptance of this type of high intensity living among the young, childless families and the retired family whose children have left home. To these groups the high rise apartment offers a very acceptable living pattern, especially since they are freed from the many responsibilities of the home owner.

In recent years there has been an effort made to eliminate this dichotomy of alternatives. This effort has resulted in the development of the cluster pattern in housing. This is a combination of many of the desirable characteristics found in older rowhouse concepts and the idea of areas of open space made available to the development as a whole through the clustering of the dwelling units. This development attained a higher density than that of the typical suburban subdivision, yet retained many of the amenities which had previously been lost in high density developments. The density of these generally runs from 9 to 15 d.u./n.a.

OBJECTIVE

It is the objective of this thesis to determine the optimum density which can be achieved while still maintaining a high degree of livability within the development.

REQUIREMENTS

In order to maintain this high degree of livability within the development, I have used, in the main, those requirements set forth in COMMUNITY AND PRIVACY, by Serge chermayeff and Christopher Alexander, as a standard of measure. They are as follows:

1. Efficient parking for owners and visitors; adequate maneuver space.

2. Temporary space for service and delivery vehicles.

3. Reception point to group. Sheltered delivery and waiting. Provision for information; mail, parcel, and delivery boxes; and storage of parcel carts.

4. Provision of space for maintenance and control of public utilities. Telephone, electricity, main water, sewerage, district heating, gas, air conditioning, incinerators.

5. Rest and conversation space. Children's play and supervision.

6. Private entry to dwelling, protected arrival, sheltered standing space, filter against carried dirt.

7. Congenial and ample private meeting space; washing facilities; storage for outdoor clothes and portable and wheeled objects.

8. Filters against smells, viruses, bacteria, dirt. Screens against flying insects, wind-blown dust, litter, soot, garbage.

9. Stops aginst crawling and climbing insect, vermin, reptiles, birds, mammals.

10. A one-way view of arriving visitors; a one-way visible access space.

11. Access points that can be securely barred.

12. Separation of children and pets from vehicles.

13. Separation of moving pedestrians from moving vehicles.

14. Protection of drivers during their transition between fast-moving traffic and the pedestrian world.

15. Arrangements to keep access clear of weather interference: overheating, wind, puddles, ice and snow.

16. Fire Barriers.

X 17. Clear boundaries within the semi-private domain. Neighbor to neighbor;tenant to management.

X 18. Clear boundaries between the sem-private domain and the public domain.

19. Maintenance of adequate illumination, and absence of abrupt contrast.

20. Control at source of noises produced by servicing trucks, cars, and machinery.

21. Control at source of noises generated in the communal domain.

22. Arrangements to protect the dwelling from urban noise.

X 23. Arrangements to reduce urban background noise in the communal pedestrian domain.

24. Arrangements to protect the dwelling from local noise.

25. Arrangements to protect outdoor spaces from noise generated in nearby outdoor spaces.

26. Provision for unimpeded vehicular access at peak hours.

27. Provision for emergency access and escape, fire, ambulance, reconstruction, and repairs.

28. Pedestrian access from automobile to dwelling involving minimum possible distance and fatigue.

29. Pedestrian circulation without dangerous or confusing discontinuities in level or direction.

30. Safe and pleasant walking and wheeling surfaces.

31. Garbage collection point enclosed to prevent pollution of enviornment.

32. Efficient organization of service intake and distribution.

33. Partial weather control between automobile and dwelling.

FACILITY REQUIREMENTS

Project Requirements:

1. Adequate access facilities for residents to their individual dwelling units.
2. Adequate access facilities for visitors to the individual dwelling units.
3. Adequate facilities for circulation between dwelling units.
4. Adequate facilities for garbage pickup and disposal.
5. Mechanical room facilities.
6. General project storage.
7. Children's play area.
8. Informal gathering area.
9. Facilities for pedestrian to community transition and for pedestrian to project transition.
10. Res. Parkg. 1.5 Per/unit.
11. Vistor .5 Per/unit

One Bedroom Units: 1800 # Approx.

1. Formal living room w/ patio
2. Dining room
3. Living-Dining garden area
4. Kitchen
5. Family room
6. Main bath
7. Master bedroom ~~with patio~~
8. Garage

Two Bedroom Unit: 2125 #

1. Formal living room w/patio

2. Dining room
3. Living-Dining garden area
4. Kitchen
5. Family room
6. Main bath
7. Master bedroom with ~~patio~~
8. Bedroom #2 with ~~patio~~

Three Bedroom Unit: 2285 □

1. Formal living room w/ patio
2. Dining room
3. Living-Dining garden area
4. Kitchen
5. Family room
6. Main Bath
7. Master bedroom ~~with patio~~
8. Bedroom #2 ~~with patio~~
9. Bedroom #3 ~~with patio~~
10. Bath #2

Four Bedroom Unit:

1. Formal living room
2. Dining room
3. Living-Dining garden area
4. Kitchen
5. Family room
6. Main bath

7. Master bedroom with patio

8. Bedroom #2 with patio

9. Bedroom #3 with patio

10. Bedroom #4 with patio

11. Bath #2

LOCATION

The general region in which this development is to be located is the Southwesten part of the United States. It is intended to be located within the fabric of an urban center. Since the problem is approached somewhat in the manner of a case study, there need not be any specific site intended. The development and its pattern should be applicable to a variety of patterns. Its ideal location would of course be within close proximity tothe various activity centers with which its residents would be involved: schools, employment centers, shopping centers, recreational and cultural facilities. This can be achieved not only by a location which provides close proximity to the facilities but also by locating the development within easy access of t e major traffic carriers of the city.

DATA

GROSS ACRES: 3.68

NET ACRES: 3.68

NUMBER OF DWELLING UNITS: 112

NUMBER OF PERSONS: 390 p.@ 3.5 persons/d.u.

DWELLING UNITS PER NET ACRE: 31 d.u./n.a.

PERSONS PER NET ACRE: 108 p./n.a.

COVERAGE: 76%

UNIT AREAS: 1 bedroom house 1800 sq. ft. Approx.
2 bedroom house 2125 sq. ft.
3 bedroom house 2285 sq. ft.
4 bedroom house 2518 sq. ft.

RESIDENT PARKING: 2 cars/d.u.

VISITOR PARKING: 0.46 cars/d.u.

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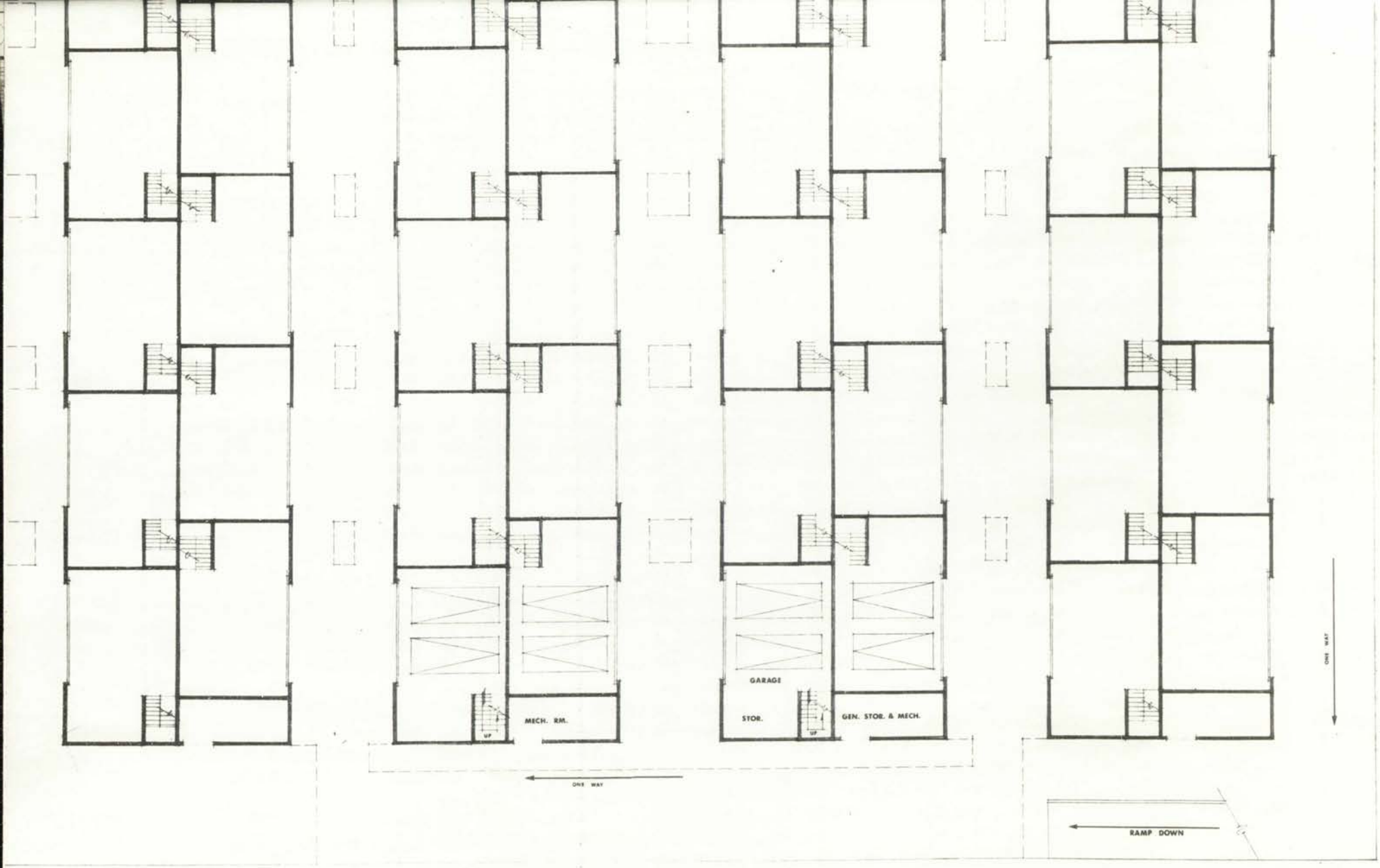
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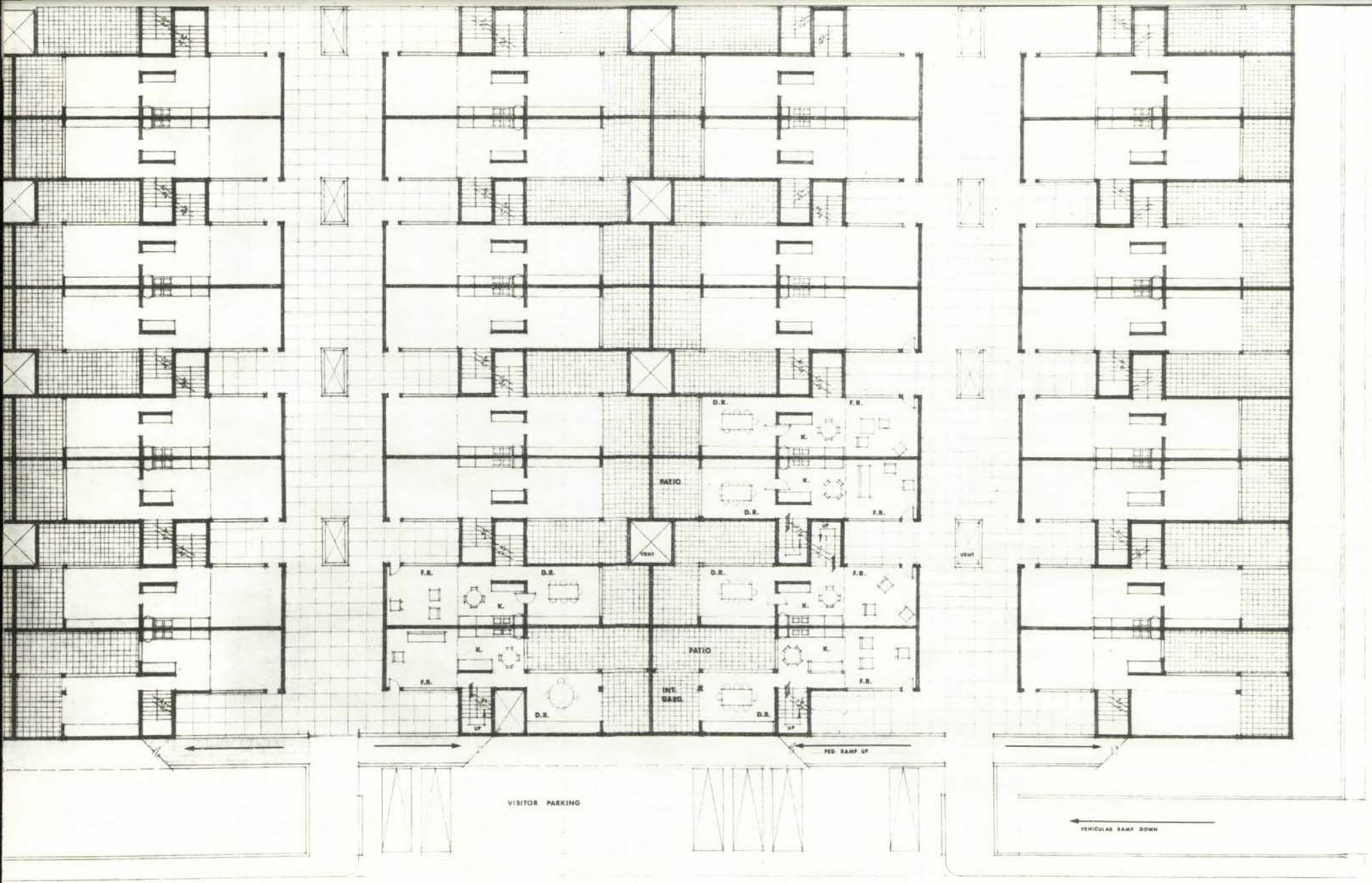
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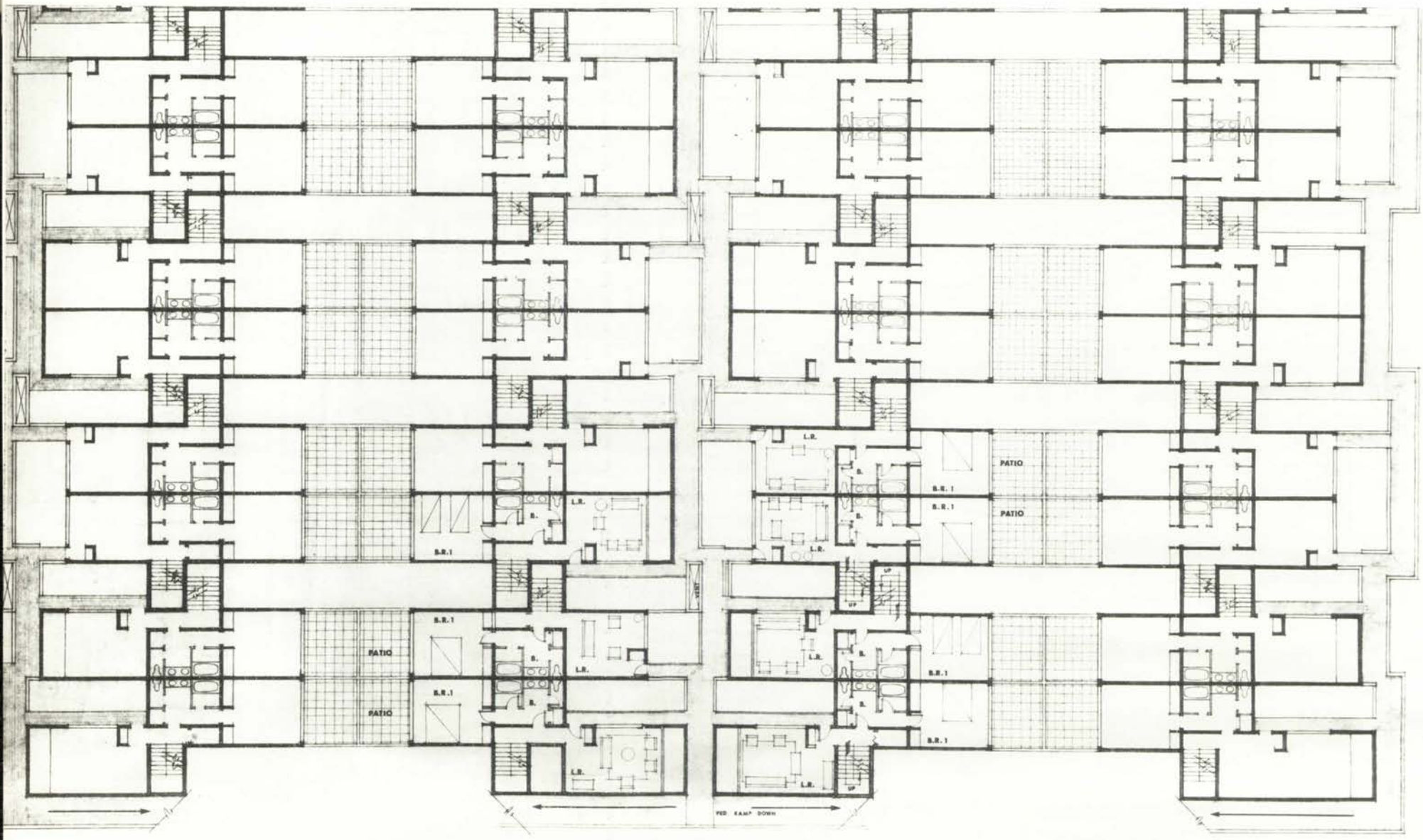
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