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ROW HOUSES

The row house has frequently been pictured as a type of housing that perfectly illustrates conditions of overcrowding, lack of light and air and open space, architectural monotony, and other environmental defects. A photograph of an old row house development was always useful in persuading a local community to modernize its zoning ordinance. However, recent attractively designed row house projects in both newly constructed and renewal areas of Louisville, Detroit, Philadelphia, San Francisco, Chicago, and many smaller communities have brought favorable comment from both builders and the general public. The now classic row developments of Chatham Village in Pittsburgh and Baldwin Hills in Los Angeles, built a number of years ago, are being examined with renewed appreciation.

The row house (also called "town house," "patio town house," "maison-ette," "court dwelling," and "group house") is enjoying increased popularity for several reasons, most important of which are lower construction costs and land space requirements per dwelling unit, and growing acceptance by the house-buying public. The row dwelling is cheaper to build than detached units. Considerable savings are made possible through the use of fewer windows and party walls, plus utilization of precut subunits, which seem to be employed more frequently in row house construction than in other types of building activity. Needing smaller lots, savings in land cost can also be realized. Good row house site design creates usable open space in contrast to the useless narrow sideyards and exposed front and back yards that are typical of single-family subdivisions, where community social mores often work to inhibit the erection of adequate fences that assure familial privacy. The row house also fills an apparent vacuum in the housing market, being particularly attractive to married couples under 25 or over 55, who find that neither the typical apartment nor the usual suburban single-family detached house meets their housing requirements.

While most row house developments to date have been built in large cities or metropolitan areas, smaller communities may soon be faced with the decision to permit or reject this new and strange kind of housing unit. Questions such as, "Is this good housing or a potential slum?"; and "Aren't these lots smaller than anything we've permitted before?" will be asked. This report introduces and describes some of the general characteristics of this type of housing.

Prepared by Frank S. So.

Advantages of Row Housing

The row house firstly offers economy to the individual owner. Proponents argue that with existing land and building costs, the row house provides more space for less money than do other types of dwelling units. Maintenance and operating expenses -- heating and care of exterior surfaces (row houses usually have brick facing) -- are lower. For those with little or no taste for outdoor landscaping and gardening, there is no need to spend long hours keeping up large private yards.

The row house offers amenity advantages over apartments and even some detached single-family dwellings. There is relatively greater privacy in living side by side in row houses than there is in living over and under other families in apartment buildings. Each row house unit has a small plot of privately-owned land that cannot be provided with apartment accommodations. It is claimed that well-fenced row house privacy can be more complete than that associated with some single-family tracts. Moreover, row house advocates contend that ownership of an individual unit imparts a feeling of responsibility for maintenance lacking in the average rental occupancy. In addition, there is freedom to alter interior arrangements as with a free-standing house, i.e., a basement can be converted into a playroom or clubroom.

Perhaps the most important attribute of row housing as far as the community as a whole is concerned is that it offers an alternative to the ubiquitous land-consuming single-family detached house. More families can be accommodated on the same amount of land. Municipal services can be more economically provided in areas of row house development than in areas of free-standing single-family houses, because of the compact nature of the former. Efficient use of land will cause net actual usable open space to compare favorably with that offered by detached single-family developments. Wasted sideyards and relatively useless setbacks can be combined to produce space better suited to both individual and community advantage. Finally, the community gains by the introduction of a dwelling unit that makes home ownership and its attendant stability possible for more people, while at the same time allowing greater architectural variety of housing type and size.

Disadvantages of Row Housing

Most of the unfavorable comment regarding row housing arises from experience with the type of unit built in the past. Many of these objections have been overcome by modern design and architectural treatment; others are primarily a matter of individual taste as to the kind of living accommodation preferred.

The typical older row house is admittedly too narrow to allow good interior planning. Living space is consequently restricted and furnishing difficult. Without adequate fencing there is little privacy in the yard. Thin party walls transmit sounds from adjacent units. Lack of proper ventilating equipment causes the house to be hot in the summer. In the very oldest examples of big city row housing, dwellings were commonly deep and dark, a fault aggravated by the inadequate artificial lighting of the era. Endless facades of brick and wood caused one dwelling and indeed one street to be indistinguishable from another, except in those instances where owners went in for fancy colors on doors and trim. Exterior uniformity in a neighborhood of row houses is generally thought to be

aesthetically more depressing than it is in a tract of detached single-family dwellings, although this is a fairly debatable point.

Open space relief in older row house neighborhoods frequently occurs only where they contain a large school site or public park. Front yards, if any, are useless, and backyards in many older developments are too long and narrow to serve any purpose but automobile servicing and the storage of garbage cans. If no on-site parking has been provided, the street becomes an inefficient parking lot. In a few cities important elements of urban living -- shopping facilities, social gathering places, and churches -- are not conveniently located in or near row house neighborhoods.

The Row House on the Lot

As mentioned previously, restricted width is the greatest defect of older row house dwelling units. In the words of The Community Builders' Handbook:[1]

> A twenty-foot width should be the minimum for today's "open planning." Any width less than 16 feet is obsolete. Lots measuring 20 feet by 90 to 100 feet in depth will accommodate 22 to 25 two-story units per net acre. This density and lot width accommodates two-story units having attributes of the present-day detached house, including integral garage, two bedrooms and bath, front setback and a rear garden. An additional half-story containing heating and air-conditioning unit, storage space and a studio room is entirely feasible where basements are omitted. For units with second-story rooms side by side, lot widths of 22 to 25 feet are essential.

Because of the difficulty of planning livable interiors for 16- and 18-foot-wide row houses, greater widths should be encouraged. However, a competent designer can often solve the problems of interior arrangement implied by a narrow width that would baffle a merchant builder without good architectural advice.

The intimate relationship of house, lot and street in a row house development means that a planning agency should take more than a normal interest in the interior design of such a dwelling. Very often sound judgment of the adequacy of exterior yard and neighborhood planning cannot be made without knowing something of interior layouts and orientation.

If living or family rooms are located in the front of the house, it is desirable to place the building far enough away from the street to provide protected and attractive open space. This design, however, reduces the amount of available back yard space, which in practical terms is quieter and more private than a yard on the street side of the building. Another disadvantage of placing the living room to the front is that it impairs the opportunity of locating common space, such as a walkway, at the rear of the lot. Also, groceries and other delivered goods must be hauled through interior living areas to the kitchen at the rear.

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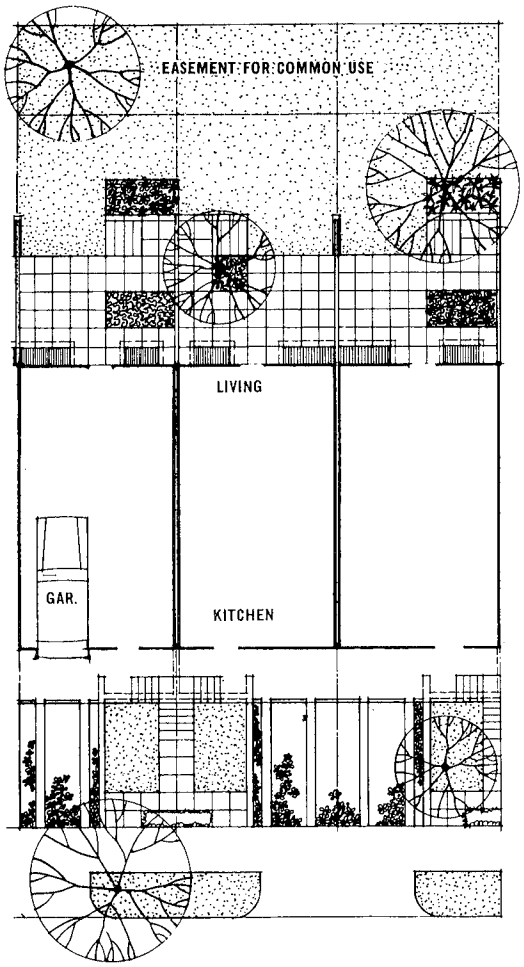
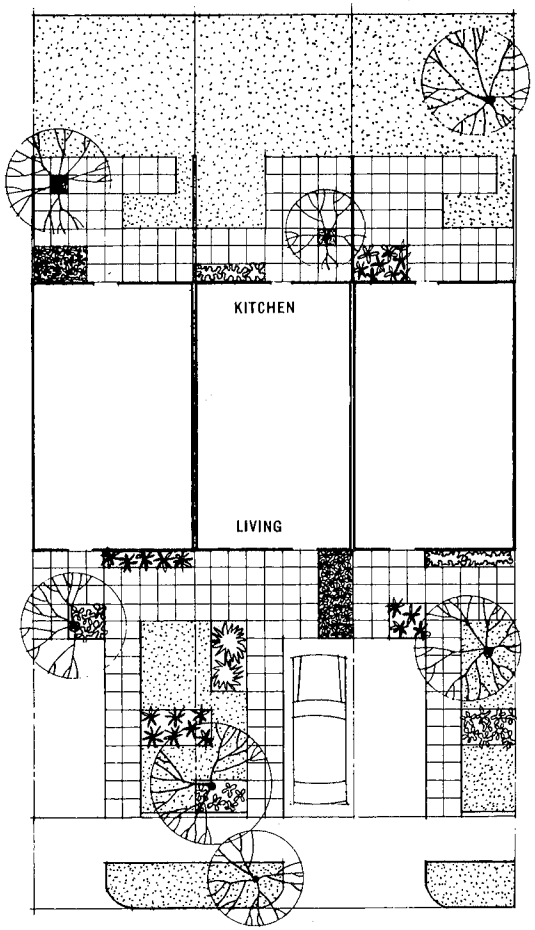
[1]This and subsequent references are listed at end of report.

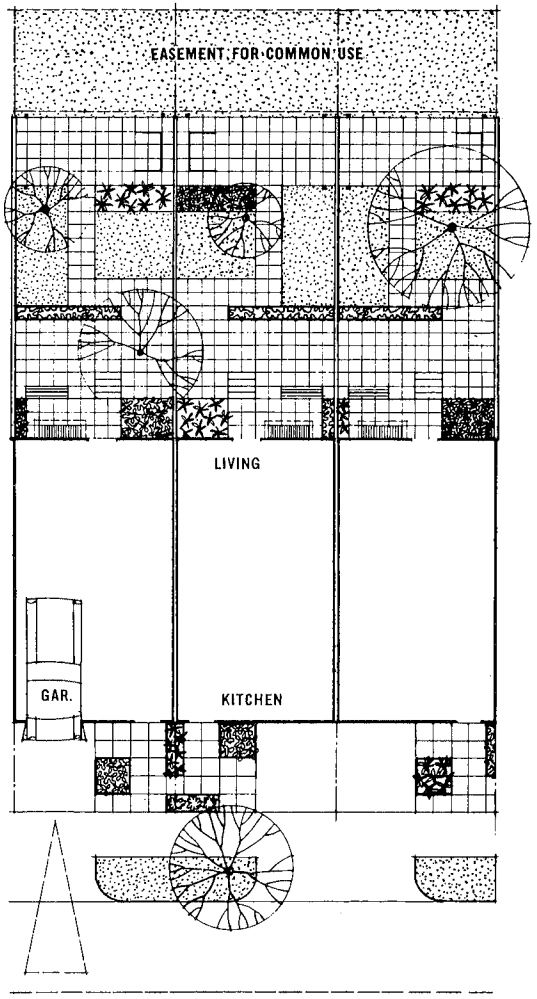
Figure 1



PLAN a



PLAN b



PLAN c

Figure 1 shows some of the alternate arrangements that may be utilized in siting the house on the lot and in varying the relationship of living and other areas within and without the unit and on the lot. A unit with the living room oriented toward a rear garden is the preferred solution.

Factors to be considered in the arrangement of the various yard spaces have been clearly presented in the Philadelphia Redevelopment Authority's Eastwick New House Study:[2]

1. Does the size of lot and position of car and house conform to ideal house-land arrangement? If not, are compensations adequate?
2. Have unusable (serving neither utility nor beauty) open areas been eliminated as far as possible?
3. Does the balance between front and rear yards and their design relate properly to the use and position of rooms opening on them?
4. Is there adequate space for:
   a. Children's play away from car and traffic but easily supervized from and accessible to house, particularly kitchen?
   b. Adult sitting, eating, entertaining, etc., with privacy and green /sic/.
   c. Gardening, outdoor work and outdoor storage?
   d. Clothes drying and rubbish /disposal/ convenient to house but as much out of sight as possible?
5. The design and amount of planting and other outside work done by the builder should encourage individual development of open areas by the owner and still tend to prohibit "anarchy" for the row or group.

The problem of fencing deserves attention by the local planning agency. Many provisions now in force could prohibit the kind of privacy that is essential in a row house development. In particular, high brick, stone, and vented wood fencing must be permitted.

Open Space

Since the conservation of land is one of the primary advantages of the row house, no neighborhood development of such dwellings should be permitted that does not provide a reasonable amount of community open space in the form of playgrounds and parks. Playgrounds with fields and equipment fill the need for active recreation areas, while parks allow passive family recreation space and are especially suitable for mothers with young children and for older couples. These two age groups can alternatively be accommodated in more urban-type open spaces such as paved courts with benches, wherever larger green park areas are not feasible.

There are no exact formulae for determining the amounts of open space needed for various kinds of land use, much less definite standards for the row house. However, Planning the Neighborhood (American Public Health Association) suggests a total of 310 square feet of open space per family as a minimum for row house neighborhoods, 40 per cent of this area to be in parks and the remainder in playgrounds.[3] With an assumed family size of 3.6 persons, this is equivalent to one acre of open space per 500 inhabitants. Together with other APHA standards (e.g., 2,400 square feet of lot area per dwelling unit), this requirement

means that approximately nine per cent of net residential area in row house neighborhoods will be devoted to open space and recreational usage. However, if about half the required playground space is provided at a nearby school site, then only four and a half to six per cent of the net residential land area need be devoted to parks and playgrounds. The Group House study made in Baltimore County (see Bibliography) suggests that 10 per cent of net residential land area should be devoted to open space; while an analysis of the Eastwick study (see p. 9) shows as much as 18 per cent of net block area allocated to open space.

The maintenance of community open space, particularly in small parcels, remains a problem. Extensive studies now in progress may suggest better modes of ownership and maintenance that will make the newer designs practicable.

Parking

A key element in the design of row house neighborhoods is the provision of adequate parking. Automobile storage will determine, to a large extent, house unit grouping and orientation, as well as the location of other facilities. In most urban areas the ratio of passenger auto ownership per family is over 1.0, and in some instances approaches 1.5 (the Los Angeles County ratio approaches 2.0). To accommodate the increasing number of two-car families and to allow for visitor parking, an overall standard of 1.5 spaces per dwelling unit should be sufficient. In some central city locations where car ownership is more restricted, this ratio may be reduced appropriately.

An important factor to be considered in the location of parking spaces within the neighborhood is the American antipathy to walking as a mode of transportation. Thus, no dwelling unit entrance should be more than 200 feet from a parking area, and, in general, parking should be as close to the house as possible, in order to minimize the distance required for carrying packages, etc.

Vehicle parking space may be located either on or off the individual house lots. Alternate parking schemes are illustrated in Figure 2. The use of an alley for vehicular access is not recommended. Not only does it use valuable space, but there is also a tendency for it to become cluttered and unsightly. The alternative, of course, is to place the parking space at the front, or street side, of the house. Although this location has some disadvantages, it is definitely preferred to rear lot storage. Figure 1 (p. 4) illustrates alternate parking locations at the front of the lot.

Carports present aesthetic problems, but may be necessary for economic reasons. Raising the first floor of the house about seven feet above sidewalk grade gains space for a front basement garage at the expense of direct outdoor access from living areas.

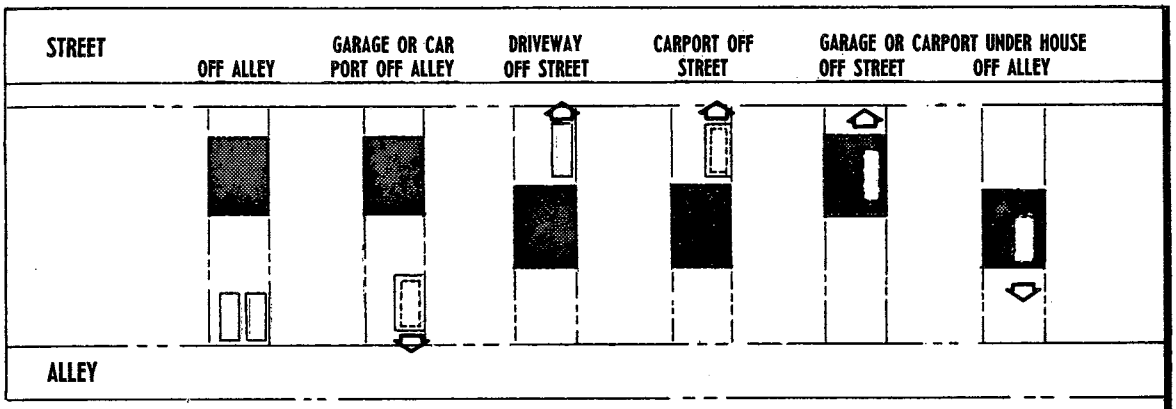
The off-street parking bay is another solution to the problem. Here parking space is grouped so as to waste as little land as possible, while walking distance to individual houses remains relatively short. This location also allows for guest parking. Figure 2, as well as the illustrations from the Eastwick study (see p. 9) show examples of parking bay arrangements.

Still another design technique is used in Chatham Village, where off-street

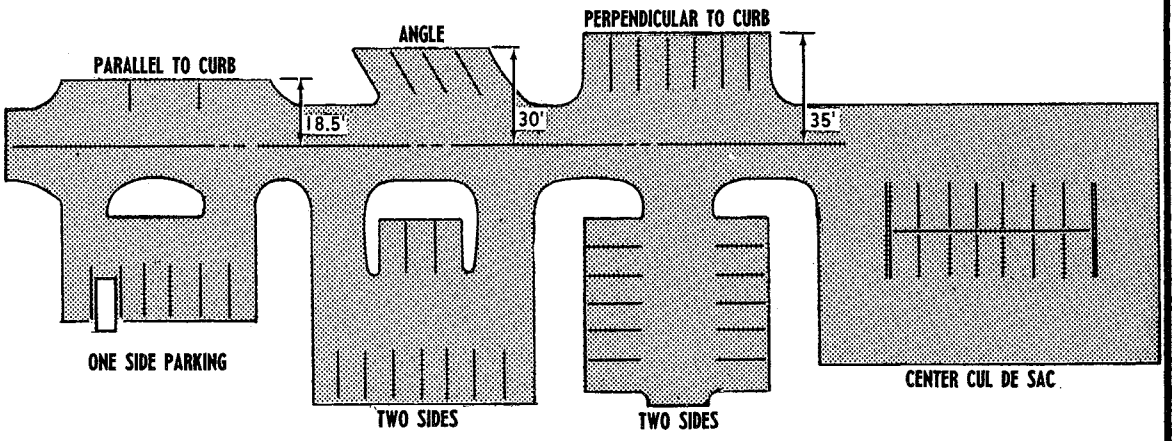
Figure 2

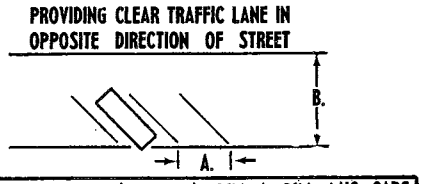
PARKING DATA

on private lot

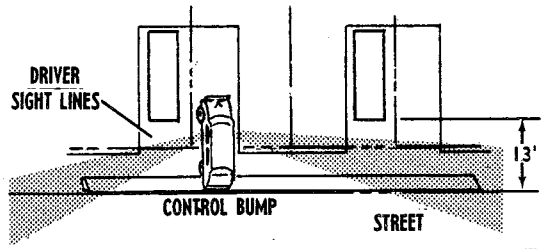


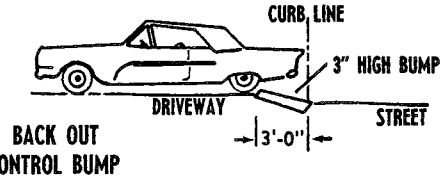
off private lot





TO CURB	ANGLE	DIM. A IN FT.	DIM. B IN FT.	NO. CARS PER 100' OF CURB
PARALLEL	0°	23	18.5	4.3
DIAGONAL	30°	18	22	5.5
DIAGONAL	45°	12.8	25	7.8
DIAGONAL	60°	10.3	30	9.7
PERPENDICULAR	90°	9	35	11.1





BACK OUT CONTROL BUMP

parking bays are combined with groups of garages in unobtrusive walled courts. These garage compounds provide space for the washing and care of the automobile often lacking in grouped parking facilities. The rolling topography of the site also permits the inclusion of underground garages in many individual units.

Whatever parking facilities and design arrangements are used in a row house development, parking on the street should be held to a minimum. Large parking areas are out of scale with this type of housing, and should be avoided wherever possible.

Streets

For the most part, the planning of collector and major streets in and near row house neighborhoods does not differ greatly from planning streets in other residential neighborhoods. The slightly higher density characteristic of row house areas does not radically alter design requirements. However, setbacks along collector and major streets, especially at intersections, should be closely controlled to maintain adequate sight distances commensurate with the higher vehicular speeds associated with these thoroughfares. The shallow setbacks usually found on minor streets in row house neighborhoods would create extremely dangerous traffic hazards on more heavily-traveled streets. Row houses should never be allowed direct traffic access via driveway onto a major street. If row groupings face a major street, a marginal access road is necessary. Similarly, where parking on individual lots is permitted, a different solution -- perhaps parking bays -- is desirable for those units fronting on collector streets.

The row house neighborhood presents many opportunities for varying minor street design. Since the function of a street system is to move people and goods (not vehicle storage), and because streets customarily occupy large amounts of space, the overall design goal should be to use as little land as possible for circulation purposes. Rights-of-way of 60 and 70 feet, with 36- and 42-foot pavements, should be more than adequate for minor and collector streets, respectively. Minor street design should discourage through traffic and excessive speeds. Loop streets and cul-de-sacs, for example, have the important advantage of going nowhere. Other possible design patterns are: rectangular meanders with short-travel tangents and frequent turns; pavement textural changes to provide a rough surface causing noise and vibration; and paving blocks or cobbles installed next to open spaces and playgrounds to slow vehicular movement in these areas.

Streets also serve as locations for water, gas, and sewer lines and storm water drains. These do not pose a serious problem, except where the rights-of-way are laid out in circuitous paths. Here a combination of intelligent street and easement planning will be necessary. Every effort should be made to encourage the underground burial of electric power and telephone wires. Overhead wiring could be a devastating intrusion in a planned row house development featuring intensive use of outdoor space.

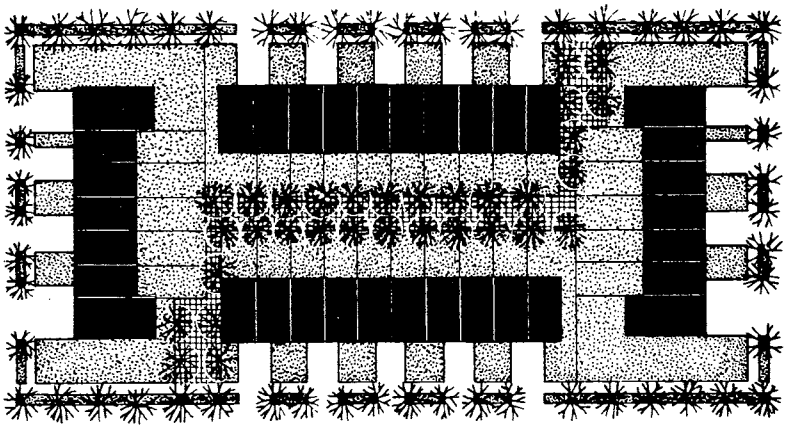
Neighborhood Design

The critical association of automobile parking and housing development pattern

Figure 3

BLOCK 4

In this block a narrow strip, usually 10 feet wide, has been eased by each house in the longer rows to form a common about 20 feet wide. The common connects with the sidewalk at each end of the block. This area may be used by the residents of the block as a private common or it may connect with a system of public walkways and parks. Alternatively, the walkway could be omitted and the rear yards made completely private. In either case, shortening the long rows and placing houses across the end of the block eliminates the resemblance to a fortress wall that is characteristic of conventional long parallel rows.



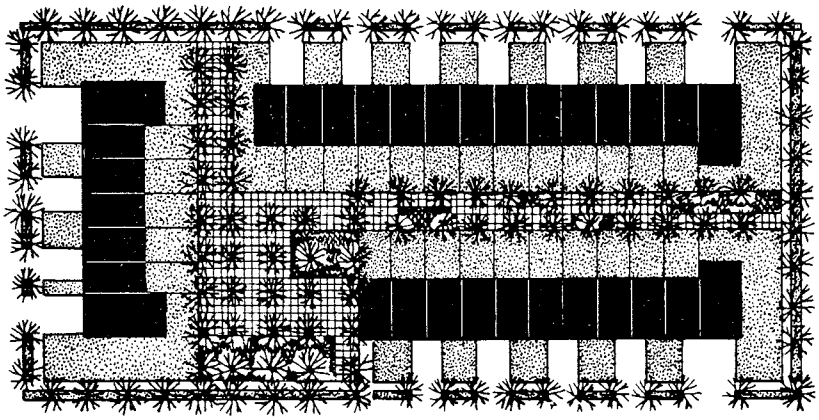
BLOCK 4 STATISTICS:

Number of units and kind:	
18′ row	28
End house	2
Duplex ends	4
	Total 34
Lot sizes:	
Row	1,620 sq. ft.
End	2,340 sq. ft.
Duplex	4,050 and 3,330 sq. ft.
Block area:	
To center lines of peripheral streets	101,910 sq. ft. or 2.34 acres
To peripheral lot lines	67,680 sq. ft. or 1.55 acres
Common area:	2,340 sq. ft.
Area of interior common walks:	4,100 sq. ft.
Area of street (cartway):	
Total	22,710 sq. ft.
Per unit	668 sq. ft.
Average lineal feet of curb per unit:	35 ft.
Area of 5′ public sidewalk:	
Total	5,960 sq. ft.
Per unit	175 sq. ft.
Gross density:	14.5 dwelling units per acre
Net density:	21.9 dwelling units per acre

Figure 4

BLOCK 5

Three or four houses have been sacrificed here to create a larger open area for rest and recreation. This area is adjacent to the street as well as related to an interior pedestrian way. The public view of the neighborhood is greatly improved through the use of planted openings in the mass of houses. The utility of the little parks as a private common may suffer from contact with the street. An alternative would be to incorporate it for public use in a larger walkway system.



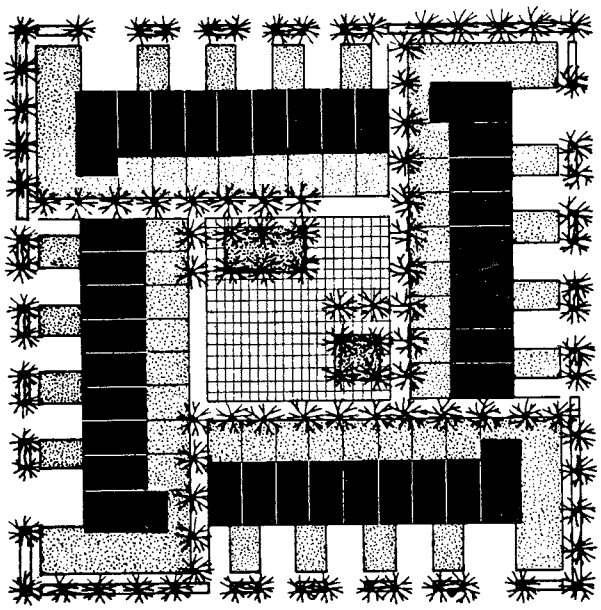
BLOCK 5 STATISTICS:

Number of units and kind:	
18′ row	26
End house	2
Duplex ends	4
	Total 32
Lot sizes:	
Row	1,620 sq. ft.
End	2,340 sq. ft.
Duplex	4,050 sq. ft.
Block area:	
To center lines of peripheral streets	104,754 sq. ft. or 2.40 acres
To peripheral lot lines	69,840 sq. ft. or 1.60 acres
Common area:	7,600 sq. ft.
Area of interior common walks:	6,200 sq. ft.
Area of street (cartway):	
Total	23,154 sq. ft.
Per unit	724 sq. ft.
Average lineal feet of curb per unit:	38 ft.
Area of 5′ public sidewalk:	
Total	6,080 sq. ft.
Per unit	190 sq. ft.
Gross density:	13.3 dwelling units per acre
Net density:	20.0 dwelling units per acre

Figure 5

BLOCK 6

Here the common is entirely enclosed. Although connected to the streets outside the block by public walks the arrangement creates a feeling of privacy and ownership.
Children's play in this area can be easily supervised from all but four of the houses in the block.
The interior common and walks are provided through a slight drop in net density (from 23.3 to 20.45) and an increase of about 3% in utility and street costs over those of conventional Block X /see Eastwick study/.



BLOCK 6 STATISTICS:

Number of units and kind:	
18′ row	28
End house	4
Duplex ends	4
	Total 36
Lot sizes:	
Row	1,620 sq. ft.
End	1,620 sq. ft.
Duplex	3,780 sq. ft.
Block area:	
To center lines of peripheral streets	109,890 sq. ft. or 2.52 acres
To peripheral lot lines	76,176 sq. ft. or 1.76 acres
Common area:	9,216 sq. ft.
Area of interior common walks:	7,440 sq. ft.
Area of street (cartway):	
Total	22,274 sq. ft.
Per unit	619 sq. ft.
Average lineal feet of curb per unit:	32.9 ft.
Area of 5′ public sidewalk:	
Total	5,920 sq. ft.
Per unit	164.5 sq. ft.
Gross density:	14.3 dwelling units per acre
Net density:	20.45 dwelling units per acre

Figure 6

BLOCK 7

This plan combines Block 6 and a variation of Block 5 in a pattern of alternating loop streets serving the area between two "collector" streets. It has many advantages, listed below, over the objectionable features which appear in Block 5A [see Eastwick study]:

The loop streets serve about 80% of the houses.

Through traffic does not travel on these streets and the speed of local traffic is reduced by their shape.

Every house has purely pedestrian access to a substantial common, never more than 150 feet away.

The positions of the rows of houses create an orderly but interesting large scale pattern with variety from any vista. Short vistas alternate with longer ones but none stretch out indefinitely and all include green areas.

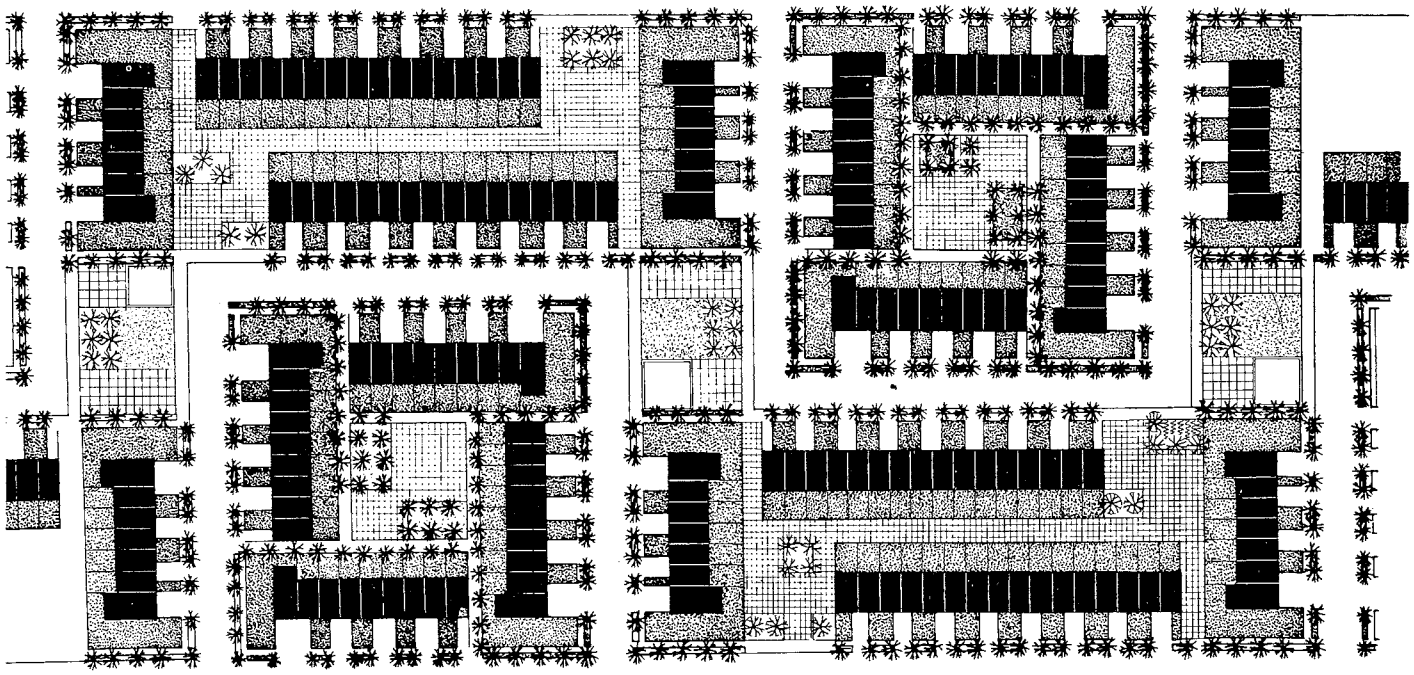
The pedestrian may walk anywhere between the collector streets without crossing any streets other than the loop streets.

The succession of small park areas on which the inner leg of the loop streets terminate are suitable for either adult recreation or restricted play facilities for children. With the walks along the streets connecting them they form a walkway system through the entire area. Objection to these parks may be raised as follows: (1) it would be difficult for the City to maintain the parks because they are small and numerous; and (2) since they are nearly the same size as the more private open areas within the blocks they are not as useful as fewer larger areas would be.

The open space, loop streets, visual interest and variety are achieved in this plan at almost no increase in street and utility cost (estimated at not over 3%) and a decrease in density from the conventional block of only 3 homes per acre.

BLOCK 7 STATISTICS:

Number of units and kind (center to center of square blocks):	
Duplex end	8
18′ row	74
	Total 82
Lot sizes:	
Duplex end	3,780 and 4,150 sq. ft.
18′ row	1,620 sq. ft.
Block area:	
Area within vertical lines through centers of square blocks and horizontal center lines of principal streets top and bottom	264,480 sq. ft. or 6.07 acres
Area above less street right-of-way area	186,100 sq. ft. or 4.27 acres
Common area:	29,216 sq. ft.
Area of interior common walks:	18,760 sq. ft.
Area of street (cartway):	
Total	51,064 sq. ft.
Per unit	623 sq. ft.
Average lineal feet of curb per unit:	33.4 ft.
Area of 5′ public sidewalk:	
Total	14,060 sq. ft.
Per unit	171.5 sq. ft.
Gross density:	13.5 dwelling units per acre
Net density:	19.2 dwelling units per acre



mentioned above is but one aspect of the close interrelationship of the various design elements prevalent in a row house neighborhood. A number of schematic block studies from the Eastwick project, reproduced as Figures 3 through 6, show the different neighborhood patterns that are possible in such areas. Blocks 4, 5, and 6 (their numerical designation in the original) represent segmental design concepts which can be arranged in larger combinations, of which Block 7 is an example. There are, of course, many more design possibilities, and the reader is encouraged to consult the sources listed in the Bibliography for additional examples.

ZONING FOR ROW HOUSES

Until recently, row house construction was concentrated in a few large cities. Most zoning ordinances do not specifically provide for row house development. Customarily they contain a few vague references to "attached" dwelling units. However, examples of zoning provisions allowing true row houses may be found in the ordinances of several large cities. It is useful to examine these provisions since they are presumably based on long experience, and deal with the key elements of land use control: density, minimum lot area, minimum lot width, maximum lot coverage, minimum front and rear yards, varying yard requirements for end units abutting other structures or streets, setbacks, maximum number of units in a row, etc.

Ordinance Provisions

The following examples are extracted from the Baltimore (City and County), Pittsburgh, and Philadelphia zoning ordinances.

Baltimore County. The Baltimore County zoning ordinance (1955) defines a group house dwelling as:

> A building that has not less than three nor more than six one-family housekeeping units erected in a row as a single building, on adjoining lots, each being separated from the adjoining unit or units by an approved masonry party wall or walls extending from the basement or cellar floor to the roof along the dividing lot line, and each such building being separated from any other building by space on all sides.

There is only one row house zone. It permits a density of about 20 units per net acre. The lot and yard requirements are summarized in Table 1. An additional provision requires that front and side (corner) building lines be a minimum of 55 feet from the center line of an abutting street.

Baltimore City. The proposed new zoning ordinance of the City of Baltimore (1962) has three zoning districts that provide for row housing. The provisions are summarized in Table 2. Differences in minimum lot areas for one, two and three dwelling units, as shown, are designed to accommodate permitted uses in more restricted residence districts -- particularly semi-attached or duplex units. In the R-7 district, for example, the minimum row house (3 to 12 units)

lot area is 5,500 square feet for three units, and 2,200 square feet for each additional unit. The proposed ordinance states that ". . .no residential use shall be established on a lot, other than a lot of record on the effective date of this Comprehensive Ordinance, which is less than 1,800 square feet in area." In effect, then, the minimum lot area for a row house in a newly platted area will be 1,800 square feet -- and not the lesser areas shown for the R-8 and R-9 districts. It should also be noted that the proposed ordinance does not utilize minimum lot width requirements to control residential densities.

Table 1

LOT AND YARD REQUIREMENTS RELATING TO GROUP (ROW) HOUSE ZONE, BALTIMORE COUNTY (1955)

	Lot Type		
	Interior	Interior End	Street Corner
Lot Area in Square Feet	2,070	3,795	4,945
Lot Width at Front Building Line in Feet	18	33	43
Lot Depth in Feet	115	115	115
Front Yard Depth in Feet	25	25	25
Side Yard Width in Feet	--	15	25
Rear Yard Depth in Feet	50	50	50
Maximum Number of Dwelling Units in Any Group Building	6	6	6

Source: Baltimore County Zoning Ordinance, 1955, p. 22.

Pittsburgh. The Pittsburgh zoning ordinance (1958) contains an interesting proviso that the row dwelling unit itself must meet certain minimum standards in order to be included as a permitted use. The pertinent section reads as follows:

> Dwelling, Row: A multiple-family dwelling divided by party walls or partition walls into a row of three or more distinct and non-communicating parts.
>
> > Row Dwelling, Class "A": Row dwelling containing not more than six dwelling units, not exceeding two rooms in depth, with no two dwelling units served by the same stairway or by the same exterior door of the dwelling.
> >
> > Row Dwelling, Class "B": Row dwelling other than Class "A."

The Class "A" row dwelling is permitted in the R-3, R-4, and R-5 districts. The Class "B" row dwelling is not a permitted use in any district at the present time. As shown in Table 3, minimum lot area and front and rear yard requirements for Class "A" row houses

in the R-3, R-4, and R-5 districts are identical. Only side yard requirements vary.

Table 2

SUMMARY OF ROW HOUSE DISTRICT PROVISIONS
PROPOSED ZONING ORDINANCE, CITY OF BALTIMORE (1962)

	District		
	R-7	R-8	R-9
Maximum Number of Dwelling Units in Any One Row	6	9	12
Maximum Number of Dwelling Units Per Acre	20	30	40
Minimum Lot Area in Square Feet Per Dwelling Unit --			
For 1 Dwelling Unit	2,200	1,450	1,100
For 2 Dwelling Units	3,300	2,200	1,650
For 3 Dwelling Units	5,500	3,650	2,750
For Each Additional Dwelling Unit	2,200	1,450	1,100
Permitted Lot Coverage of Principal Building, Per Cent	40	40	50
Minimum Depth of Front Yard in Feet	25	25	25
Minimum Depth of Rear Yard in Feet	26	26	24
Minimum Depth of Side Yards in Feet (End Units Only) --			
When Abutting Street	15	15	10
When Not Abutting Street	15	10	7

Source: City of Baltimore Proposed Zoning Ordinance, 1962.

Philadelphia. Philadelphia is a city with extensive row house development. In its recently adopted zoning ordinance (1962), a wide row house zone was included to accommodate row houses of 24-foot width. The text of the Philadelphia provisions follows (Figure 7 illustrates how the yard requirements are applied):

> Sec. 14-207 "R-6" Residential District
>
> (1) Use Regulations. The specific uses permitted in this district shall be the erection, construction, alteration, or use of buildings and/or land for:
>
> (a) Attached single-family dwellings in groups of not more than ten; provided, that each dwelling be not less than 24 feet in width, and, provided further, that end dwellings of each group may contain two families;

(b) Private dwelling garage as an accessory use;
(c) Accessory uses as defined;
(d) Signs, to the extent permitted in "R-2" Residential Districts.

(2) Area Regulations

(a) Lot Width and Area. The minimum lot width shall be 24 feet, and the minimum lot area shall be 1,920 square feet; provided, that the minimum lot width of the end dwelling of a group shall be 35 feet, and the minimum lot area of the end dwelling shall be 2,880 square feet.

(b) Occupied Area. Not more than 50 per cent of the lot area shall be occupied by buildings.

(c) Open Area. The open area shall be not less than 50 per cent of the lot area and shall consist of at least the minimum front and rear yards or open courts as shall be required to equal an area not less than the total open area required.

(d) Building Set-back Line. The building set-back line shall be 15 feet from all street lines.

(e) Front Yards. The minimum depth of a front yard shall be the depth required between the street line and the building set-back line, as herein specified.

(f) Side Yards.

(.1) Every dwelling which is the end unit of a permissible group shall have a side yard with a minimum average width of 12 feet; provided, however, that no portion of said yard shall be less than eight feet in width.

. . .

(h) Rear Yards.

(.1) The minimum depth of a rear yard shall be 20 feet.

(3) Height Regulations

(a) The maximum height of a building shall be 35 feet above the average ground level at the base of the building, but in no case over three stories.

. . .

Planned Unit Development and the Row House

The likelihood of monotony is far greater in row house construction than with any other type of residential land use. Consequently, flexibility is essential if good developmental practices are to be fostered. Flexibility can be achieved by use of planned unit development provisions in the zoning ordinance. Special planned unit text provisions provide a method of varying requirements pertaining to yards, lot sizes and arrangements, spatial relationships of structures, variety in dwelling types, and mixture of land uses -- provided they are part of an overall plan. The ordinance usually requires that the gross density of the proposed development shall not exceed that permitted by the provisions of the district in which the project will be located. In some zoning ordinances the developer may be given a bonus in the form of a small increase in permitted density, if he provides additional community facilities, such as open space, within the project boundaries.

Table 3

SUMMARY OF ROW HOUSE DISTRICT PROVISIONS
CITY OF PITTSBURGH ZONING ORDINANCE (1958)

	District		
	R-3	R-4	R-5
Minimum Lot Area in Square Feet per Dwelling Unit	2,500	2,500	2,500
Minimum Depth of Front Yard in Feet	25	25	25
Minimum Depth of Rear Yard in Feet --			
Abutting Street	25	25	25
Not Abutting Street	30	30	30
Minimum Depth of Side Yard in Feet --			
Interior Lots --			
Abutting Street	25	25	25
Not Abutting Street	10	10	15
Exterior Lots --			
Abutting Street	25	25	25
Not Abutting Street	30	30	30

Source: Pittsburgh Zoning Ordinance, 1958.

The concepts and principles of planned development provisions in the zoning ordinance have been ably treated in Density Zoning: Organic Zoning for Planned Residential Development, published by the Urban Land Institute as Technical Bulletin Number 42 in July, 1961.

Planned development provisions are usually applied to selected residential (as well as commercial and industrial) districts. The proposed City of Baltimore ordinance gives an example of this practice, wherein planned development provisions may be applied to those residential districts in which row housing is permitted. The planned unit section contains language of a general nature and does not spell out specific standards for a planned row house development, as such. Each site plan must be reviewed and considered on its own merits by the planning commission.

The new Philadelphia zoning ordinance takes another approach to the problem. It does not contain a planned unit provision, as such, but instead includes a number of districts in which group housing (row houses) may be combined with tall apartment buildings. The R-11, R-12, and R-13 district provisions, for example, allow many different building-site arrangements. Extensive use is made of floor-area ratios, varied spacing patterns, and light obstruction scales. These complex requirements call for close study of the ordinance text and accompanying descriptive figures and illustrations.

R6 RESIDENTIAL DISTRICT

INTERMEDIATE LOT -
MINIMUM AREA - 1920 SQ. FT.
MINIMUM WIDTH - 24 FT.

INTERMED. LOT - END DWELLING -
MINIMUM AREA - 2880 SQ. FT.
MINIMUM WIDTH - 36 FT.

MINIMUM DWELLING WIDTH - 24 FT.

Intention

A new district.
To provide for a wide row house as an improved dwelling type.

Use Regulations

Permits single family and duplex, detached and semi - detached dwelling;
Single family attached dwellings limited to a maximum of ten dwellings per group.
Prohibits multi-family dwellings.
Permits regulated non-residential uses.

Bulk, Area, Height Regulations

Small set-back, 15 ft., to encourage front garages.
Maximum height limited to lesser of 35 ft. or 3 stories.

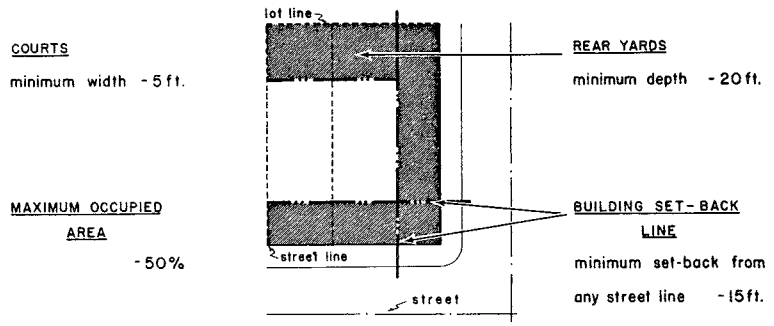
Other Provisions

Off-street parking not required.
Signs regulated.

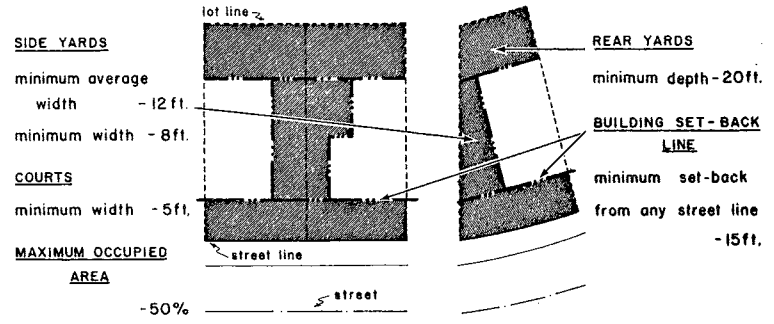
Figure 7

AREA REGULATIONS

ATTACHED DWELLINGS



INTERMEDIATE LOT CORNER LOT



INTERMEDIATE LOTS & END DWELLINGS

A similar innovation is included in the proposed Baltimore County "R.V.T." (Residence, Varied Type) zone. In this instance, however, a much lower density is anticipated, with a permitted maximum of approximately six families per acre. This density is between the lot area requirements of the one-family unit (6,000 square feet) and the two-family unit (10,000 square feet or 5,000 square feet per family) in the R-6 one- and two-family residential zone. Elevator buildings are also permitted in the "R.V.T." zone. A minimum of 10 per cent of the total site area must be dedicated for public open space. As in the case of the Philadelphia provisions, the density, area and yard provisions are extremely detailed.

In summary, then, a row house district in the zoning ordinance, unless modified by planned unit provisions of the type mentioned above, will not of itself ensure the development of new row house neighborhoods that will be up to the standards now being achieved in more progressive projects.

CONCLUSIONS

The popularity of the row house is increasing in all parts of the U. S. Municipal officials in both large and small cities are being asked to approve a type of residential building that they never expected to see in their cities. They are understandably concerned that the endless monotony of the row house as they may have seen it in a few large eastern cities not be repeated in their communities. Modern zoning and development regulations can prevent this monotony. The row house, properly designed and located, does offer some advantages over other types of residential units. A reasonable amount of row housing can be absorbed beneficially, but municipal authorities must be prepared to adopt and enforce development controls that are somewhat more stringent than those used for one- and two-family detached structures.

REFERENCES

1. Urban Land Institute, The Community Builders' Handbook, 1961, p. 101.

2. Philadelphia Redevelopment Authority, Eastwick New House Study, 1957, p. 11.

3. American Public Health Association, Committee on the Hygiene of Housing, Planning the Neighborhood, 1960.

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(Items of interest concerning the row house have appeared in House and Home issues of July 1955, August 1959, March 1961, April 1961, January 1962, and December 1962).

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