

AREA OF HOUSE	TYPE OF HOUSE, SHOWING DIMENSIONS	TYPE OF HOUSE, SHOWING DIMENSIONS	TYPE OF HOUSE, SHOWING DIMENSIONS	TYPE OF HOUSE, SHOWING DIMENSIONS
	DETACHED	SEMI-DETACHED	SINGLE STOREY ROW	DOUBLE STOREY ROW
600 sq. ft.				
700 "				
800 "				
900 "				
1000 "				
1200 "				
1400 "				

TABLE 1. DIMENSIONS OF HOUSES  
SCALE: 1 INCH = 100 FEET.

AREA OF HOUSE	MIN. PLOT AREA	DETACHED	SEMI-DETACHED	SINGLE STOREY ROW	DOUBLE STOREY ROW
AREA	AREA	AREA	AREA	AREA	AREA
600 sq. ft.	2000 sq. ft.	2790 sq. ft.	2170 sq. ft.	2000 sq. ft.	1500 sq. ft.
700 "	2333 "	3008 "	2360 "	2333 "	1666 "
800 "	2666 "	3200 "	2680 "	2666 "	1833 "
900 "	3000 "	3520 "	3015 "	3000 "	2000 "
1000 "	3333 "	3776 "	3332 "	3333 "	2166 "
1200 "	4000 "	4224 "	4032 "	4000 "	2600 "
1400 "	4666 "	4864 "	4686 "	4666 "	2833 "

#### DISTANCES. COVERAGE.

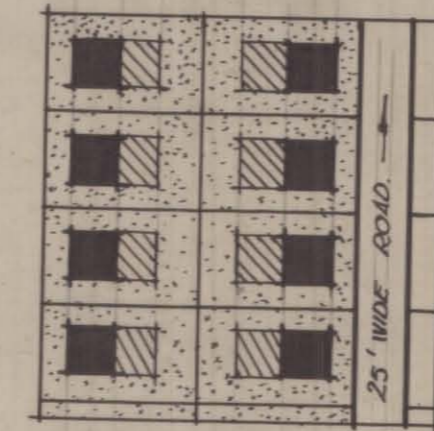
THIS SIDE OF LINE CONTROL BY DISTANCES BETWEEN UNITS. THIS SIDE OF LINE CONTROL BY MAX. COVERAGE OF 30%.

#### TABLE 2. AREA & DIMENSIONS OF STANDS FOR VARIOUS SIZED HOUSES. COVERAGE & SPACING CONTROL.

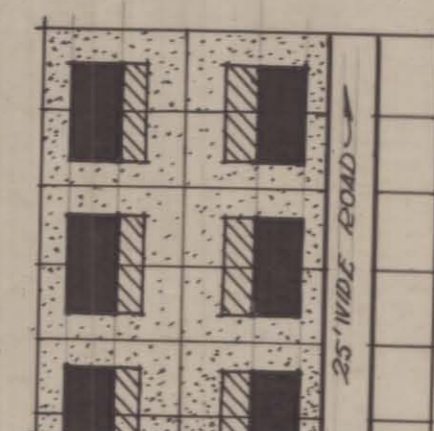
NOTE. CONTROL AS FOLLOWS.  
MINIMUM DISTANCE BETWEEN DWELLINGS, FRONT TO FRONT, REAR TO REAR OR FRONT TO REAR 50'-0" & SIDE TO SIDE 20'-0" AND NO SITE COVERAGE TO EXCEED 30% COVERAGE.  
TABLE 1. GIVES DIMENSIONS OF HOUSES USED IN TABLE 2.  
TABLE 2. SHOWS HOW MINIMUM SPACING CONTROLS STAND SIZES FOR DETACHED, & SOME SEMI-DETACHED DWELLINGS WHERE AS COVERAGE CONTROLS THE REMAINDER.

#### DISTANCES & COVERAGE TABLES.

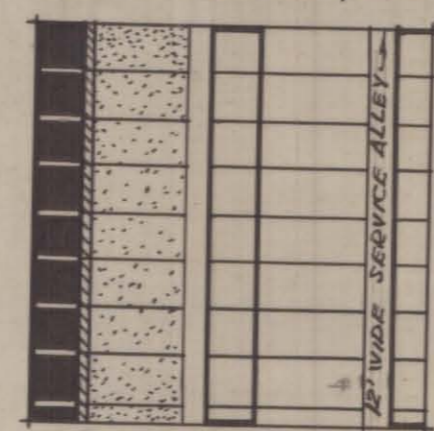
PLATE NUMBER BRA/K/23.



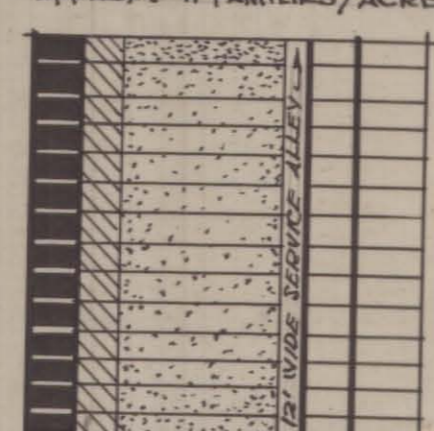
CASE 1. DETACHED HOUSES. PLOTS 30' x 70'. COVERAGE 35%. APPROX. 8 FAMILIES/ACRE.



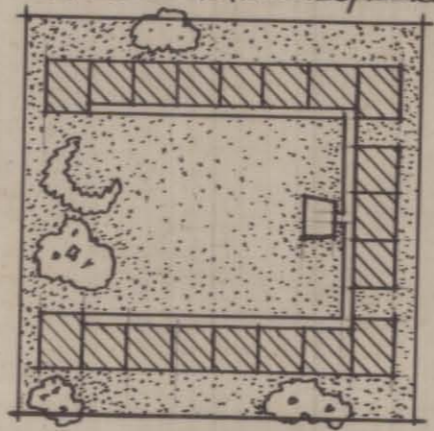
CASE 2. SEMI-DETACHED. PLOTS 40' x 70'. COVERAGE 35%. APPROX. 11 FAMILIES/ACRE.



CASE 3. SINGLE STOREY ROWS. PLOTS 25' x 80'. COVERAGE 35%. APPROX. 16 FAMILIES/ACRE.



CASE 4. DOUBLE STOREY ROWS. PLOTS 15' x 135'. COVERAGE 35%. APPROX. 20 FAMILIES/ACRE.



CASE 5. THREE STOREY FLATS. 1 ACRE PLOT. COVERAGE 30%. APPROX. 57 FAMILIES/ACRE.

#### SYSTEM. AMERICAN.

FEDERAL HOUSING ADMINISTRATION. LOT AREAS NOT TO BE LESS THAN: DETACHED ONE FAMILY DWELLING 4000 SQ. FT. SEMI-DETACHED " " 3000 SQ. FT. ROW DWELLINGS ONE FAMILY. 2000 SQ. FT. WHEN HOUSING TWO FAMILIES INCREASE 50%. COVERAGE, DETACHED 30%, SEMI-DETACHED 35% & ROW HOUSES 35%. HOUSE AREA 600 SQ. FEET. = MAX. ALLOWED UNDER PROVISION OF COVERAGE CLAUSE.

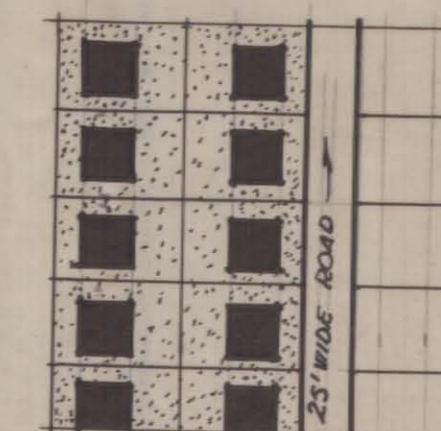
#### OBSERVATIONS.

CASE 1. DETACHED, GOOD SIZE OF MINIMUM STAND TAKING A MAXIMUM COVERAGE OF 1200 SQ. FT. INCLUDING OUTBUILDINGS IF ANY.  
CASE 2. SEMI-DETACHED, GOOD SIZE OF MINIMUM STAND WITH A COVERAGE GIVING 1050 SQ. FT. INCLUDING OUTBUILDINGS.  
CASE 3. SINGLE STOREY ROW HOUSES, GOOD STANDARDS GIVING 700 SQ. FT. OF BUILDING COVERAGE.  
CASE 4. DOUBLE STOREY ROW HOUSES, STANDARDS GOOD IF STAND FRONTAGE IS LIMITED TO MINIMUM OF 22'-0". AS DRAWN AT 15'-0" WITH MAXIMUM COVERAGE OF 700 SQ. FT. GIVING 1400 SQ. FT. HOUSE. THIS COVERS VENTILATION OF DWELLING IS BAD (DEPTH IS 46'-8") AND MINIMUM FRONTAGE WOULD AT ONCE RECTIFY THIS.  
CASE 5. THREE STOREY APARTMENTS, HAVE NO STANDARD Laid DOWN THEREFORE A 30% COVERAGE WAS ASSUMED GIVING GOOD RESULT.

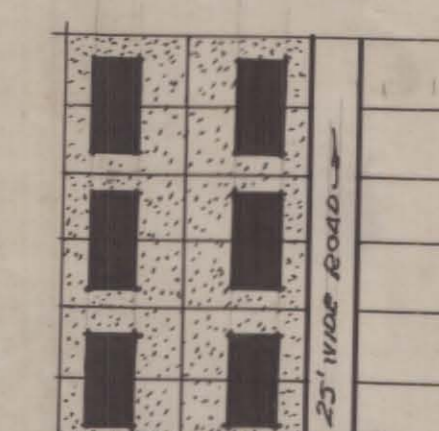
SCALE: 1 INCH = 100 FT. EACH SQUARE EQUALS 1 ACRE.

#### DEVELOPMENT CONTROL BY MINIMUM SIZED STANDS IN CONJUNCTION WITH COVERAGE.

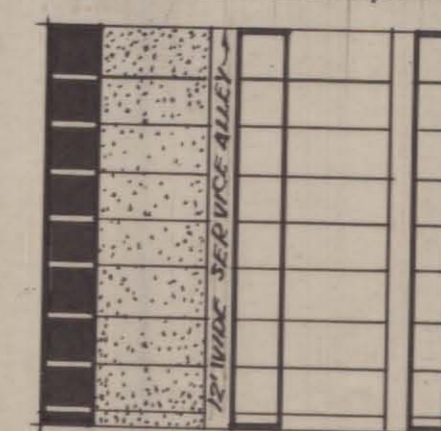
PLATE NUMBER BRA/K/



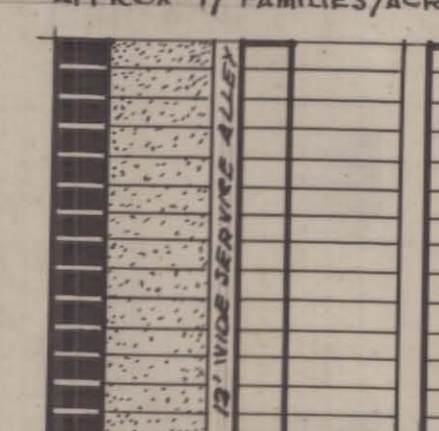
CASE 1. DETACHED HOUSES. PLOTS 30' x 63'. COVERAGE 35%. APPROX. 14 FAMILIES/ACRE.



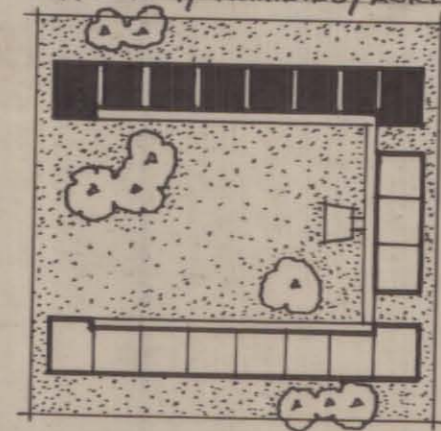
CASE 2. SEMI-DETACHED. PLOTS 40' x 70'. COVERAGE 35%. APPROX. 17 FAMILIES/ACRE.



CASE 3. SINGLE STOREY ROWS. PLOTS 25' x 80'. COVERAGE 35%. APPROX. 17 FAMILIES/ACRE.



CASE 4. DOUBLE STOREY ROWS. PLOTS 15' x 83'. COVERAGE 35%. APPROX. 28 FAMILIES/ACRE.



CASE 5. THREE STOREY FLATS. 1 ACRE PLOT. COVERAGE 30%. APPROX. 57 FAMILIES/ACRE.

#### SYSTEM.

NO BUILDING OR BUILDINGS MAY COVER MORE THAN 30% OF SITE, THE FOLLOWING MINIMUM SPACING IS ADHERED TO: FRONT & REAR SPACE MIN. 50'-0" & SIDE SPACES OF 20'-0" CLEAR. A BUILDING LINE OF 12'-6" WAS ALLOWED & AREA OF HOUSE 600 SQ. FT. AS BEFORE. TABLE SHOWS PLOT SIZES FOR DIFFERENT SIZED HOUSES, SEE PLATE BRA/K/

#### OBSERVATIONS.

CASE 1. DETACHED, IS DICTATED BY SPACING OF BUILDINGS RESULTING IN ONLY 21.5% COVERAGE. THE RESULTANT 45'-0" FRONTAGE IS INTERESTING.  
CASE 2. SEMI-DETACHED, RESULT OF SPACING AGAIN, COVERAGE = 28%  
CASE 3. SINGLE STOREY ROW IS BASED ON 30% COVERAGE ALONE.  
CASE 4. DOUBLE STOREY ROW AGAIN BASED ON COVERAGE.  
CASE 5. THREE STOREY APARTMENTS, BASED ON 30% COVERAGE. SPACING DISTANCES MUST BE INCREASED WITH HEIGHT OF BUILDING AND THIS WILL BE STUDIED LATER.

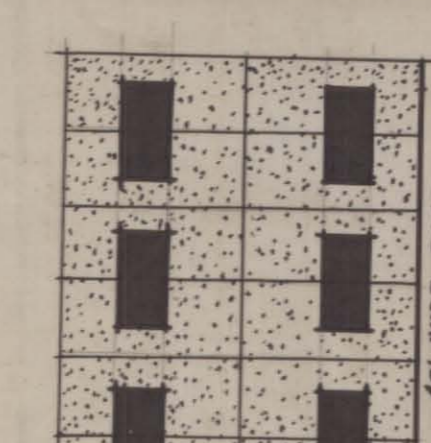
SCALE: 1 INCH = 100 FT. EACH SQUARE EQUALS 1 ACRE.

#### DEVELOPMENT CONTROL BY COVERAGE IN CONJUNCTION WITH MIN. SPACES BETWEEN BLDGS.

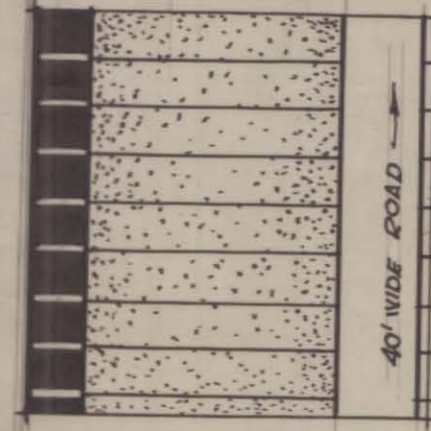
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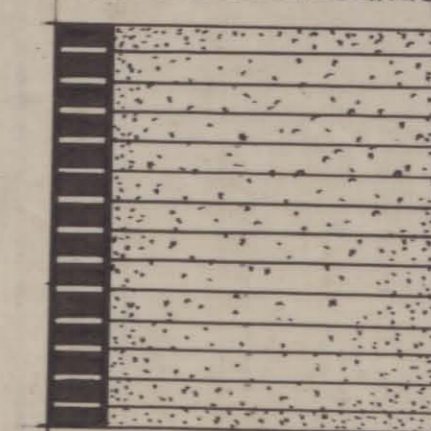
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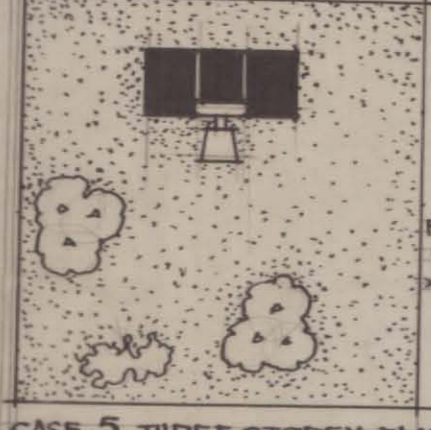
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#### SYSTEM.

A FLOOR SPACE INDEX WAS SELECTED FROM OBSERVATIONS MADE ON A LAYOUT OF DETACHED HOUSES OF DWELLING AREA 600 SQ. FT. THE INDEX WAS 0.1333 AND OUR FORMULA READS: F.S.I. = TOTAL FLOOR AREA / TOTAL SITE AREA  
FLOOR AREA = ALL ROOFED AREAS & SPACE OCCUPIED BY ALL WALLING ETC.  
SITE AREA = TOTAL SITE AREA INCLUDING ALL LAYS, OPEN SPACES IF PROVIDED & HALF ROAD WIDTH SURROUNDING SITE TO A MAX. OF 20'-0" ONLY.

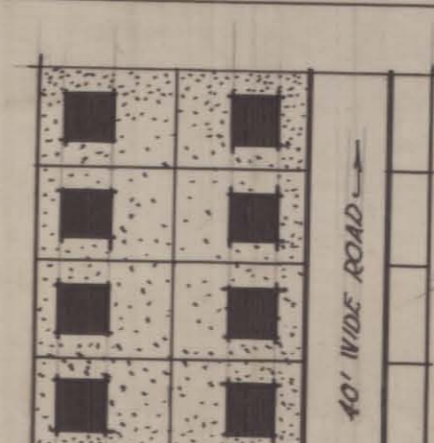
#### OBSERVATIONS.

GENERALLY: WITH A CONSTANT FLOOR SPACE INDEX DENSITY IS FIXED FOR VARIOUS UNIT TYPES, COVERAGE IS REDUCED WHEN NUMBER OF STOREYS ARE INCREASED. CORNER PLOTS HAVE GREATER COVERAGE AS ROAD AREA IS INCREASED.  
CASE 1 & 2. ARE REASONABLE BUT OTHER CASES ARE TOO RIGIDLY CONTROLLED, ESPECIALLY CASE 5.  
THIS IS ONLY A DIAGRAMATIC ILLUSTRATION TO SHOW WAYS, THAT A FIXED FLOOR INDEX, EFFECTS VARIOUS TYPES OF LAYOUT. THE PROPER APPLICATION IS SEEN ON PLATE BRA/K/ IN ADDITION IT IS VERY USEFUL IN COMPARING DIFFERENT DENSITIES IN AN EASY & RAPID METHOD.

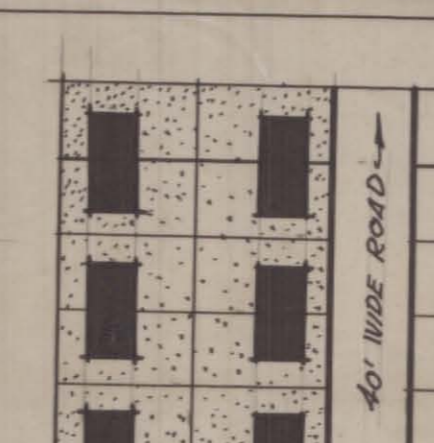
SCALE: 1 INCH = 100 FT. EACH SQUARE = 1 ACRE.

#### DEVELOPMENT CONTROL BY CONSTANT FLOOR SPACE INDEX.

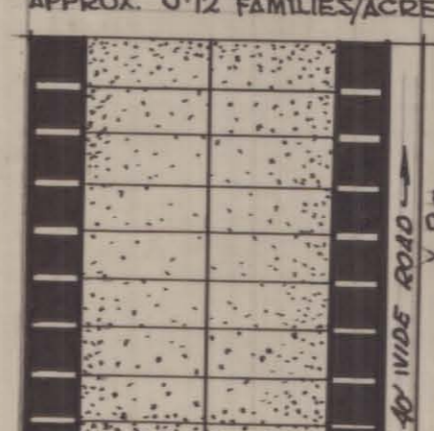
PLATE NUMBER BRA/K/



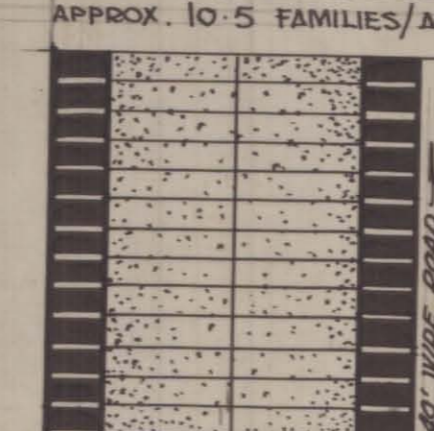
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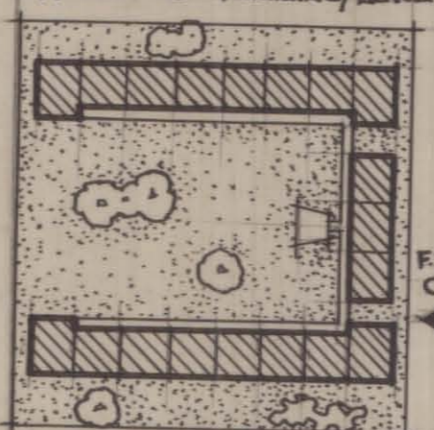
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#### SYSTEM.

BY OBSERVING F.S.I. ON SEVERAL LAYOUTS THE INDEX MOST SUITABLE TO EACH TYPE WAS SELECTED, SO THAT SIMILAR CONDITIONS COULD BE REPEATED. EACH TYPE OF HOUSING HAVING A DIFFERENT INDEX, TO OBTAIN THE BEST RESULTS IN EACH CASE.  
INDEX DETACHED. 0.1333  
SEMI-DETACHED. 0.167  
SINGLE STOREY ROW. 0.215  
DOUBLE STOREY ROW. 0.455  
FLATS 3 STOREY. 0.83

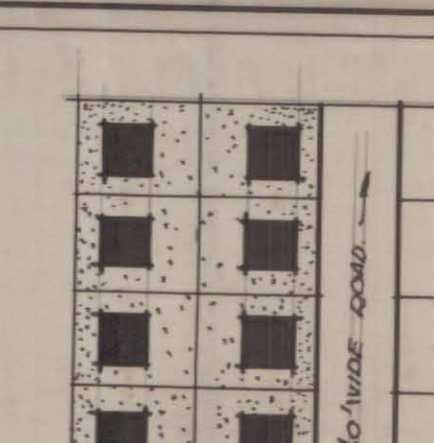
#### OBSERVATIONS.

FLOOR SPACE INDEX ALLOWS DESIGNED FREEDOM YET MAINTAINS THE CORRECT AMOUNT OF OPEN SPACE WHEN THE INDEX IS CORRECTLY CHOSEN. BAD & GOOD LAYOUTS CAN BE QUICKLY COMPARED BY THEIR INDEX VALUES.  
THE ABOVE CASES ARE PURELY ARBITRARY IN THEIR INDEX SELECTION & MUCH RESEARCH MUST BE UNDERTAKEN BEFORE STANDARDS CAN BE LAID DOWN FOR SOUTH AFRICA.

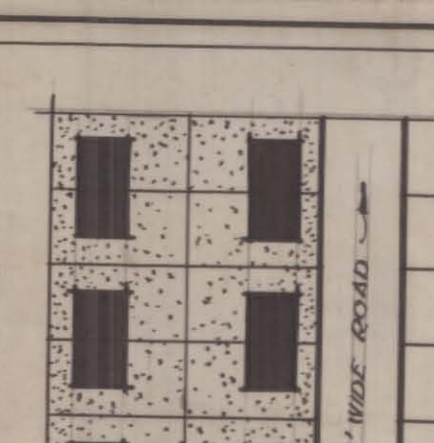
SCALE: 1 INCH = 100 FT. EACH SQUARE EQUALS 1 ACRE.

#### DEVELOPMENT CONTROL BY VARIABLE FLOOR SPACE INDEX.

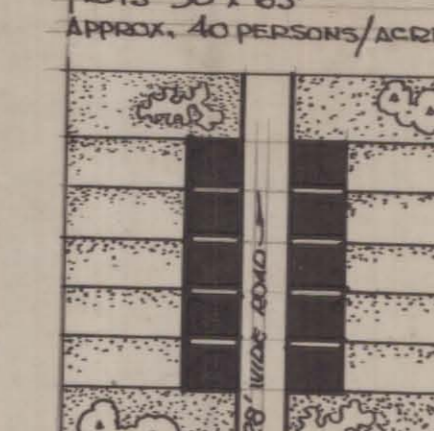
PLATE NUMBER BRA/K/



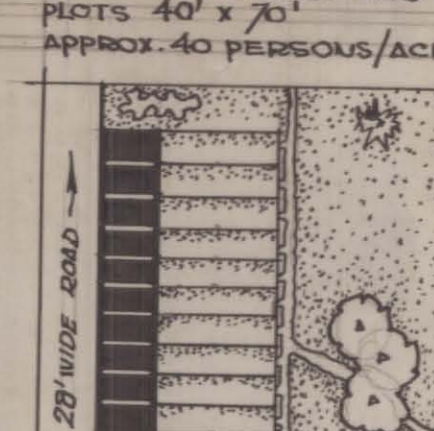
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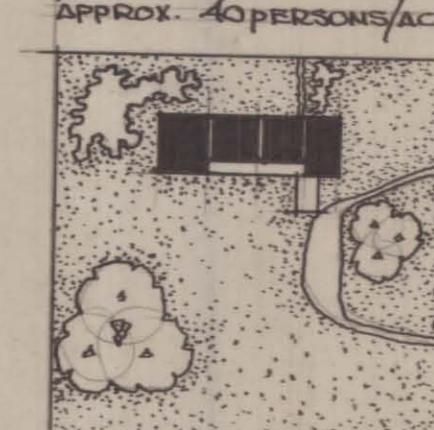
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CASE 5. THREE STOREY FLATS. 1 ACRE PLOT. COVERAGE 30%. APPROX. 57 FAMILIES/ACRE.

#### SYSTEM.

A DENSITY OF 40 PERSONS/ACRE NETT IS IMPOSED ON A LAYOUT, IF DWELLINGS ARE DESIGNED FOR FAMILIES OF 4 PERSONS THEN 10 DWELLINGS/ACRE ARE REQUIRED. THE EXAMPLES SHOW A 600 SQ. FT. UNIT IN DIFFERENT UNIT FORMS HAVING IN EACH CASE WORKED TO 10 DWELLINGS TO THE ACRE.

#### OBSERVATIONS.

GENERALLY: THIS FORM OF CONTROL GIVES THE DESIGNED FREEDOM ONLY SO FAR AS NO LIMITATIONS ARE IMPOSED UPON HIM WITH REGARD TO TYPE OF UNITS. (IN NON-EUROPEAN HOUSING WHERE SINGLE STOREY DETACHED & SEMI-DETACHED UNITS ARE USED THE DESIGNER, IN THE CASE OF HIGH DENSITIES, HAS HIS HANDS TIED IF HE CANNOT RELIEVE THE CONGESTION OF DWELLING SPRAWL BY THE INTRODUCTION OF ROW HOUSES & FLATS.)  
ONE FURTHER POINT TO NOTE IS THE FACT THAT A LAYOUT CAN BE DESIGNED FOR A PARTICULAR DENSITY, BUT WITHOUT CONTROL DURING OCCUPATION OF DWELLINGS OVER-CROWDING CAN EASILY DEVELOP FROM (A) LODGERS BEING ACCOMMODATED IN FAMILY DWELLING & (B) LARGE FAMILY OCCUPYING DWELLING DESIGNED FOR SMALL FAMILY UNIT (CAUSED BY LOWER RENTAL OF SMALLER UNIT).  
SCALE: 1 INCH = 100 FT. EACH SQUARE = 1 ACRE.

#### DEVELOPMENT CONTROL BY CONSTANT DENSITY: - NUMBER OF PERSONS/ACRE, NETT.

PLATE NUMBER BRA/K/

BRA/V/508.

BRV 508

DEVELOPMENT CONTROL BY CONSTANT DEVELOPMENT CONTROL BY VARIABLE  
PLATE  
BRA/V/508  
D.M. CALDERWOOD  
655 X 685