

RECONSIDERING THE DREAM: TOWARDS A MORPHOLOGY FOR A MIXED DENSITY BLOCK STRUCTURE IN SUBURBIA

PART 3: POSITING A NEW PARADIGM

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For :
The Centre for Future Studies in Housing and Living Environments

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RECONSIDERING THE DREAM: towards a morphology for a mixed density block structure in suburbia

PART 3: Positing a New Paradigm

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RECONSIDERING THE DREAM

1.0 EXECUTIVE SUMMARY

1.1 Background

Prompted in part by nascent environmental, economic, and societal considerations, various critiques have been advanced which have suggested the desirability of a fundamental reassessment of the principal tenets founding the contemporaneous North American suburban planning model. While there exists no absolute consensus, it is generally agreed that the ubiquitous, land-consumptive, use-segregated, predominately low density postwar suburban morphology is no longer tenable.

1.2 Mandate

As Resident in the Centre for Future Studies in Housing and Living Environments at CMHC, Ian MacBurnie has recently concluded a comprehensive three-part investigation of the state of the North American suburb.

The first segment involved a review and analysis of multidisciplinary literature pertaining to key periods, seminal projects, and provocative ideas in the transformation of suburbia, focusing upon the interval from the industrial era until the present day, and highlighting *avant-garde* planning and development trends. It was undertaken to better comprehend suburbia in terms of its revolutionary past, evolutionary present, and theoretical future.

The second aspect, intended to elucidate and articulate contemporary design and development practices in the selected jurisdiction of Mississauga, Ontario, involved the conducting of round table discussions, to which were invited to participate prominent architects, planners, developers, lawyers, as well as representatives of community groups and the public sector, who were active in the design, development, and/or regulation of suburbia.

The third part of the study attempted to synthesize appropriate aspects of these practices with round table recommendations, and to incorporate these ideas with appropriate historical as well as contemporary projects, such as the Traditional Neighbourhood Development (TND) and the Pedestrian

Pocket strategies, in the postulation of an alternative architectural and planning paradigm, one aimed at redirecting the nature of development on the metropolitan periphery.

1.3 Objectives

The literature review, analysis, and round table discussions highlighted the fact that the contemporary (pre *avant-garde*) suburban planning model, while once relevant, no longer adequately responds to the needs and aspirations of a majority of the population. Suburbia's continued predilection for the single family detached house, even though it now situates it in a more complex environment, and its attendant proscriptive planning bias, ensured that four essential conditions necessary for long term community viability, those of affordability, diversity, flexibility, and choice, were lacking.

The principal objective, therefore, was to articulate a new planning strategy which, while not rejecting the single family detached house *per se*, sought to incorporate it as part of a revised form of lower density block structure, and to employ this new structure as the primary building block of an alternative paradigm. The alternative, in addition to offering greater affordability, diversity, flexibility, and choice, was to be founded upon the following intentions: less doctrinaire zoning ordinances and regulatory controls, decreased automobile dependence through the relaxation of rigidly hierarchical traffic planning models and the provision of an efficient collective transport network, community compactness, increased residential density and mixed-use facilities provided in a range of urbane low and medium rise building typologies, and a dramatic increase in the quality and quantity of open space. The alternative concept was to be "*tested*" on a greenfield, secondary planning district site in west-end Mississauga.

1.4 Concept

The holistic reconsideration of contemporary North American suburbia resulted in the positing of a new paradigm for a community plan which responds to the aforementioned objectives; in the process, it has generated a model which has both regional and local implications. The strategy involves the creation of a series of finitely bounded, collective transit-oriented precincts, each of which is referred to as a

"Metropolitan Purlieu".

The purlieu, a pedestrian-friendly neighbourhood of approximately 60 hectares, provides residential accommodation for 2800 housing units and a population of approximately 7000, as well as local employment opportunities for 3000. Contextually relevant, purlieux are designed to be readily accommodated within the traditional line and concession grid pattern of rural southwestern Ontario.

Development is clustered into limited areas, enabling Metropolitan Purlieu communities to be separated, one from the next, by a network of broad, linear, nature/recreational/institutional park belts.

Each 1000 x 600 metre purlieu is designed to accommodate a wide range of housing typologies, these are organized in the form of a linear *"donut"*.

At the periphery of the donut are belts containing higher density residential, main street commercial, and techno-industrial facilities; at the centre, a new type of designation: that of the mixed density pocket. This innovative classification is intended to *"operate"*, in a novel and dynamic fashion: a variety of lot and house types are permitted to be offered by builder/developers along streets situated in the designation; house types would include single family detached, semi-detached, duplex, and walk-up apartment buildings. Built into the idea of the mixed density pocket is the idea of *"transformation"*. Therefore, the individual lots of which a pocket is comprised would not be *"end-run"* propositions, but rather something which would evolve over time. As part of the concept, there would exist the possibility of subdividing the largest of the lot types into as many as four smaller lots. Within the pocket, residences are designed to accommodate separately-accessed apartments, and street-related workshop/offices. Residences are designed to respond to *"temporal"* conditions, enabling expansion, contraction, and conversion. A simplified regulatory control process would be implemented which would enable both builders and homeowners to readily adapt to evolving demographic or market circumstances.

1.5 Product

The Metropolitan Purlieu concept has been prepared for review in documentary, diagrammatic, and model form. It is to be presented and exhibited at the annual Canadian Institute of Planners conference

to be held in London, Ontario, during the month of June, 1992.

RECONSIDERING THE DREAM

2.0 INTRODUCTION

Part 3 of the tripartite study entitled "Reconsidering the Dream: towards a mixed density block structure for suburbia" has three principal objectives: the first is to summarize and draw conclusions from the literature review and analysis previously undertaken and submitted in draft version as Part 1; the second is to summarize the salient aspects of the two round table discussion sessions conducted at the Central Library of the Mississauga Civic Centre; the third is to present the alternative model or "*new paradigm*", which has been derived as a result of the above-mentioned investigations and discussions, been objectified by a synthesization of relevant components of historical, contemporaneous, and avant-garde planning models, and been complemented by original design conception.

RECONSIDERING THE DREAM

3.0 LITERATURE REVIEW: a summary and conclusions

The literature review and analyses undertaken in Part 1 of the tripartite study provided insight into the ideology and practices operative in contemporary North American suburbia.

A central premise of the investigation was to determine whether there existed the potential for creating a new form of suburban block structure, one which would be predicated on the derivation of a "*mixed density*" land use typology intended to supplant existing low density designations, and one which would be utilized as the centrepiece of a new suburban planning model.

In light of this hypothesis, much of the literature focused upon two central themes: an investigation into the origins and evolution of suburbia, and the concomitant role and impact of the single family dwelling. Revealed, amongst other aspects, were the direct and indirect linkages between the current nature of development on the metropolitan periphery, and its historical antecedents. Disclosed, as well, was the complexity, encodedness, and intrinsic functionality founding contemporary suburbia's deceptively straightforward plan.

Finally, as a principal objective of Part 1 of the study was to set out a theoretical framework for the positing of both a mixed density block structure and an alternative planning model, the review presented and analyzed two of the most significant of the recent reconsiderations of the post-war suburban model, those of the Traditional Neighbourhood Development (TND), and the Pedestrian Pocket.

For the purposes of this summary, the most salient findings of the literature review and its assessment of the modern North American suburb will be presented in one of three principal classifications, categories as originally conceived by Professor Valerio Rynnimeri of the University of Waterloo School of Architecture, those of: Nature, Infrastructure, and Property, and referred to by the acronym NIP.

3.1 Nature

The literature review and analyses considered the evolved and evolving relationship between nature

and habitat on the metropolitan periphery, examining this from socio-cultural, environmental, and physical planning perspectives.

The review revealed the long-term diminution in importance of "*nature*" as a principal structuring component in the conception of greenfield developments. While many "*seminal*" projects were predicated upon a harmonious interaction between nature and habitat (i.e., Hampstead Garden Suburb, Riverside), the vast majority of post-war suburban developments replaced the idea of "*nature*" with the more banal and readily achievable idea of "*open space*". Nature, which was originally intended to be omnipresent, and to be comprised of both wild and tamed elements, was generally usurped by the much more limited concept of open space, a stipulated, minimal quantity of land which was to be the locus of predominately active recreational uses.

In Ontario, while the advent of "*environmental*" planning has required subdivision developers to conserve significant woodlots and other landscape features, a holistic attitude towards the "*country*" is absent. Effectively, there exists no legislation to dissuade developers from planning large-scale subdivisions which are essentially predicated on a *tabula-rasa* approach to the rural landscape. Except for non-binding urban design guidelines, there currently exists no mechanism by which a municipality or region could consistently, as a matter of policy, coerce developers into preparing secondary or subdivision plans which approach development from a "*layered*" perspective, a design approach which attempts to retain a site's intrinsic qualities while it is being overlain, in an additive way, with new functions.

Under current practice, as metropolitan greenfield sites are transformed for residential, commercial, or industrial uses, nature becomes vestigial at best. At worst, nature's surrogate, open space, instead of being utilized as a means to structure and define a community, is frequently regarded as one of the least important design criteria. A review of recently approved (post-1970) secondary plans for "*greenfield*" districts in Mississauga amply demonstrates the proclivity by the designers and developers of suburbia to relegate open space to residual, otherwise "*valueless*" property.

In summary, the literature review and analysis highlighted concerns for nature with respect either to its outright absence or to its marginalization and impoverishment. With respect to open space and the

landscape in general, the review focused upon concerns of the loss of "*collective memory*", about the quantity of open space required in subdivision plans (deemed to be minimal), about the character and quality of lands so designated, as well as about possible environmental implications of such an attitude. The TND and Pedestrian Pocket strategies both attempted to address questions about the type, character, quality, and quantity of open space. TND and Pedestrian Pocket strategies both sought to provide a greater range of open space types, from civic public space, for example town squares, to passive neighbourhood parks, situated as focal points and primary structuring elements within their precincts. Both the TND and Pedestrian Pocket strategies attempted to address open space at the regional level either through an encouragement of the provision of "*green belts*" between developments (TND), or through the establishment of limits to community size with surrounding land being reserved for "*green*" purposes in a precinct's hinterland (Pedestrian Pocket). Neither the TND nor the Pedestrian Pocket strategy is founded upon the principle of an "*additive*" approach to the development of the rural landscape.

3.2 Infrastructure

The literature review and analysis investigated the disposition of infrastructure, and its role as a key determinant in structuring the plan of the contemporary suburb. Highlighted were descriptions and critiques of the merits of the postwar model's hierarchical road network bias. Examined as well was the postwar model's reliance upon the automobile as the principal, if not only viable mode of transport. The review demonstrated that the current reliance upon a hierarchically planned road network was largely the result of a desire to design new communities on the metropolitan periphery which, unlike the traditional urban environments which preceded them, could be readily and easily accessed by the private automobile. Concomitantly, the hierarchical network was meant to ensure that single family detached neighbourhoods, and their residents, would be protected from the insidious aspects of the automobile's unique ubiquity (i.e., depreciated property values due to high traffic volume). Critiques of a hierarchical approach to the structuring of the road network (i.e., provision of freeway, arterial, collector, and local roads) focused upon the strategy's inherent inefficiency, particularly as experienced

in automobile-dependent Planned Unit (PUD) developments in southern California. It was illustrated that the hierarchical approach led to increased traffic congestion and increased travel miles on principal arteries, and increased travel time as traffic was routed to the periphery of primarily single family neighbourhoods, instead of being permitted to filter through them, as in traditional (pre corporately-developed) environments. While a hierarchical system, in theory, appeared to be the most "*functional*", it was demonstrated that it quickly became dysfunctional once a perimeter artery was not performing as intended (i.e., accident, road repairs).

Critiques advocated a less dogmatically structured hierarchy, one which still attempted to direct through traffic around residential communities, but one which also provided for a variety of alternative routes which passed through a community.

At the neighbourhood level, critiques engaged the hierarchy's strict separation of arterial, collector, and local roads. Criticized was this system's unnecessary duplication, inherent inefficiency, and greater expense (i.e., the creation of "*traffics sewers*"). Of concern as well, and critiqued from socio-cultural, economic, and physical planning perspectives, was the nature of a hierarchical structure which prevented "*interconnectedness*" between adjacent neighbourhoods, an approach which prompts residents to drive what otherwise would be short distances between two points made excessively distant due to the circuititious, limited access, or curvilinear road pattern. This concept was also deemed to be partially responsible for the decline of sociability in the suburbs, as unplanned encounters failed to occur as neighbours no longer interacted while walking.

From a collective transport perspective, the non-directional (curvilinear), restricted access planning of lower density neighbourhoods was considered to be the least efficient and least desirable pattern possible. However, the concept of segregated arterials and collectors, if designed to be "*directional*" and to be sufficiently densely "*populated*" along their lengths, were deemed to be advantageous for the development of an efficient collective transport network.

Finally, of concern was how a suburban development road infrastructure would be situated onto a pre-development rural landscape. Cited was the problem of scale between an existing two-lane concession road, one typically bordered by hedgerows, and a six or eight-lane arterial road, one which would of

necessity erase hedgerows and other landscape features once placed on top of the old route. In addition to concerns for the loss of collective memory caused by such an event, critiques considered the difficulty residents would encounter to safely traverse such a broad artery. In effect, such routes were considered to act as definite physical and psychological barriers between adjacent neighbourhoods, further restricting social interaction, further propagating the development of an enclave psychology.

The TND and Pedestrian Pocket strategies both reconsidered the accepted postwar practice of a doctrinaire approach to the design of road infrastructure. Within neighbourhood precincts, the TND approach was to discard the separated hierarchy concept in favour of a "*neo-traditional*" scheme, one predicated on the concept of frequent "*intersections*" occurring within a modified grid. While there were still to be collector and local road typologies, each designation was "*tamed*" through the incorporation of design features such as reduced rights-of-way, reduced paving widths, reduced turning radii, the utilization of different paving materials, the adoption of shorter block lengths, and the provision of on-street parking. Collective transport planning was not a central concern, although it could be relatively effectively accommodated, although in the TND concept, it would be doubtful whether sufficient densities could be achieved to make collective transport an efficient proposition. The Pedestrian Pocket also employed a modified grid as the primary structuring element in its design. Shorter blocks, narrower rights-of-way, on-street parking were also featured. However, the Pedestrian Pocket, intended as a bounded pedestrian precinct and local or regional employment community surrounded by reserved open space and accessed primarily by a light rail line, was not planned to be readily interconnected with communities distended from a uni-directional commuter line (i.e., it is not truly predicated on transit-oriented planning). Hence, from a road infrastructure perspective, it would, in practice, probably replicate many of the shortcomings of the conventional PUD-employed hierarchical design.

3.3 Property

The literature review and analyses considered the status of property, and its embodiment as the

singularly most important component in the plan of contemporary suburbia. Highlighted were critiques of "*neighbourhood unit*" planning, of the typology of the single family detached dwelling and its associated lot and block structure, of the "*low density*" residential zoning designation, of zoning's proscriptive bias, of the dogmatic attitude towards the separation of various density and use categories, of the relevance of "*main street*", and of the preference for zoning over comprehensive planning.

One of the dominant themes in the literature was the effort to ascertain what would be the appropriate or "*ideal*" size, in physical as well as population terms, of a community located on the metropolitan fringe. The corollary to this was the effort to determine how to "*identify*" or bound peripheral communities in order to avoid the problem of sprawl. While no absolute consensus emerged, it was evident that an ideal community would be one which had the necessary critical mass (population) so as to permit the establishment of desirable amenities (i.e., cultural, commercial, institutional), one that permitted the implementation and operation of an efficient mode of collective transport, one that enabled its residents to live as well as work within it; one that was adequately interconnected so that it could be readily traversed, one that was not overly large so as to lack a comprehensible identity, but one in which the whole was sufficiently greater than the sum of the parts. It was generally posited that the population for such a community should range anywhere from 5,000 to 15,000 residents; that there should be employment opportunities for several thousand, that there should be an identifiable "*centre*", and that the physical area should be of a size that it could be travelled on foot (i.e., a 1/4 to 1/2 mile radius, the equivalent to a five to ten-minute walk). It was also generally posited that communities should be separated one from the next by a transitional zone, one that permitted the identification of community "*edge*".

The single family detached home, while it was recognized that this was by no means the only form of residential occupancy provided for in the modern suburb, was criticized from socio-economic and physical planning perspectives. Criticized was the contemporary single-family dwelling's lack of flexibility and choice (i.e., the severe restrictions placed upon its ability to be expanded, converted, or to be modified to incorporate other functions such as home employment or a rental apartment),

problems rooted in the typology of house, lot, and block, as well as in the vagaries of the development community, and its response to the proscriptive bias of zoning, problems with short and long-term affordability, urban design deficiencies (i.e., a streetscape of cars and garage doors), wide rights-of-way, the lack of variety offered (i.e., the absence of authentic "*starter*" houses), and the inefficient use of land.

Advocated were the employment of innovative architectural and urban design solutions, a significant increase in density in single family neighbourhoods, and the relaxation and reform of an overly proscriptive regulatory framework. In terms of design, critics proposed the provision of small starter houses on small lots, dwellings types which could be modified and converted, the design of dwelling types which increased external privacy, the adoption of a street and lane block morphology based on a modified grid which would enable the provision of small apartments located above detached garages, the narrowing of rights-of-way, the movement of detached dwellings closer to the street to decrease the length of driveways and to create a greater sense of street "*definition*", and, on very narrow lots, the removal of garages and driveways to a secondary lane. Advocated as well were alternative forms of higher density accommodation which utilized lower rise and smaller footprint structures.

In terms of regulatory control, the critiques argued for the substitution of proscriptive controls with qualitative controls, such as which would consider such aspects as a dwelling's location, footprint, height, overlooking, and overshadowing.

With respect to the doctrinaire approach concerning the separation of various density and use categories, the critiques argued both for greater flexibility concerning occupation, for a more "*rational*" approach to the juxtaposition of various densities, and for a more co-ordinated approach to the implementation of urban design guidelines (i.e., as regarding height, bulk, setback, and footprint), guidelines which would also assume greater authority.

With respect to the creation of a focal point for the community, critiques either argued for the adoption of a neo-traditional pedestrian main street, for a principal town square replete with commercial and civic functions, or for a modified (tamed) version of the contemporary, automobile-oriented strip-centre dominated arterial or collector road.

The TND strategy's response to the aforementioned critiques was to promote a greater range of single family dwelling and lot types, to advocate the adoption of a street and lane morphology, the promotion of a "*scattered*" approach to the provision of apartments (i.e., to be located either in small footprint, low rise buildings adjacent to single family detached districts, or to be situated in detached garages directly in such districts), and the provision of narrower rights-of-way with individual dwellings being placed closer to the streetline.

The TND posited a less proscriptive and more "*prescriptive*" form of zoning control which employed an urban design rationale as the basis for residential footprint, setback, height, and material requirements. Although the strategy did not advocate a particular size or population for a community, it did propose that communities be separated by open space, and that each have either a main street or town square. It also did not stipulate that local employment should be provided for.

The Pedestrian Pocket strategy was premised upon the establishment of a community of specific size and population (an approximately 5,000 resident population, a 50 to 100-acre maximum area, and local and regional employment for approximately 3,000) separated from other communities by a reserved green belt.

The Pedestrian Pocket proposed a range of residential dwelling typologies, the majority of which were to be low rise, higher density. The single family detached house was marginalized and in general not incorporated as the principal component of the community's plan. Like the TND, the Pocket advocated narrower rights-of-way and residences moved closer to the street line. A commercial/civic square was proposed as the focal point for each community, to be situated adjacent to the light rail transit station. The Pedestrian Pocket proposed less proscriptive zoning ordinances, suggesting that the emphasis should be placed on creating a quality urban design. Unlike the TND, it did not propose aesthetic nor overtly prescriptive controls in its urban design guidelines.

3.4 Conclusions

The literature review and analysis highlighted the contention that the contemporary suburban planning model, while once relevant, no longer adequately responds in socio-cultural and economic terms, to

the needs and aspirations of a majority of the population. Suburbia's predilection for the single family detached dwelling, and its inherently proscriptive bias, ensure that four essential conditions necessary for long-term community viability are lacking: those of affordability, diversity, flexibility, and choice.

From an environmental perspective, highlighted were the contemporary plan's dependence upon the automobile as the principal mode of transport, its proclivity towards *tabula rasa*, anti-conservation development practices, its denial of collective memory, and its inefficient use of land.

Alternative proposals to the contemporary suburban plan should attempt to address these as well as other concerns through the implementation of a plan which is predicated on: less doctrinaire zoning ordinances and regulatory controls, decreased automobile dependence through efficient, transit-oriented planning and the relaxation of rigidly hierarchical traffic planning models, community compactness, increased residential density and mixed-use facilities provided in a range of lower rise building typologies, and a dramatic increase in the quality and quantity of open space, and greater conservation of nature.

RECONSIDERING THE DREAM

4.0 ROUND TABLE DISCUSSIONS: a summary and conclusions

Part 2 of the study involved the conducting of round table discussions, the principal objectives of which were first, to engage the opinion and elicit the reaction of a representative cross section of the Mississauga community both to the literature review and analysis of contemporary suburbia, in order to ascertain its accuracy and legitimacy; second, to create a discussion about possible alternative scenarios, particularly as concerned the situation of the single family detached home and the low density zoning category; and third, to elicit reaction to the proposed alternative paradigm which was

"tested" on a greenfield site in the west-end, Churchill Meadows Secondary Plan district of Mississauga.

Invited to attend the round table discussions were representatives from both the public and private sectors, including prominent architects, planners, lawyers, developers, as well as representatives of non-profit housing and community groups, individuals and groups familiar with Mississauga, and active in the design, development, and regulation of suburbia.¹

The salient issues raised by the round table discussions are presented below in point form in two categories. The first category highlights opinions and reactions to the literature review and analysis of contemporary suburbia; the second category lists significant reactions to the proposed alternative paradigm.

LITERATURE REVIEW AND ANALYSES

- hierarchical approach to infrastructure needs to be re-examined, but not at the expense of an efficient road network
- street and lane morphology has merit but not if it means creating two qualities of life in suburbia: higher quality on the street, lower on the lane

PROPOSED ALTERNATIVE PARADIGM

- mixed density block approach versus low density single family designation has merit
- dynamic interaction of lot and residential types considered significant and workable
- convertible/expandable house types beneficial
- provide for a fourth residential type - that of a small walk-up apartment-type building

¹ A list of participants who attended the first round table is provided in Section 7, the Appendix.

- the historical rural Ontario road and concession grid should be used as the basis for an alternative planning type
- layering new development in an additive way onto the rural landscape
- concern about altering the status quo - as it has "*worked*" for many quite well
- requirement to first view the "*big picture*", before any reconsideration of the single family house type or block is contemplated
- create a new plan which permits a wide range of possibilities, which permits diversity
- concern about increasing density forcing a greater percentage of higher-density housing types for which a market was speculative
- street and lane morphology must be efficient to be viable - use of land, infrastructure, maintenance
- market apparently believes soundest investment is in large, single family detached residences, even if it is greater than what familial situation requires or finances readily permit
- juxtaposition of single family and higher density forms of housing problematic
- ability to convert residences to apartments in a single family neighbourhood if market or demographics make this desirable
- contemporary large house, narrow lot morphology cannot be readily converted - inflexible
- cul-de-sac desirable location for most single family homeowners
- contemporary plan exacerbates NIMBY attitudes as affordable housing cannot be easily "*scattered*" throughout community
- difficult to have cottage-type employment owing to zoning bylaws and house/lot types
- nostalgia for "*desirable*" Mississauga area neighbourhoods which were developed "*pre-planning*"
- provide for a mechanism by which Secondary Plan approval enables flexibility in mixed density pockets without requiring revisions
- generic pattern of development in the metropolitan periphery should be more carefully considered so that it had wider applicability
- institute a "*Recipe Book*" approach to mixed density pocket areas
- employ a "*salami*" approach to the planning of mixed density pockets - whereby streets were relatively similar in the residential typologies being offered, and end conditions varied (different typology)
- need to design subdivisions which can be transformed, in which demolition, densification can be contemplated
- concern about whether the increased density proposed for mixed density pockets was sufficient to offset increased amount of road surface and infrastructure
- scattering of affordable housing throughout community, especially in mixed density pocket, laudable
- emphasis on diversity, flexibility and choice in mixed density pockets laudable
- concern that the node or cluster approach to high density housing had given way to a linear or beltway approach
- concern about additional time and effort required to drive as a result of reliance upon a one-way, single loaded collector/arterial road network
- concern about not providing curbs and gutters along the street edge in mixed density pockets
- consensus that from an infrastructural perspective, mixed density pocket and community could adequately function

- example of evolution and change: complexity enabled in traditional (pre-planning) neighbourhoods such as the Beaches in Toronto
- acknowledgement that it was possible there existed a substantial, untapped market for alternative house/lot/community planning models
- desire for the re-introduction of starter-house types and small lots
- examples of similar starter-home and small lot projects being undertaken elsewhere, including within the Greater Toronto Area (GTA)
- desire for the relaxation of proscriptive bias of planning in single family detached neighbourhoods
- desire for a new regulatory framework which permitted greater flexibility in what developers and builders could offer on the market, and in the time it took to "*change*" existing approvals in order to respond to new or perceived market conditions
- work with existing building types (i.e., single family detached, semi-detached, townhouses, apartment buildings, strip shopping centres), but to reconsider them
- consideration of relative merits of "*controlled chaos*" approach versus status-quo approach to control
- interest expressed in undertaking a demonstration project highlighting the mixed density pocket

In conclusion, the proposed alternative paradigm met with considerable interest and critical support, especially as concerned the idea of a mixed density pocket with its dynamic approach to the configuration and operation of lot and house types.

Refinements were requested which would further clarify the mixed density pocket and alternative concept both generically and site specifically, and which would enhance the mixed density pocket's diversity and flexibility.

RECONSIDERING THE DREAM

5.0 POSITING A NEW PARADIGM

While the nature of development in Canadian suburbia has changed dramatically in the past quarter-century, so much so in fact that many edge communities in Ontario, Quebec, and British Columbia are no longer dormitory districts (thus even employment of the inherently pejorative term "*suburbia*" is understandably challenged by critics), and even though North American society has, during the same time span, evolved to such an extent that, for example, the traditional concept of the nuclear family risks becoming, or has already become, an anachronism, the "*preferred*" form of residential accommodation on the urban edge remains the single family detached home. And even though land costs in Canada's most strategic communities have debased the single family dwelling type to being little more than a townhouse with air vents, builder's will continue to produce as long as the public continues to consume. Herein lies a paradox that can only be satisfactorily comprehended following research into the socio-cultural, economic, and political processes operative in suburbia. What is needed in the Canadian context, it would appear, is an architectural and planning paradigm that not only synthesizes the most appropriate aspects of historical, contemporary, as well as vanguard models, but one which combines these with a new design strategy for lower density development in general, and for the single family detached dwelling, and its associated block structure, in particular.

5.1 The Current Lower Density Planning Paradigm

The planning type as currently manifested in such high land cost communities as Mississauga is proscriptive, hence one predicated on the twin concepts of segregation and prevention. It can be described as follows: ultra-narrow frontage and deep rectangular lots built upon with very large, two-storey, two-car garage residences placed equidistantly along wide right-of-way, crescent-shaped, cul-de-sac, or sinuously looping local roads. Such a low density residential morphology, and the regulatory controls which accompany it, defies ready accommodation of additional functions, such as a separately accessed, at-home workshop or office, and a non-basement apartment; as well, these large detached

dwellings cannot be converted to semi-detached or multiple-unit accommodation once a single family use is no longer desirable.

Where local roads meet collectors, this low density morphology abruptly confronts medium or high density nodes: spatially separate designations manifested by townhouses and/or the high rise tower or slab. Where local roads parallel collector or arterial roads, lower density neighbourhoods typically resolve variant land uses through the utilisation of reverse frontage properties, effectively rendering higher volume arteries as "*traffic sewers*". Such a morphology is inherently wasteful of a limited natural resource; it is one which produces a community in which, amongst other considerations, opportunities for social interaction and walking are constrained. In terms of "*flexibility*" and "*choice*", the current paradigm, and especially the low density, single family block morphology, has been universally criticized for being an "*end-run*" proposition, one which is overly restrictive, and excessively prescriptive.

5.2 Towards an Alternative Design Strategy

As part of the holistic reconsideration of development of the metropolitan periphery, it appeared that a key missing aspect of other investigations is the postulation of a new approach to the conception of the single family detached house, its lot, its block, the process by which it would "*function*", and its relationship to and integration with other land uses and building types.

Synthesizing relevant aspects of TND and Pedestrian Pocket planning concepts, as well as aspects of late 19th and early 20th-Century Garden City and Suburb models, in response to some of the ideals as espoused in early CIAM (Congrès International d'Architecture Moderne) congresses, and as the result of original conception, an alternative paradigm is proposed, one which has, as its basis, the incorporation of an innovative planning module: that of the "*mixed density block*".

The resultant architectural and planning model, a true hybrid, is intended to address many of the most significant concerns associated with the design, development, and regulation of urban edge communities in general, and the single family detached dwelling in particular.

RECONSIDERING THE DREAM

6.0 DESIGN CONCEPT: THE METROPOLITAN PURLIEU

As manifested in the 798-hectare west-end Mississauga planning district of Churchill Meadows, an authentic "*greenfield*" landscape, the alternative model is predicated upon the optimization of five critical conditions, those of conservation, affordability, flexibility, diversity, and choice.

It is proposed that the Churchill Meadows Secondary Plan district, one serviced on its southern flank by two stations of the proposed regional Mississauga Busway, be comprised of a series of clustered, bounded, collective transport oriented, pedestrian-sealed communities of approximately sixty hectares,

each accommodating approximately 2,800 dwelling units for some 7,000 residents, and providing local employment opportunities for some three to four thousand persons. Revamped "*neighbourhood units*", the communities plan is informed by, and can be accommodated within, the regular, historical, line and concession pattern of rural land division in southwestern Ontario.

Entitled the "*Metropolitan Purlieu*", a term derived from Old French which, according to Webster's New Dictionary and Thesaurus (1989), is described as a frequently visited neighbourhood located on the outskirts, unique in that it is of a dimension which has been determined by perambulation, a process of determining a community's size through the conducting of an official inspection on foot.

The prototypical plan, intended to "*operate*" on both a generic and site specific level, proposes peripheral development which is premised on the concept of pedestrian-friendly, transit-oriented planning. In this respect, the Churchill Meadows communities would be designed to be accessed directly by either a proposed east-west regional busway, or by an intersecting, north-south local transit network, operating along a right-of-way and forming the basis for a "*main street*" spine. Each purlieu is composed so that a majority of its residences and local based employment is situated within an acceptable five to ten-minute walking distance from a means of collective public or collective private transport.

Communities are bounded and separated in a north-south direction by a network of 300-metre wide, linear park belts, containing "*nature*" as well as local and regional recreational and institutional

infrastructure; concurrently, they are linked in a north-south direction by a narrow, linear park comprising gardens and a bicycle path. In an east-west direction, they are separated by the main street transit spine. Each community would be sufficiently populated so as to permit the provision of institutional as well as neighbourhood shopping facilities, the former of which would be located in the broad park belts, the latter of which would be situated along the main street transit spine; as well, local shopping facilities (i.e., "*corner*" stores), would be dispersed throughout the precinct.

The approximately two by four-kilometre Churchill Meadows Secondary Plan district would permit the accommodation of eight such semi-autonomous communities, for a total population of some 56,000. Individual communities would have an average density of 116 persons per hectare, while the Secondary Plan, considered as a whole, would have a density of approximately 75 persons per hectare, equivalent to that currently permitted in Mississauga. The Secondary Plan district would have sufficient population to enable development of reformulated neighbourhood shopping centres housing "*corporate*" consumerism.

Individual *purlieux* would be planned according to a regular rectilinear grid designed in a form analogous to that of a donut. Mixed-use and higher densities would be located along the periphery of the donut, adjacent to the linear parks and the main street transit spine, while newly conceived mixed density blocks would be situated in "*pockets*" at the centre. Higher density belts would comprise approximately 50 percent of dwellings; medium and mixed density belts and pockets would comprise 25% of dwellings respectively.

Arterial and collector roads would be designed as a network of one-way arteries. As a result, it would be possible to overlay new arteries on top of existing concession or line roads, as the rights-of-way widths would be compatible.

6.1 The Mixed Density Pocket

Built into the idea of the mixed density pocket is the concept of "*transformation*". Therefore, the individual lots of which a pocket is comprised would not be "*end-run*" propositions, but rather something that could evolve over time.

The residential typologies and mixed density block are founded on the principles of long-term affordability, flexibility, and choice; thus, a variety of lot types, with associated residential types, would be offered by builders to consumers. Intended to *"operate"* in a dynamic fashion, a form of *"controlled chaos"*, both builders and consumers would be able to choose from a selection of property *"options"*, including narrow front and deep lots, wide and deep lots, wide and shallow lots, and narrow and shallow lots. A builder or consumer would have the additional option to purchase a large lot, and to subdivide it into as many as four small lots. They could choose as well between a range of concomitant dwelling types, including single family detached, semi-detached, duplex, and two-storey walk-up garden apartments, each of which would be situated close to the property line in order to address narrow right-of-way, pedestrian and vehicular shared streets. These would also allow builders and consumers to select from a number of potential features, including built-in, independently street-accessed apartment units and home-based employment *"offices"* or workshops, or residences which could be easily converted to accommodate these functions, as well as dwellings which could be *"up-sized"* (expanded horizontally) or *"down-sized"*; the latter through the division of a larger home into two semi-detached or duplex units.

This *"recipe book"* approach to affordability, flexibility, and choice is intended to be attractive to as wide a spectrum of builders and consumers as possible, as well as to respond to temporal socio-cultural and economic considerations. In particular, it would seek to ensure that the provision, actual or potential, of smaller, truly affordable apartment-type units appropriate for singles or couples, younger or elderly, is *"built-in"* at the outset of the plan, as well as to ensure that these units are dispersed or *"scattered"* throughout the community.

In mixed density pockets, the narrow (14.4 metre) right-of-way streetscape would be designed to incorporate visitor parking, the installation of services, and the planting of trees, regardless of the ultimate nature of development on a particular lot. This would be accomplished through the adoption of a co-ordinated street, lot, and residence design package which would fix in advance the location of all driveways: essentially, one driveway location and width would suffice for all lot and residential types.

At the head of each mixed density block would be located a series of extra-wide corner lots, properties which would be designated so as to permit the operation of a private daycare facility.

The Metropolitan *Purlieu* is intended to be a concept that can be readily implemented, one which comprehends contemporary development practices and consumer predilections. In this spirit, therefore, instead of promoting a radical departure from conventional residential, commercial, and lot typologies, the *Purlieu* concept embraces these types, modifying them in the process. All mixed density pocket residential dwellings are premised upon standard types: single family residences are two-storey dwellings arranged to present a narrow or broad frontage to the street, and are situated so as to advantageously exploit zero-lot line, or narrow side yard, site planning practices. Duplexes and semi-detached are sited with narrow side yards, as is the walk-up garden apartment typology.

Dwellings in mixed density pockets are provided with minimal front yards, and "*conventionally-sized*" small lot backyards. Residents are expected to comprehend that the loss incurred in sacrificing an individual front lawn is offset by the advantage accrued by a substantial increase (in physical area and qualitative terms) in collective space. Mixed density pockets attain density levels approximately double that of conventional, small lot (R5) single family detached development; a density of approximately 70 units per hectare, or 27 units per acre, is attained. Site coverages range from a conventional 40 percent, to a maximum of 70 percent in the case of the garden apartment types.

Mixed density pockets would be linked in an east-west direction to the adjacent linear park and main street spine through a network of designated public pathways.

Medium, high density, and mixed-use belts are also premised on the principle of utilizing, but modifying, conventional building and lot types. Medium density belts would be comprised of two and three-storey townhouse dwellings situated on narrow lots. Individual garages would be situated to the rear of lots, accessed from a secondary street; each garage would have the potential for a small, street-accessed apartment or office/workshop. Medium density belts would either be arranged addressing "*multi-functional*" public squares, or along "*collector*" type streets. Most would be linked to other parts of the purlieu by a network of linear paths. An average density of 88 units per hectare, or 35 units per acre, would be attained.

High density and mixed-use belts are predicated on a substantial modification to the conventional building and lot types typically representative of these designations. In lieu of very large area, high density and mixed-use sites being occupied by the prototypical tower or slab-in-a-park paradigm, this designation would be modified so that a maximum lot area (approximately eighty-four metres in length by sixty metres in width) was prescribed, ensuring that the footprint of these areas was not out of scale with adjacent medium density belts and mixed density pockets. Additionally, each high density site would be separated from its adjacent property by a public pedestrian pathway. Prescribed design guidelines would be intended to ensure that the bulk, height, and footprint of residential structures in this designation were compatible with adjacent types. While the "*slab*" would not be prohibited, it would be "*controlled*" architecturally and in planning terms: its height would be restricted to ten storeys; it would be positioned so that only the narrow elevation of the building fronted onto adjacent neighbourhoods. The slab could not be sited as the only "*object building*" on a high density site alone: each site would be required to be comprised of a variety of building types. In this manipulated manner, it would be possible to attain densities of approximately 256 units per hectare, or 100 per acre, the maximum currently permitted in Mississauga, and still create a development compatible with its neighbours.

Mixed-use belts would also be premised on the utilization and modification of conventional commercial typologies, including office and retail. As with high density residential sites, mixed-use commercial properties would be controlled in terms of establishing a maximum lot area (eighty-four metres long by sixty metres deep), each which would be separated from the next by a public pedestrian pathway, as well as controlled in terms of architecture and site planning. Office developments would be able to employ the conventional tower typology; however, as with high density residential projects, towers would be restricted to a maximum of ten storeys in height. They would also be subjected to design guidelines affecting their footprint and siting. Office development sites could not be comprised of a tower-in-a-park alone, but rather, of a variety of building types.

Finally, retail developments would be restricted to the same maximum lot dimensions as office and mixed-use and high density residential. While "*strip-centres*" would be permitted, and surface parking

permitted between building and street line, design guidelines would require extensive planting and landscape features, such as low walls, to screen and "*compartmentalize*" parking. Retail sites would be sufficiently large to accommodate current "*neighbourhood commercial*" centre designations.

In a regulatory sense, the Metropolitan *Purlieu* and mixed density pocket are intended to operate on a prescriptive and "*performance*" basis (i.e., comprehensive guidelines for community development would focus on aspects of height, footprint, setback, overlooking, coverage, and, overshadowing, and would concentrate less on "*use*"). In the mixed density pocket, individual builders or developers could purchase a lot cognizant that a range of possibilities were available should market conditions change, or should they wish to experiment, without having to seek secondary plan amendments for each of the variants permitted within the designation.

Specific details of The Metropolitan *Purlieu* are listed in chart form in the accompanying Appendix, Section 7.0.

6.2 Conclusion

The proposition of a mixed density block structure as the basis for a new suburban community design morphology, while innovative, is not intended as a panacea for the multivalent problems associated with urbanization on the urban periphery. While it does address many aspects of issues associated with nature, infrastructure, and property on the urban edge, it is not intended that it address the fundamental concern that, even if radically "*improved*", in the absence of policies designed to mitigate its impact, urbanization on the fringe will continue to threaten the viability of traditional cities at the centre.

RECONSIDERING THE DREAM**7.0 APPENDIX**

NAME OF PARTICIPANT	FIRM OR GROUP REPRESENTED
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Angus McDonald	City of Mississauga
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Gillian Mason	Canadian Urban Institute
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George Dark	Berridge Lewinberg Greenberg
Frank Lewinberg	Berridge Lewinberg Greenberg
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Ian MacBurnie

Atelier Arcadia

Eva Berlin

Community Representative

Ted Blackmore

Community Representative

LIST OF DRAWINGS

The following diagrammatic representations are intended to respond to four objectives: first, at the "*micro*" level, to illustrate, in a series of comparative plans, the implications of existing Mississauga low density designation bylaw requirements, especially with respect to street morphology and house typology; second, to illustrate the alternative mixed density pocket concept, especially through a demonstration of variable lot and house types, and an illustration of the dynamic qualities of each; third, at the "*macro*" level, to illustrate the generic and regional concept as posited by the Metropolitan *Purlieu*; fourth, to illustrate a "*test*" demonstration of site-specific qualities of the design concept.

The list of drawings is as follows:

1. Mississauga Bylaw Situation

- .1 Mississauga Bylaw Plan at Collector/Arterial
- .2 Mississauga Bylaw Local Road Type
- .3 Mississauga Bylaw Lot Type
- .4 Mississauga Bylaw House Type
- .5 Regional Municipality of Ottawa/Carleton (R.M.O.C.) Reduced Norms Proposal
- .6 Superimposition of Various Residential and Lot Type Strategies

2. Mixed Density Pocket Concept

- .1 Comparison of Lot Type Strategies
- .2 Variable Lot Type Strategy
- .3 Optional Residential and Lot Types
- .4 Narrow Lot House Type Plan
- .5 Expandable Patio House Type Plan
- .6 Convertible House Type Plan

- .7 Walkup Garden Apartment Type Plan
- .8 Narrow Lot House Type Combination
- .9 Expandable Patio/Convertible House Type Combination
- .10 Engineering Services Plan

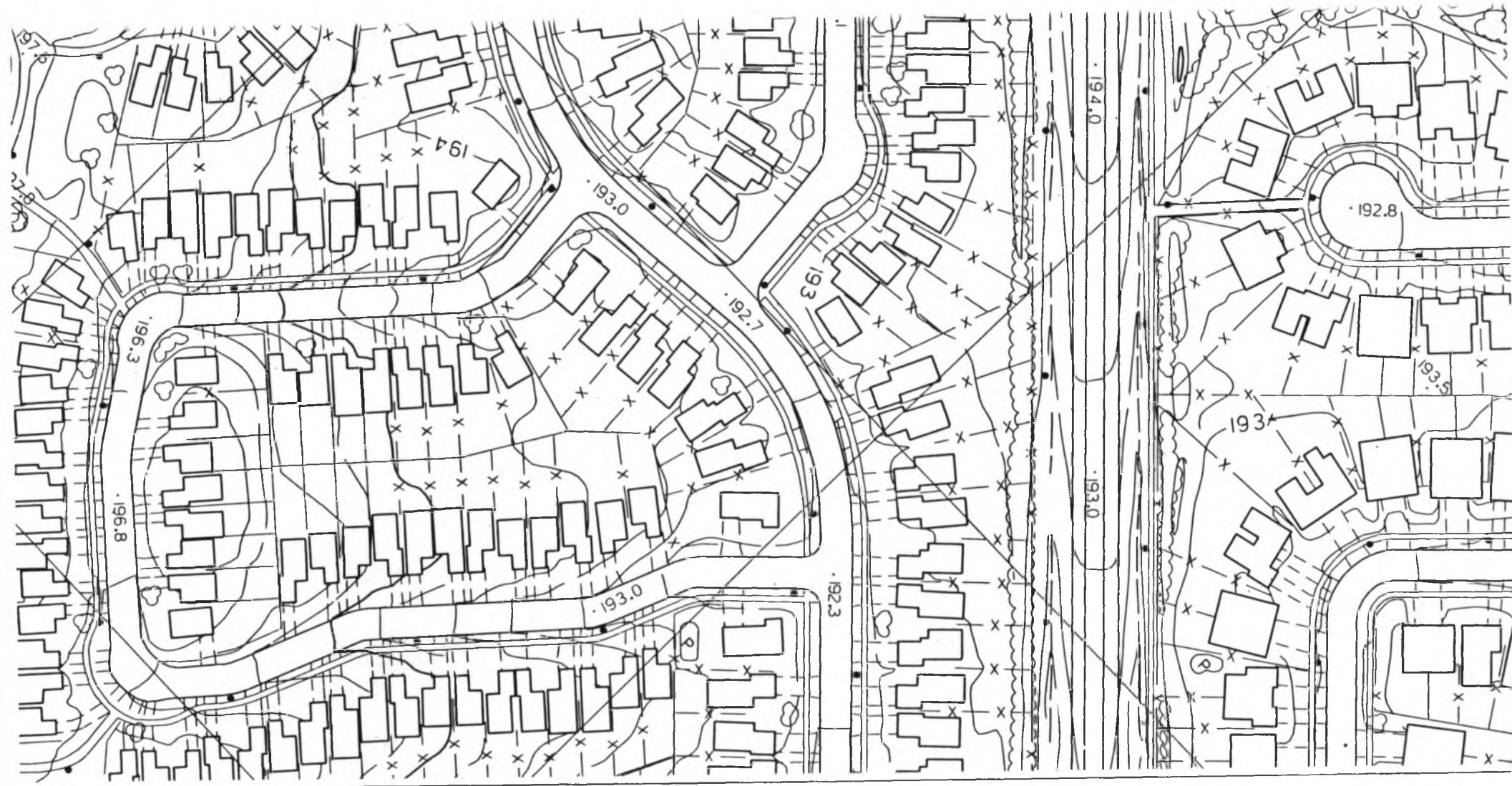
3. The Metropolitan *Purlieu* Concept

- .1 The Metropolitan Purlieu
- .2 Transit Plan at the Regional Level
- .3 The Metropolitan Purlieu at the Secondary Plan Level

4. The Metropolitan Purlieu: A Site Specific Test Case

- .1 Existing Situation
- .2 Street and Road Network Plan
- .3 Public and Private Transit Plan
- .4 Bicycle/Pedestrian/Open Space Network
- .5 Mixed-Use Belt Plan
- .6 High Density Belt Plan
- .7 Medium Density Belt Plan
- .8 Mixed Density Pocket Plan
- .9 Techno-Industry Belt Plan
- .10 Plan at Main Street
- .11 Plan at Linear Park/Mixed Density Pocket
- .12 Plan at Collector/Arterial

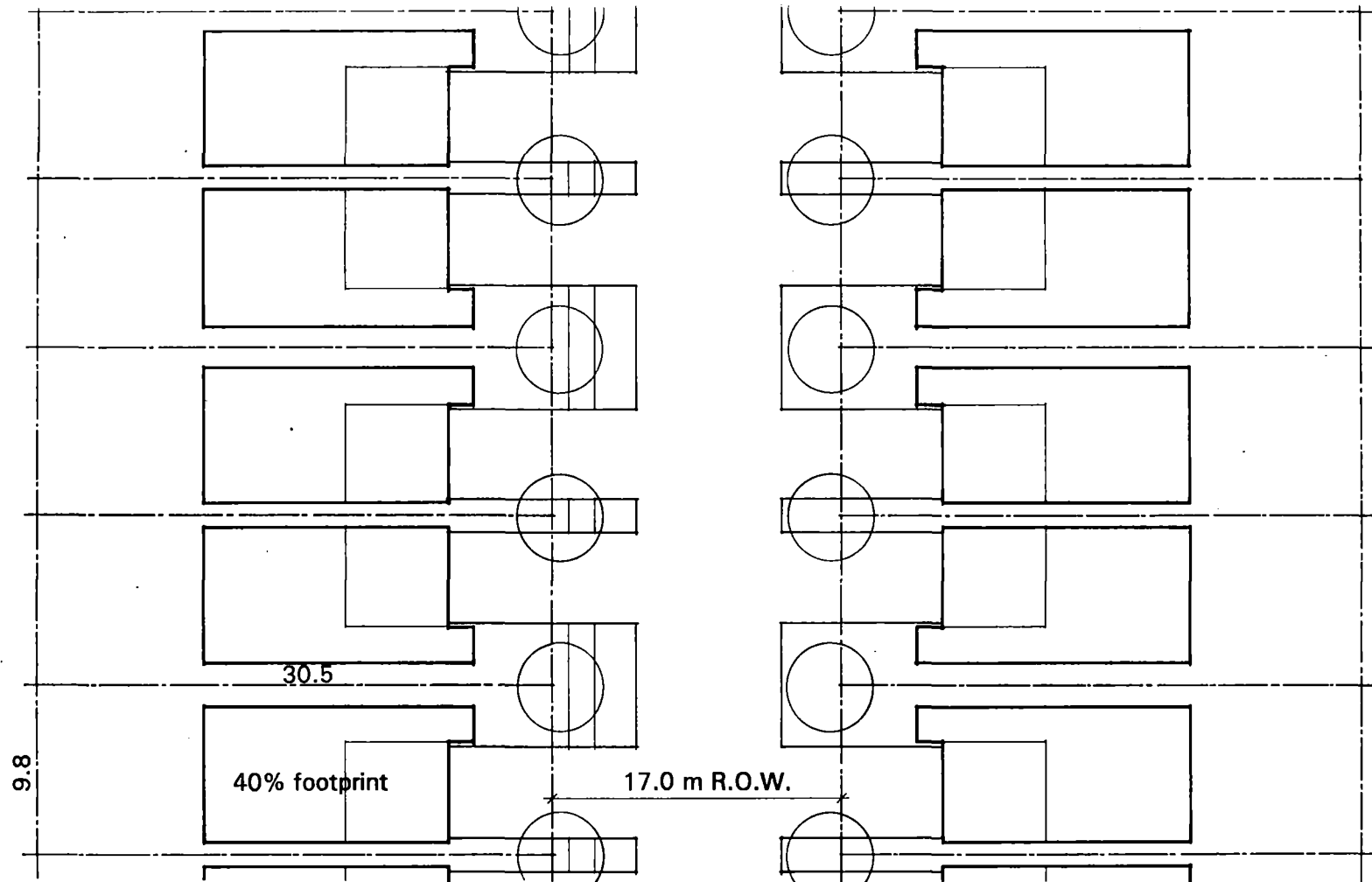
MISSISSAUGA BYLAW SITUATION



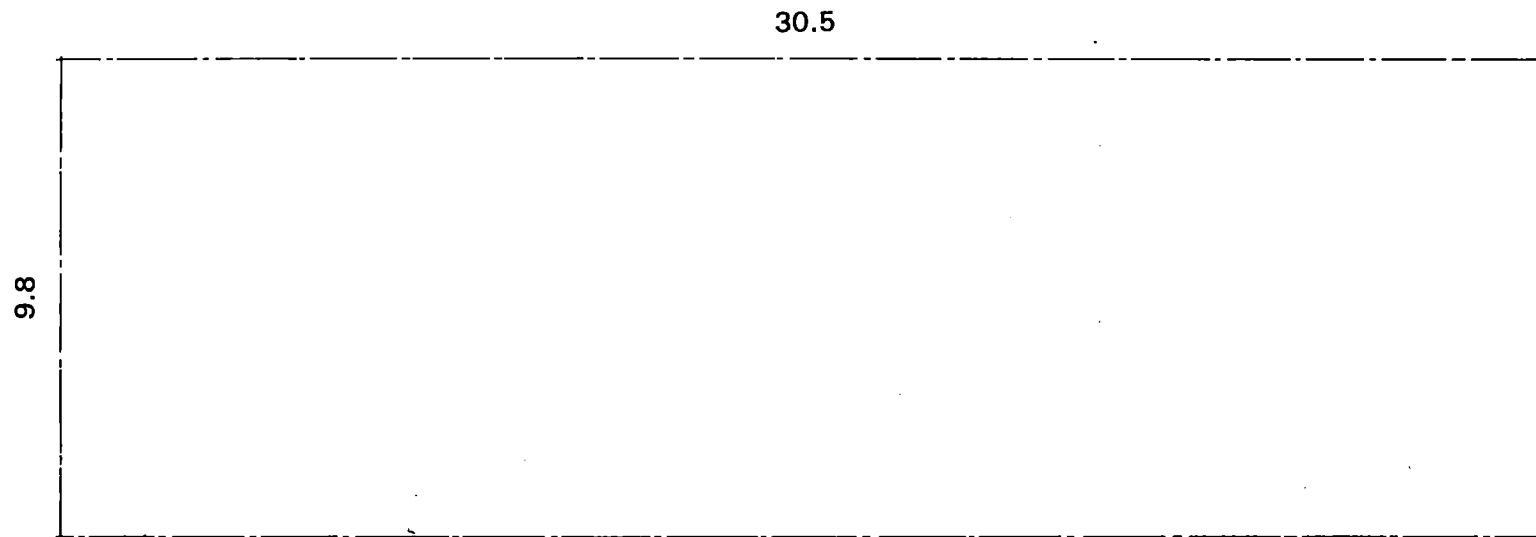
MISSISSAUGA BYLAW PLAN AT
COLLECTOR/ARTERIAL (17.0 m R.O.W.)



THE METROPOLITAN PURLIEU 1:1000

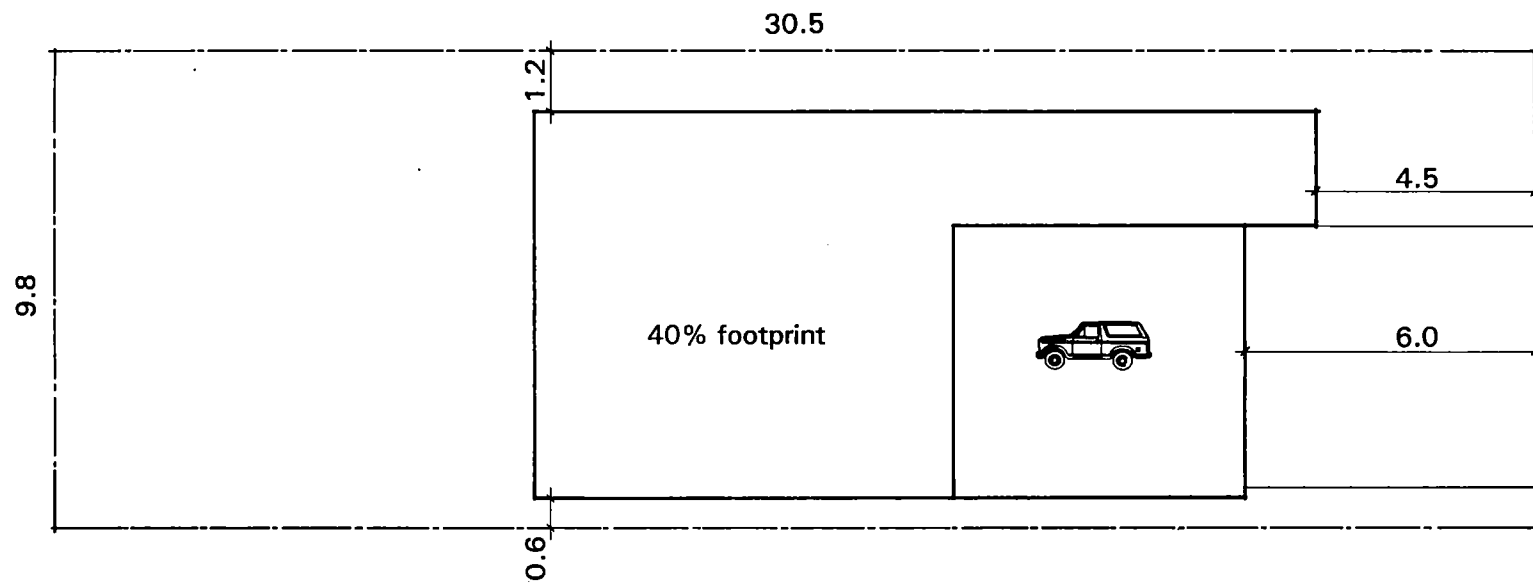


**MISSISSAUGA BYLAW LOCAL ROAD TYPE
(17.0 m R.O.W.)**

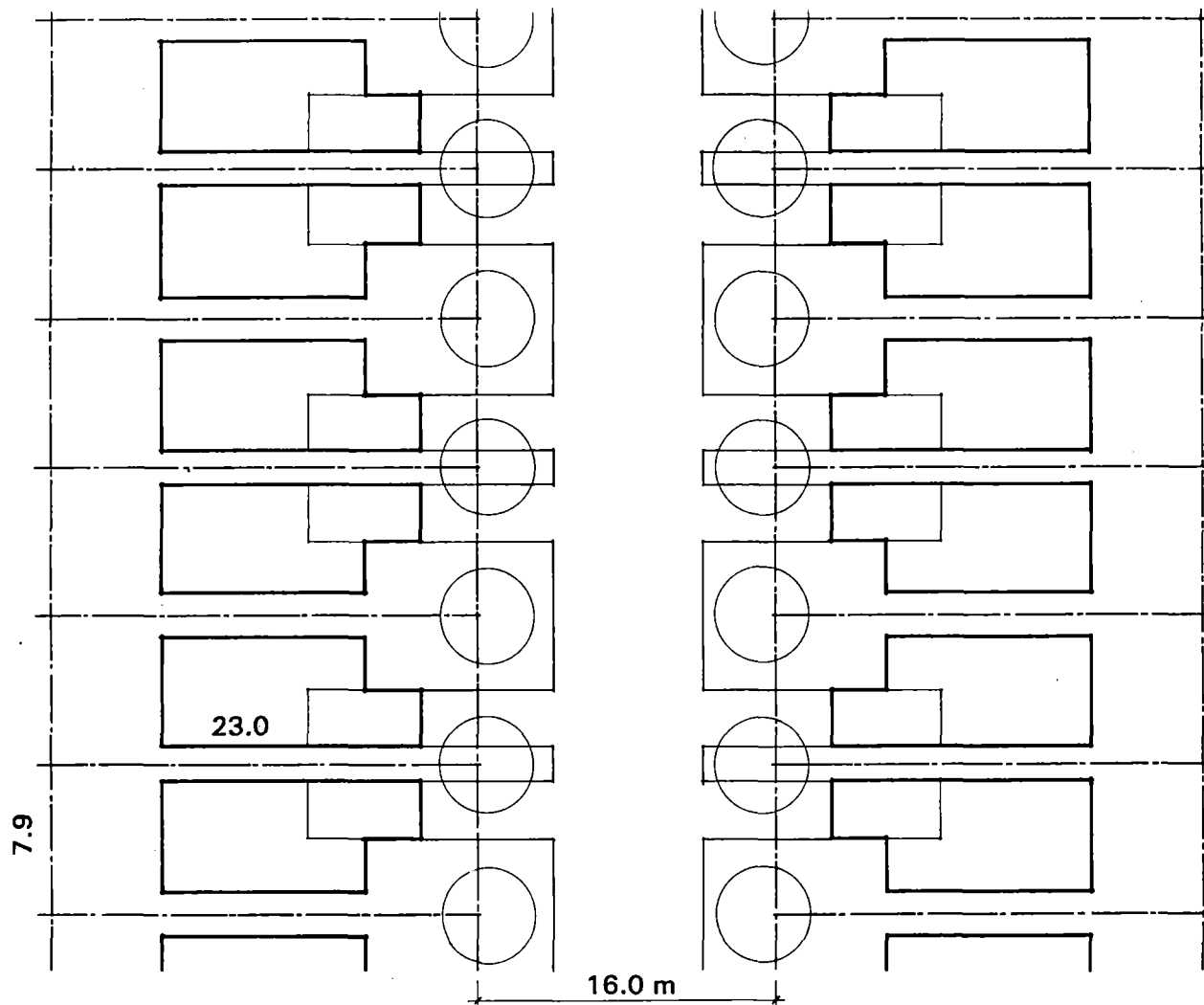


MISSISSAUGA BYLAW LOT TYPE

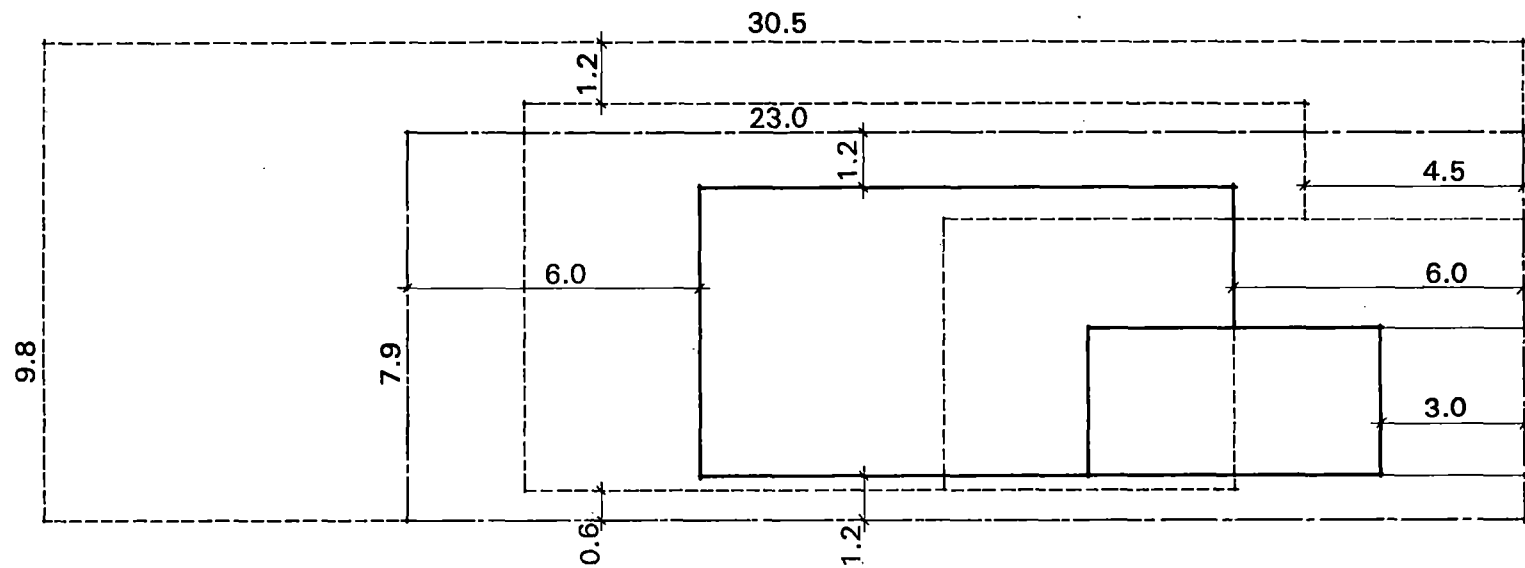
THE METROPOLITAN PURLIEU 1:100



MISSISSAUGA BYLAW HOUSE TYPE

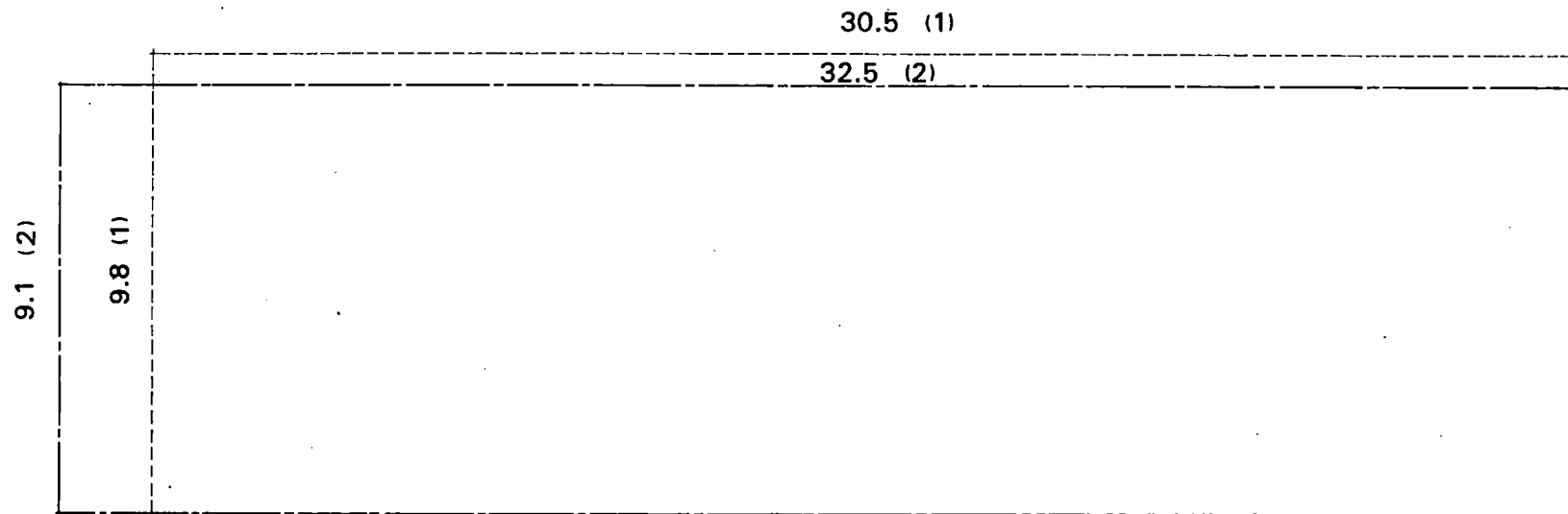


REGIONAL MUNICIPALITY OF
OTTAWA/CARLETON (R.M.O.C.) REDUCED
NORMS PROPOSAL (16.0 m R.O.W.)



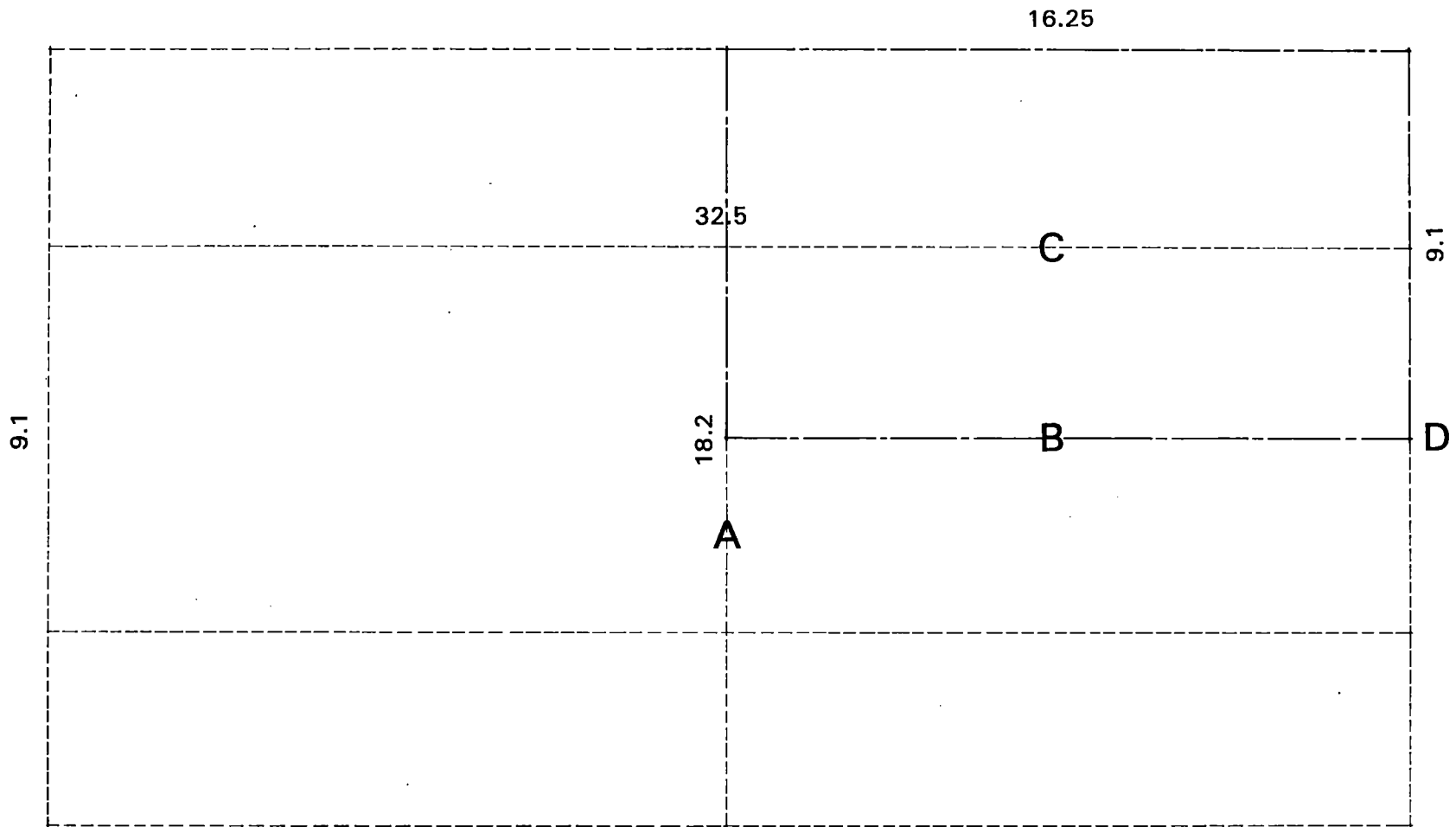
**SUPER IMPOSITION OF VARIOUS
RESIDENTIAL AND LOT TYPE STRATEGIES**

MIXED DENSITY POCKET CONCEPT



1 MISSISSAUGA BYLAW LOT TYPE
2 NARROW LOT TYPE

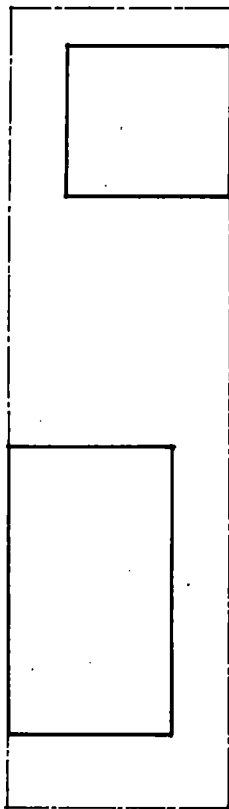
COMPARISON OF LOT TYPE STRATEGIES



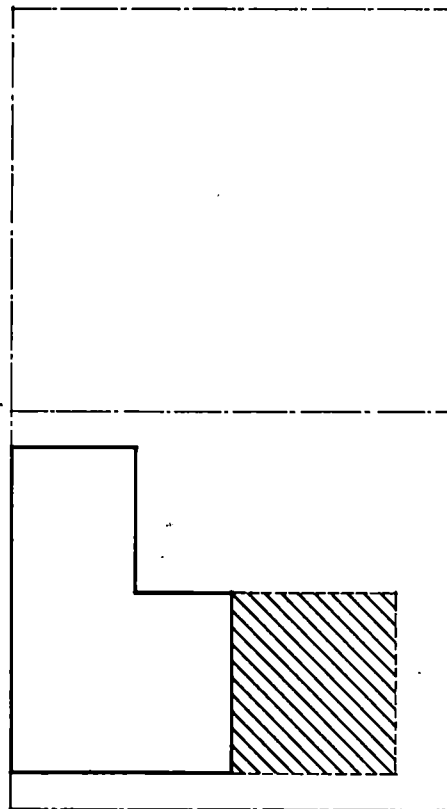
PROJECT LOT SIZE, SETBACK, COVERAGE NORMS

TYPE A : NARROW LOT	: 9.1 m x 32.5 m = 295.8 m ² (30 FT x 106 FT = 3180 SQ. FT.)
TYPE B : MINI LOT	: 18.2 m x 16.25 m = 295.8 m ² (60 FT x 53 FT = 3180 SQ. FT.)
TYPE C : MICRO LOT	: 9.1 m x 16.25 m = 147.8 m ² (30 FT x 53 FT = 1590 SQ. FT.)
TYPE D : FULL LOT	: 18.2 m x 32.5 m = 591.5 m ² (60 FT x 106 FT = 6360 SQ. FT.)

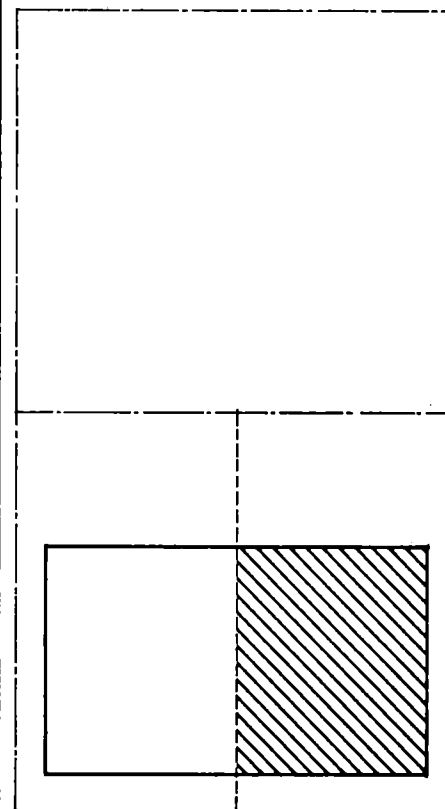
VARIABLE LOT TYPE STRATEGY



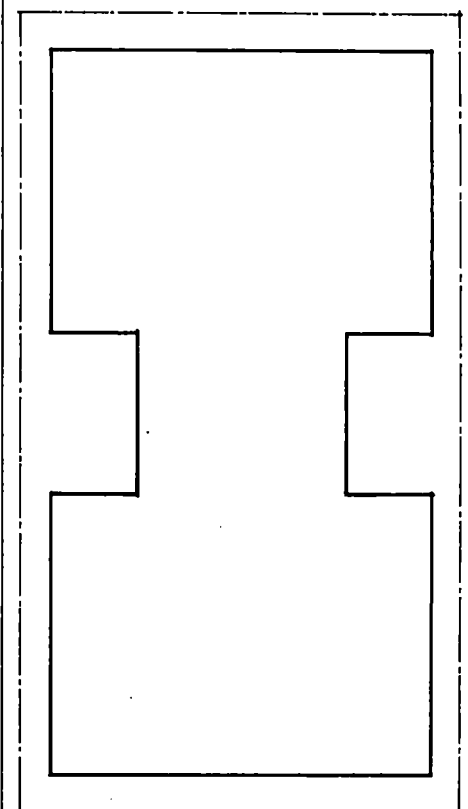
1



2



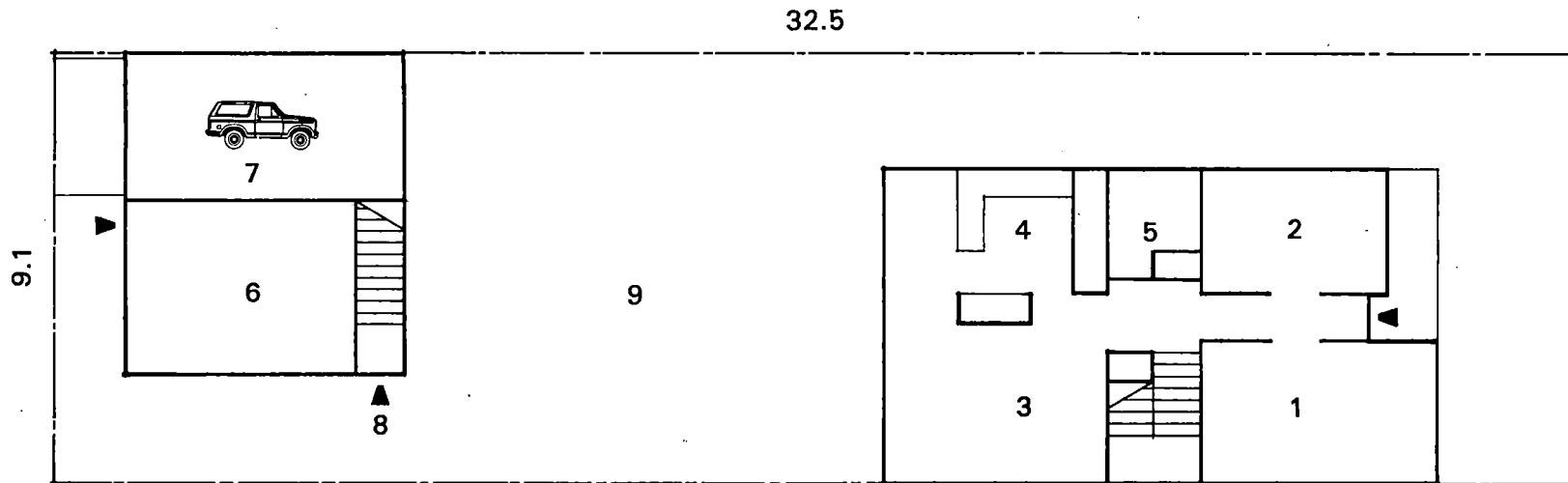
3



4

- 1 NARROW LOT HOUSE TYPE (DETACHED GARAGE)
ZERO-LOT LINE CONFIGURATION
- 2 EXPANDABLE PATIO HOUSE TYPE
ZERO-LOT LINE CONFIGURATION
- 3 CONVERTIBLE HOUSE TYPE (SINGLE, SEMI-DETACHED, DUPLEX)
- 4 WALKUP GARDEN APARTMENT TYPE (6 OR 8 UNITS)

OPTIONAL RESIDENTIAL AND LOT TYPES



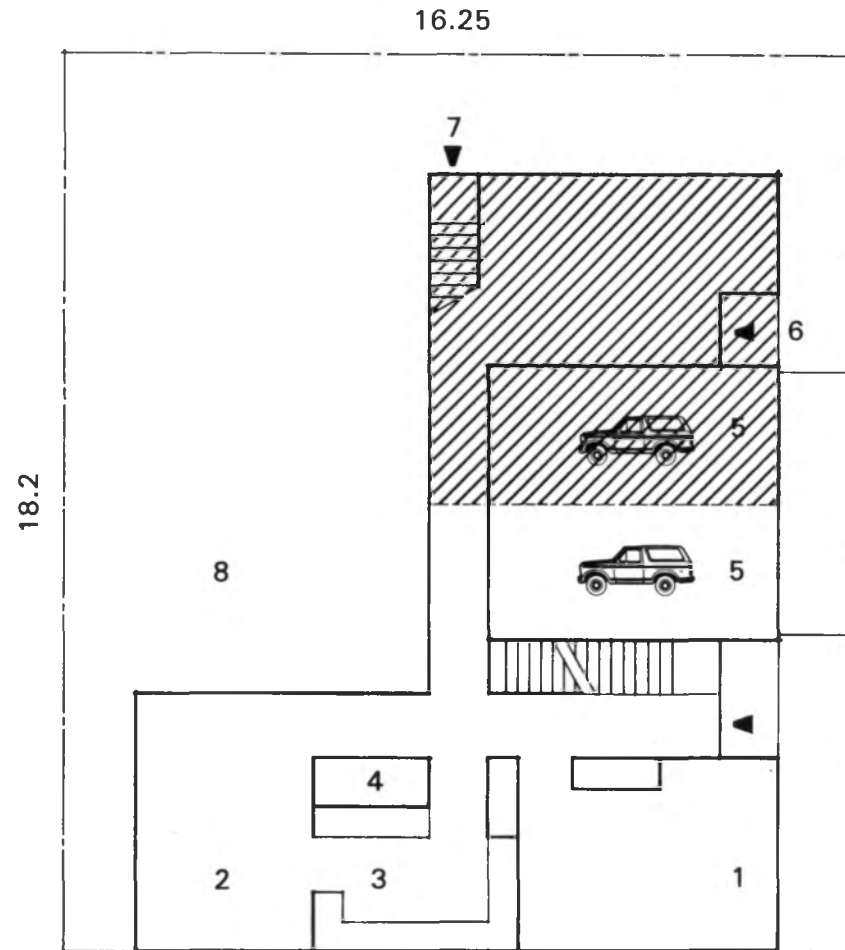
SETRACKS

MAIN HOUSE :	FRONT YARD	:	3.0 m (9.8 FT)
	SIDE YARD 1	:	2.4 m (7.9 FT)
	SIDE YARD 2	:	0 m
	REAR YARD	:	17.75 m (58 FT)
DETACHED UNIT :	FRONT YARD	:	1.5 m (4.9 FT)
	SIDE YARD 1	:	2.4 m (7.9 FT)
	SIDE YARD 2	:	0 m
	REAR YARD	:	25 m (82 FT)

- 1 LIVING
- 2 DINING
- 3 FAMILY
- 4 KITCHEN
- 5 TOILET
- 6 STREET-RELATED OFFICE
- 7 GARAGE
- 8 SEPARATELY ACCESSED SECOND FLOOR APARTMENT
- 9 GARDEN

NARROW LOT HOUSE TYPE PLAN

HOUSE AREA (INCLUDING DETACHED GARAGE AND APARTMENT) : 238 m² (2570 SQ. FT.)
SITE COVERAGE : 40 PERCENT



SETBACKS

STARTER VARIANT :	FRONT YARD	1.5 m (4.9 FT)
	SIDE YARD 1	8.1 m (26.6 FT)
	SIDE YARD 2	0 m
	REAR YARD 1	1.5 m (4.9 FT)
EXPANDED VARIANT :	FRONT YARD	1.5 m (4.9 FT)
	SIDE YARD 1	2.4 m (7.9 FT)
	SIDE YARD 2	0 m
	REAR YARD 1	1.5 m (4.9 FT)
	REAR YARD 2	7.4 m (24.2 FT)

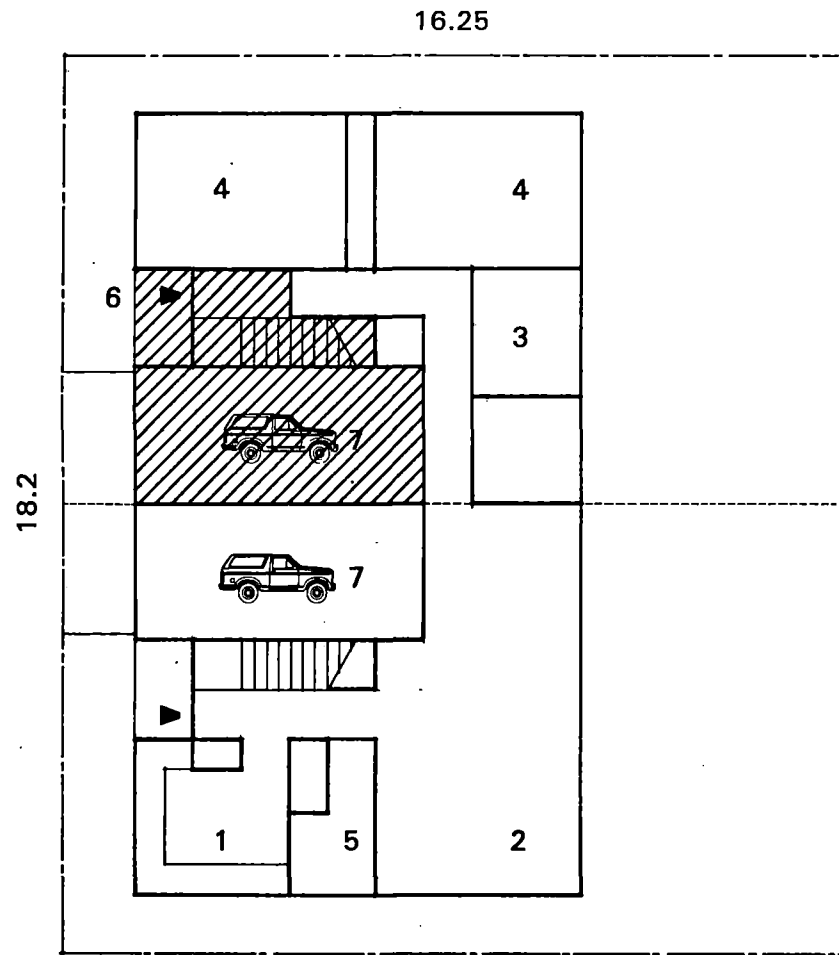
- 1 LIVING
- 2 FAMILY / DINING
- 3 KITCHEN
- 4 TOILET
- 5 GARAGE
- 6 STREET-RELATED OFFICE
- 7 SEPARATELY ACCESSED SECOND FLOOR APARTMENT
- 8 GARDEN

EXPANDABLE PATIO HOUSE TYPE PLAN

HOUSE AREA 1 (STARTER VARIANT) : 163 m² (1760 SQ. FT.)
SITE COVERAGE : 32 PERCENT

HOUSE AREA 2 (EXPANDED VARIANT) : 263 m² (2840 SQ. FT.)
SITE COVERAGE 2 : 49 PERCENT

THE METROPOLITAN PURLIEU 1:100



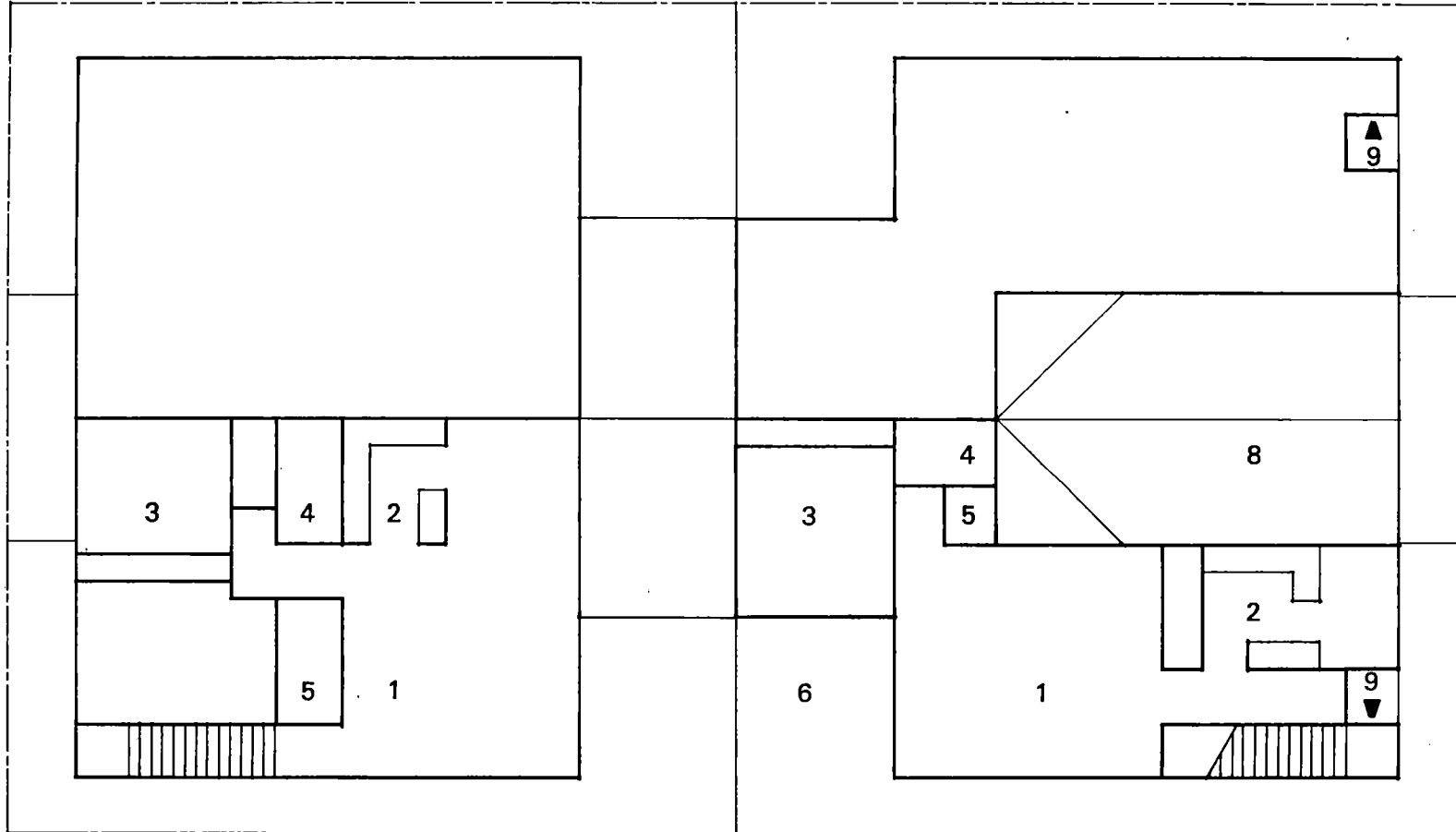
SETBACKS

SEMI DETACHED :	FRONT YARD	:	1.5 m (4.9 FT)
	SIDE YARD 1	:	1.2 m (4 FT)
	SIDE YARD 2	:	0 m
	REAR YARD	:	5.5 m (18 FT)
DUPLEX :	FRONT YARD	:	1.5 m (4.9 FT)
	SIDE YARD 1	:	1.2 m (4 FT)
	SIDE YARD 2	:	1.2 m (4 FT)
	REAR YARD	:	5.5 m (18 FT)
SINGLE FAMILY :	FRONT YARD	:	1.5 m (4.9 FT)
	SIDE YARD 1	:	1.2 m (4 FT)
	SIDE YARD 2	:	1.2 m (4 FT)
	REAR YARD	:	5.5 m (18 FT)

- 1 KITCHEN
- 2 LIVING / DINING
- 3 BATHROOM
- 4 BEDROOM
- 5 TOILET
- 6 DUPLEX
- 7 GARAGE

CONVERTIBLE HOUSE TYPE

HOUSE AREA 1 (SEMI DETACHED, 2-STOREY) : 146 m² (1576 SQ. FT.)
 SITE COVERAGE 1 : 49 PERCENT
 HOUSE AREA 2 (DUPLEX, 1-STOREY) : 146 m² (1576 SQ. FT.)
 SITE COVERAGE 2 : 49 PERCENT
 HOUSE AREA 3 (SINGLE FAMILY DETACHED, 2-STOREY) : 292 m² (3152 SQ. FT.)
 SITE COVERAGE 3 : 49 PERCENT



SETBACKS

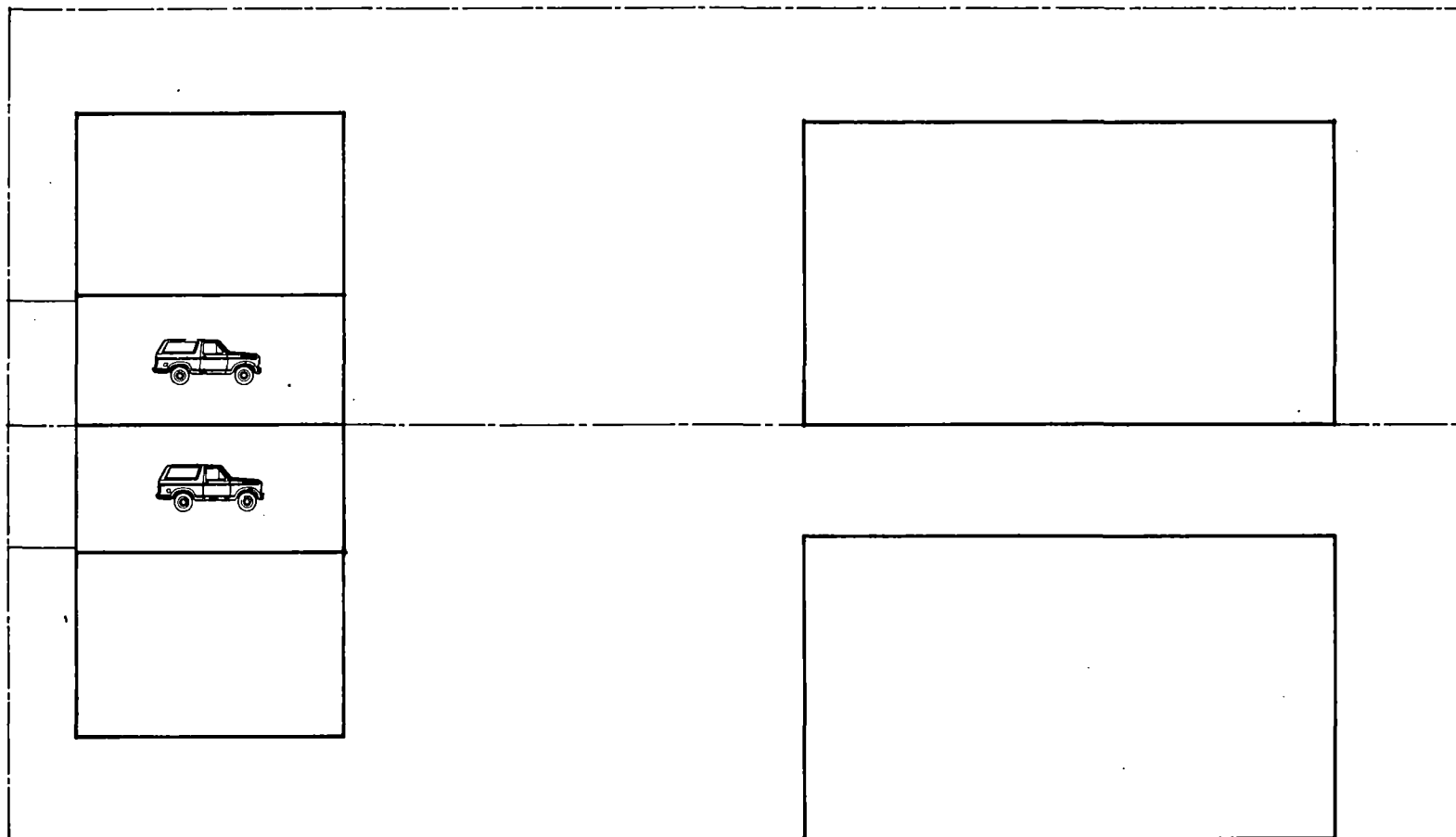
GROUND FLOOR :	FRONT YARD	:	1.5 m (4.9 FT)
	SIDE YARD 1	:	1.2 m (4 FT)
	SIDE YARD 2	:	1.2 m (4 FT)
	PATIO WELL	:	4.7 m x 7.0 m (15.4 FT x 22.9 FT)
	REAR YARD	:	1.5 m (4.9 FT)
SECOND FLOOR :	FRONT YARD	:	1.5 m (4.9 FT)
	SIDE YARD 1	:	1.2 m (4 FT)
	SIDE YARD 2	:	1.2 m (4 FT)
	PATIO WELL	:	18.2 m x 7.0 m (60 FT x 22.9 FT)
	REAR YARD	:	1.5 m (4.9 FT)

- 1 LIVING / DINING
- 2 KITCHEN
- 3 BEDROOM
- 4 BATHROOM
- 5 STORAGE
- 6 GARDEN
- 7 PATIO
- 8 RAMP TO BASEMENT GARAGE
(UNDERGROUND PARKING FOR EIGHT VEHICLES)
- 9 APARTMENT

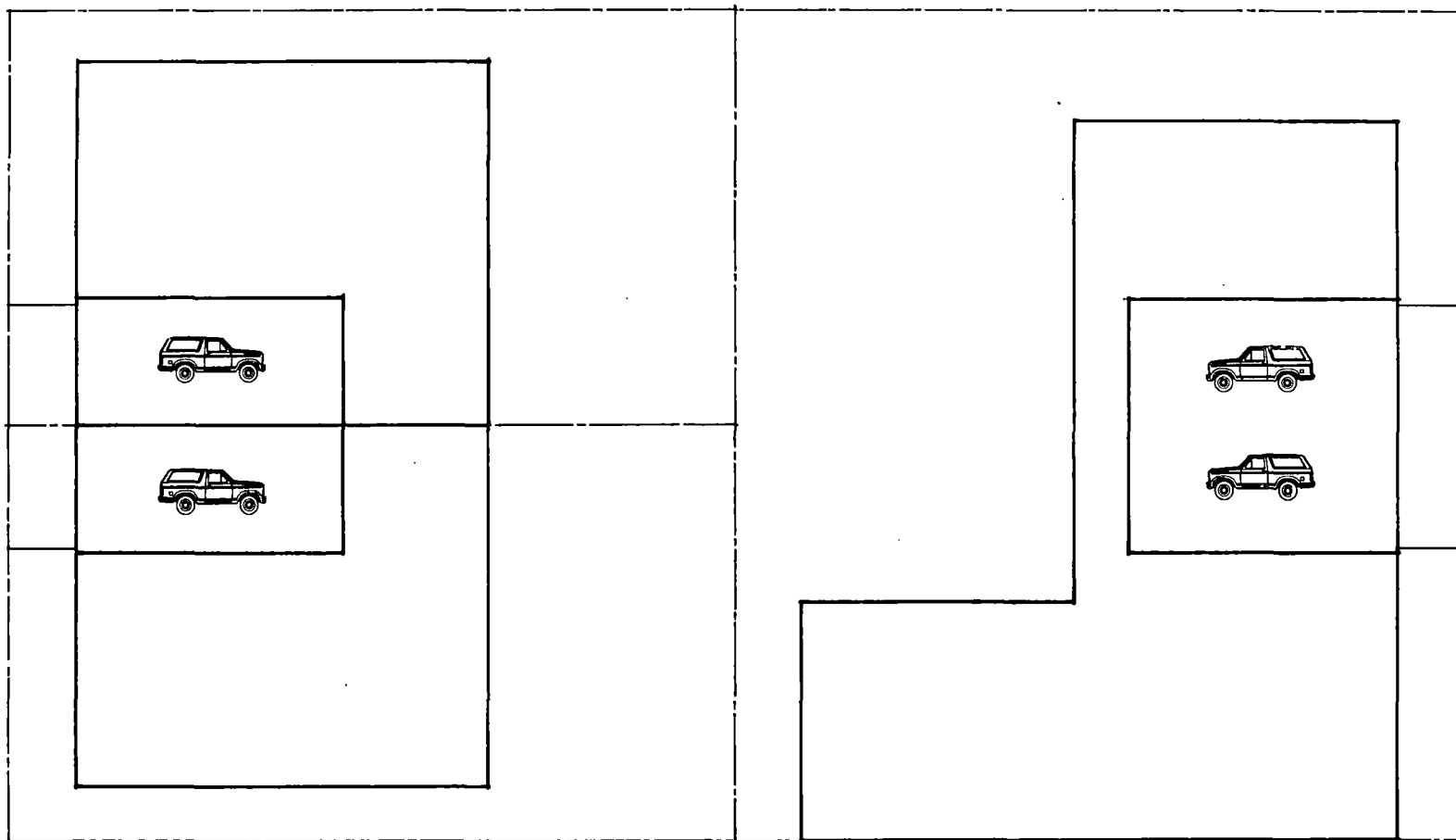
WALKUP GARDEN APARTMENT TYPE PLAN

EIGHT UNIT APARTMENT BUILDING AREA : 772 m² (8344 SQ. FT.)
SITE COVERAGE : 70 PERCENT

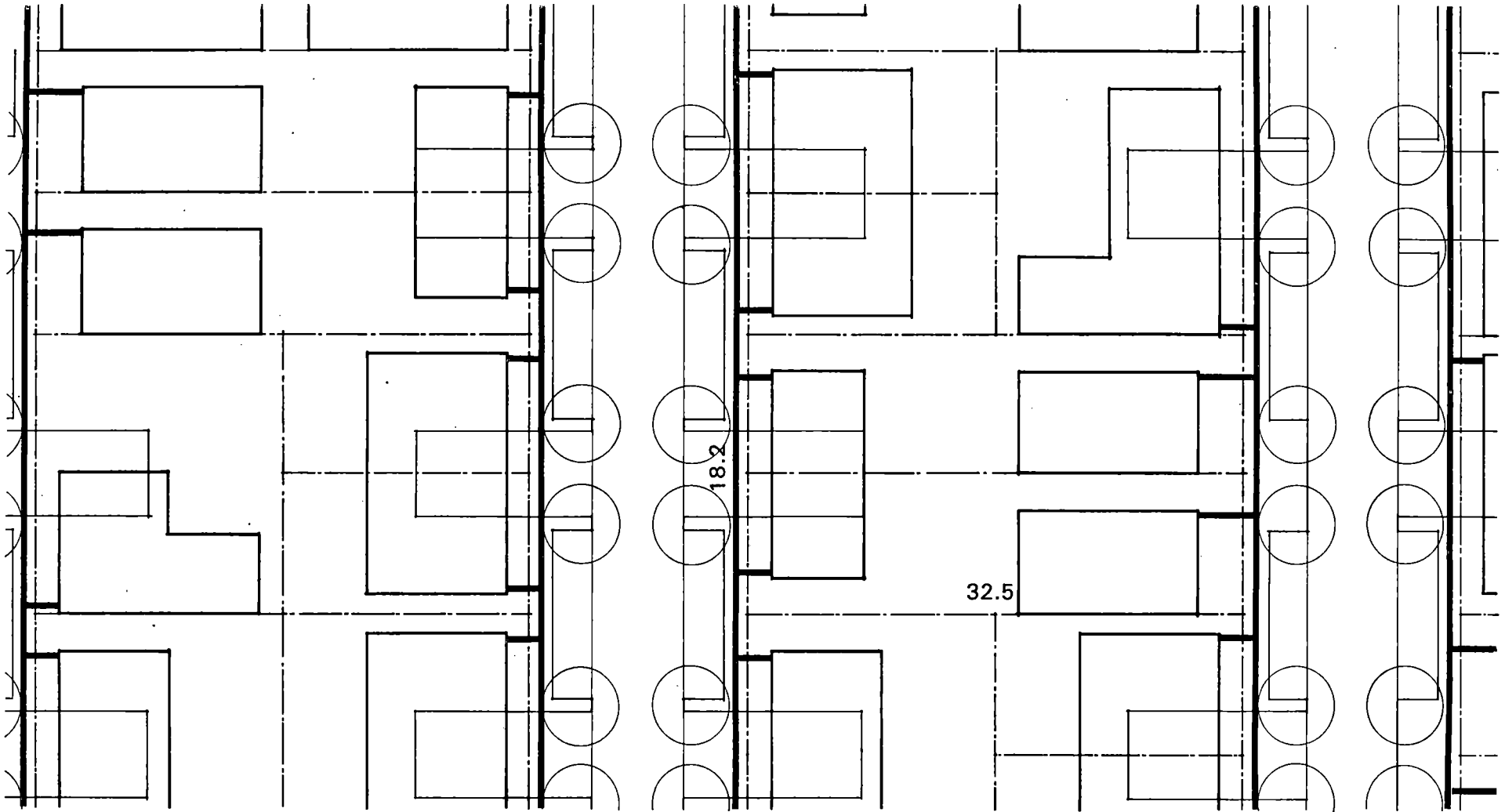
THE METROPOLITAN PURLIEU 1:100



NARROW LOT HOUSE TYPE COMBINATION

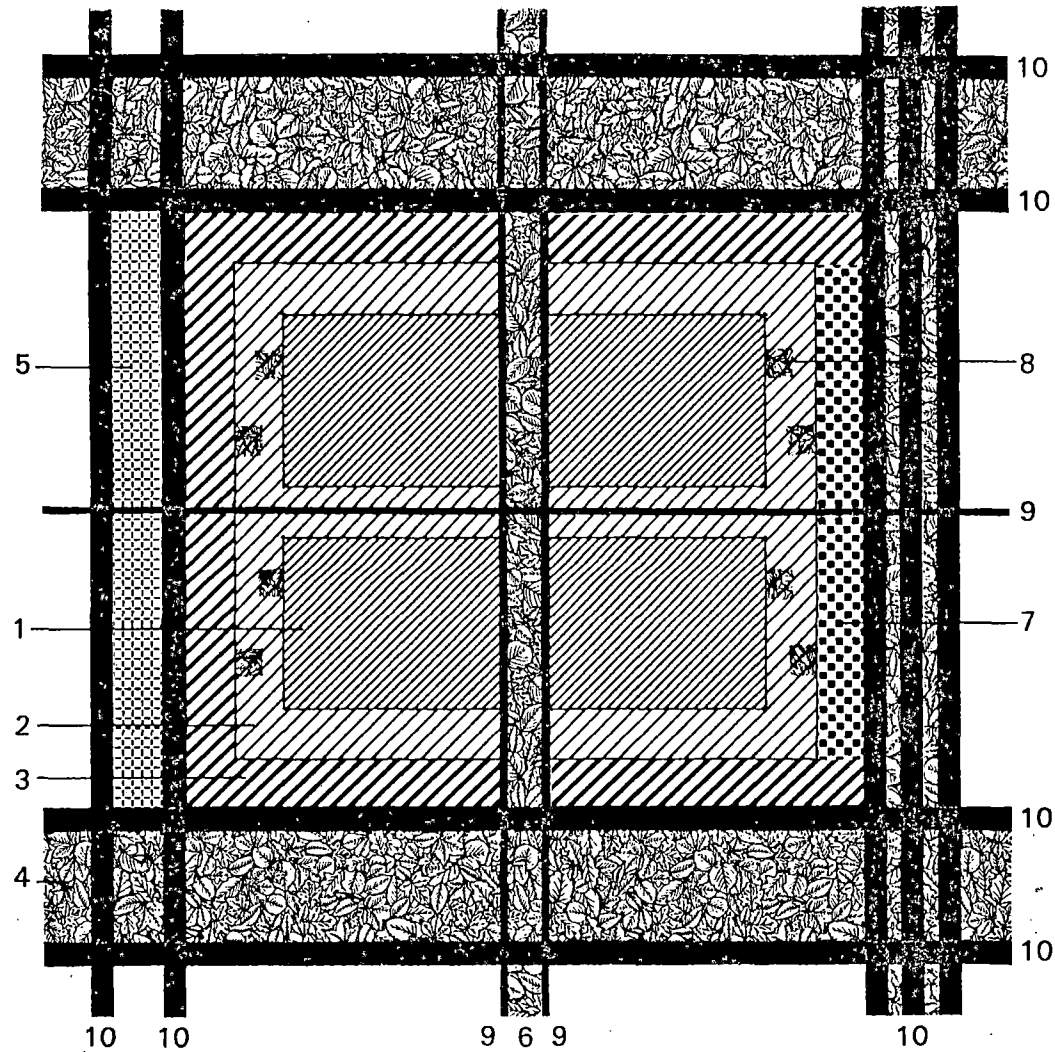


EXPANDABLE PATIO/CONVERTIBLE HOUSE
TYPE COMBINATION



ENGINEERING SERVICES PLAN

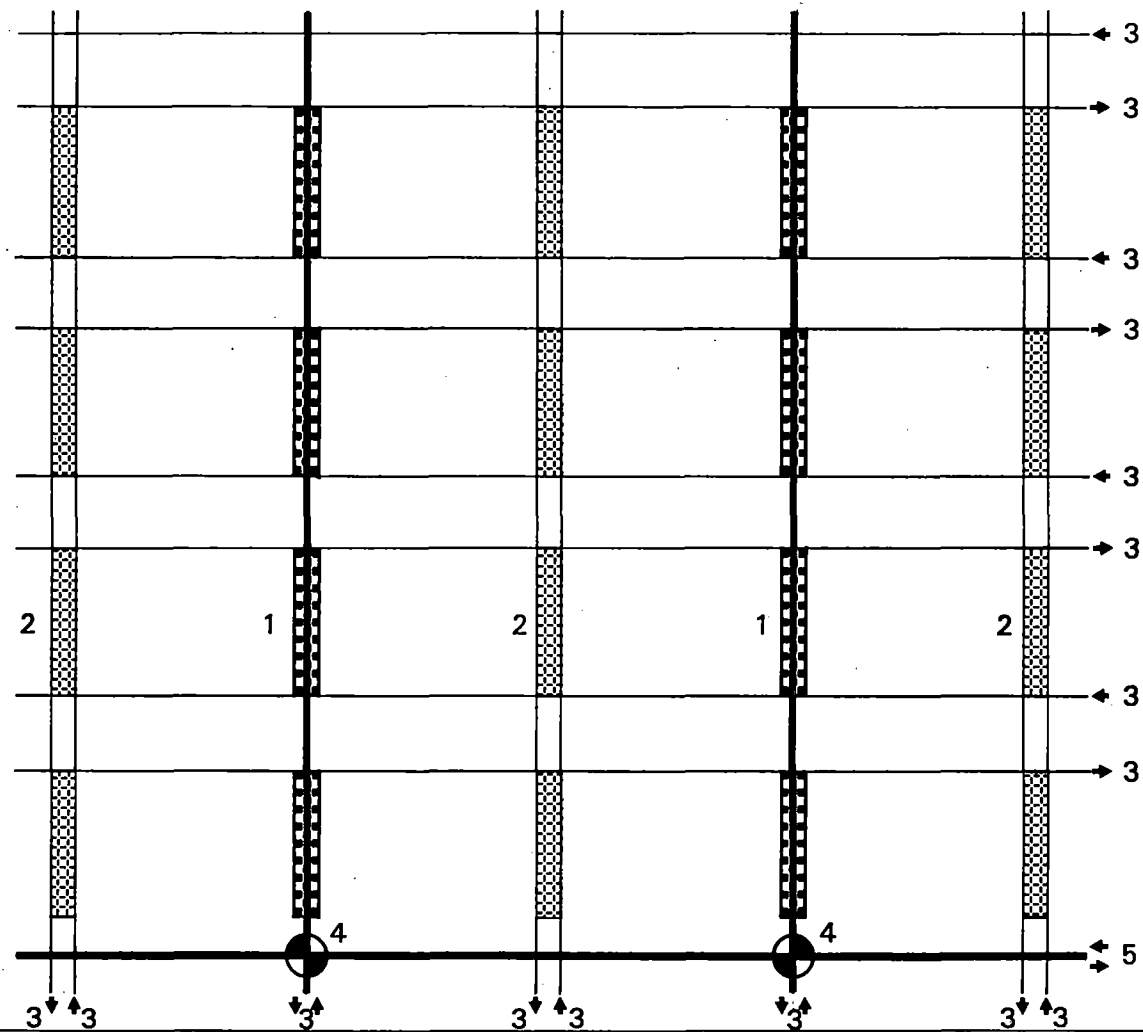
THE METROPOLITAN *PURLIEU* CONCEPT



- 1 MIXED DENSITY POCKET
- 2 MEDIUM DENSITY BELT
- 3 HIGH DENSITY BELT
- 4 NATURE/RECREATIONAL/INSTITUTIONAL BELT
- 5 TECHNO-INDUSTRY BELT
- 6 LINEAR PARK BELT
- 7 MIXED USE BELT
- 8 MULTI-PURPOSE SQUARE
- 9 MAXI-TAXI ROUTE
- 10 PUBLIC TRANSIT ROUTE

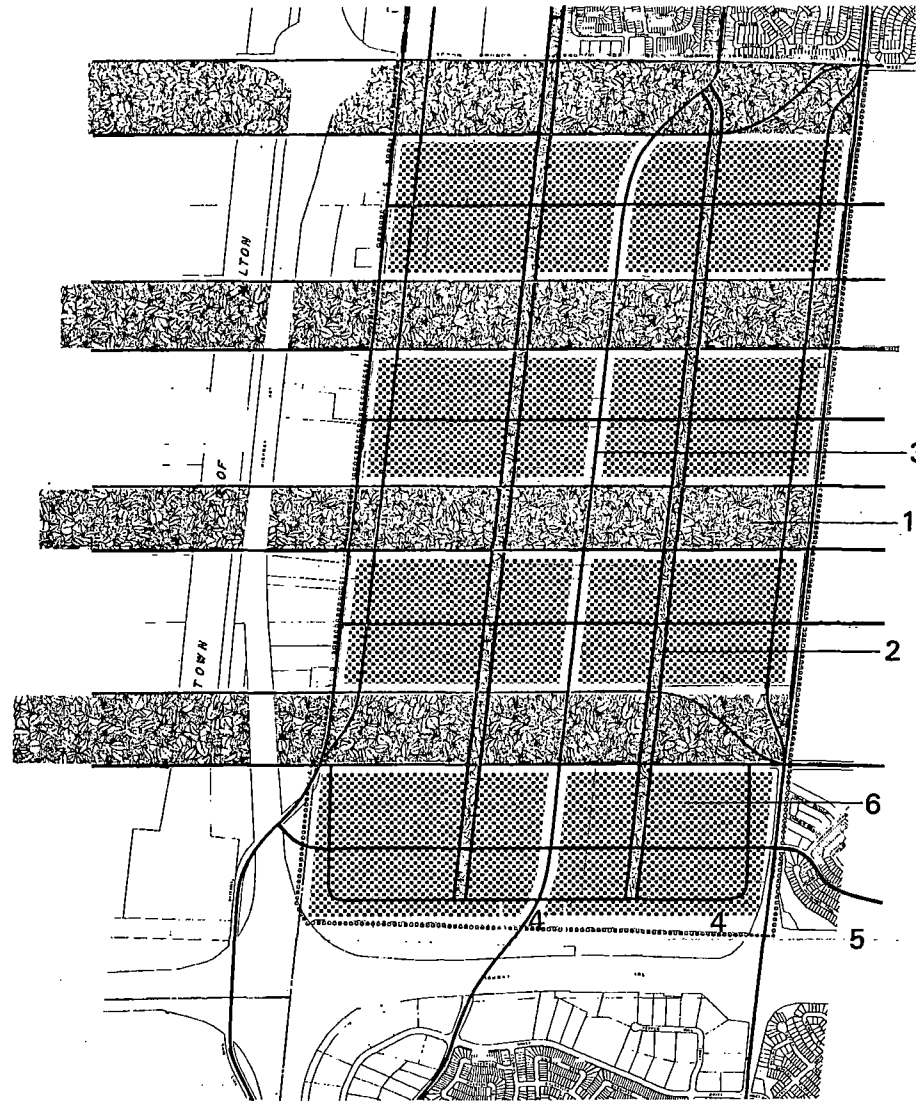
THE METROPOLITAN PURLIEU

THE METROPOLITAN PURLIEU



- 1 MAIN STREET BELT
- 2 TECHNO-INDUSTRY BELT
- 3 PUBLIC TRANSIT ROUTE
- 4 REGIONAL TRANSIT NODE
- 5 REGIONAL TRANSIT BUSWAY

TRANSIT PLAN AT THE REGIONAL LEVEL



- 1 NATURE/RECREATIONAL/INSTITUTIONAL BELT
- 2 LINEAR PARK BELT
- 3 MAIN STREET BELT
- 4 REGIONAL TRANSIT NODE
- 5 REGIONAL TRANSIT BUSWAY
- 6 METROPOLITAN PURLIEU

THE METROPOLITAN PURLIEU AT THE SECONDARY PLAN LEVEL



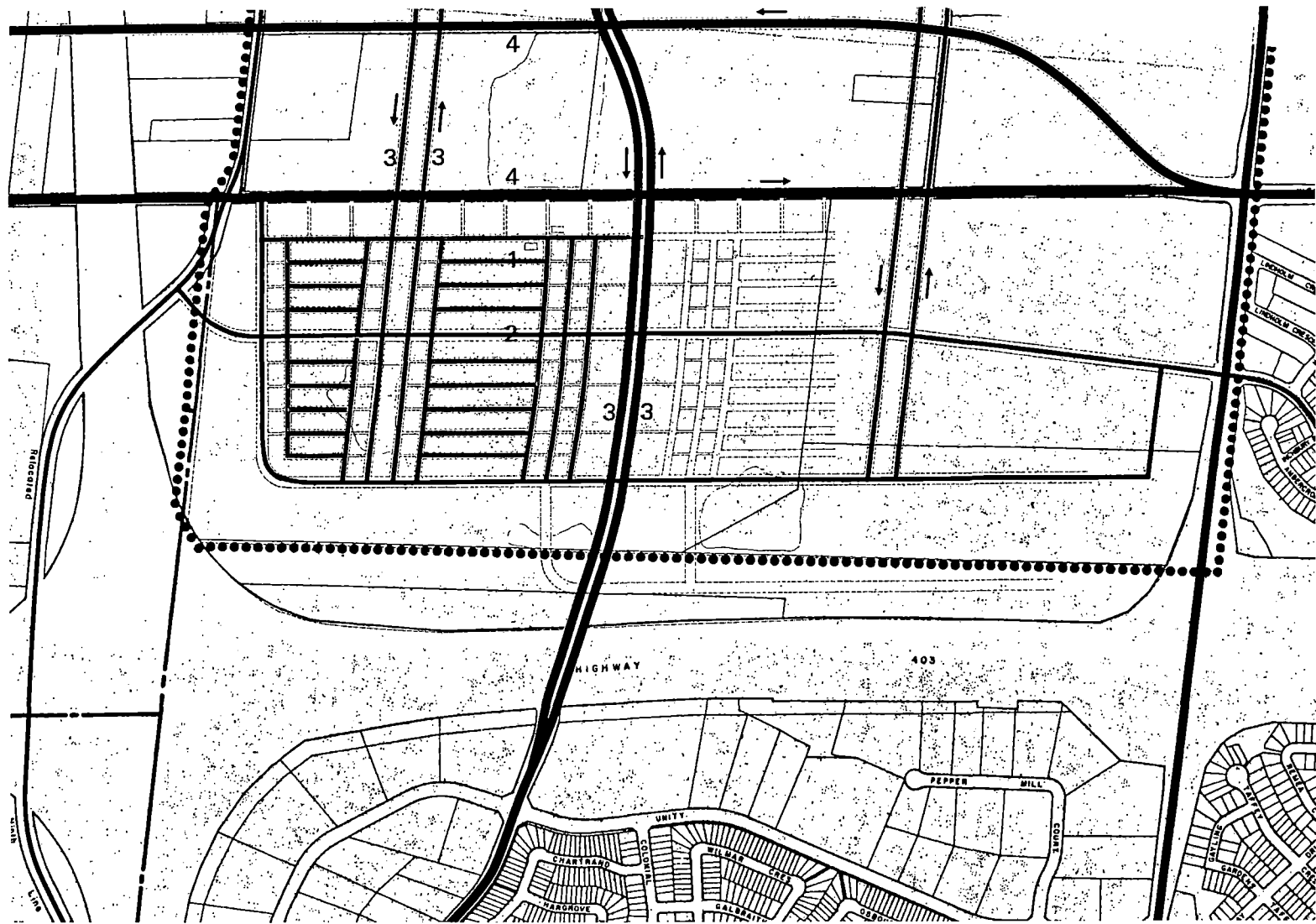
THE METROPOLITAN PURLIEU: A SITE SPECIFIC TEST CASE



- 1 WOODLOT
- 2 HEDGEROW
- 3 EXISTING FARM HOUSE
- 4 EXISTING BARN

EXISTING SITUATION



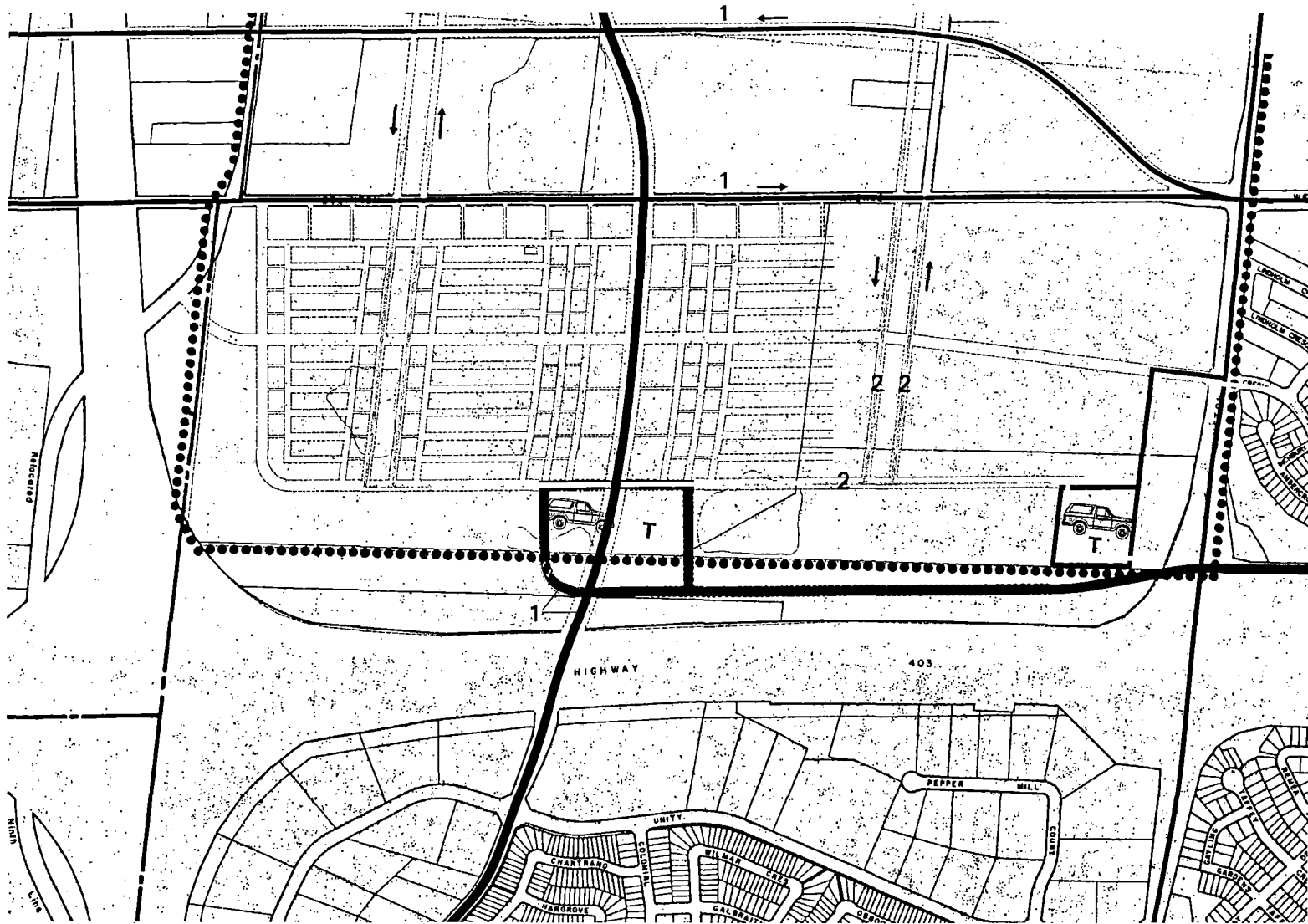


PROJECT RIGHT OF WAY CLASSIFICATIONS AND STANDARDS

- | | |
|---------------|--|
| 1 STREET : | 14.4 m (NO SIDEWALKS) |
| 2 AVENUE : | 17.4 m (SIDEWALK 2 SIDES) |
| 3 BOULEVARD : | 16.0 m + LINEAR PARK + 16.0 m (2-ONE WAY ROADS, SIDEWALK ON ON SIDE OF EACH) |
| 4 WAY : | 23.0 m + MAJOR PARK + 23.0 m (2-ONE WAY ROADS, SIDEWALK ON ON SIDE OF EACH) |

STREET AND ROAD NETWORK PLAN

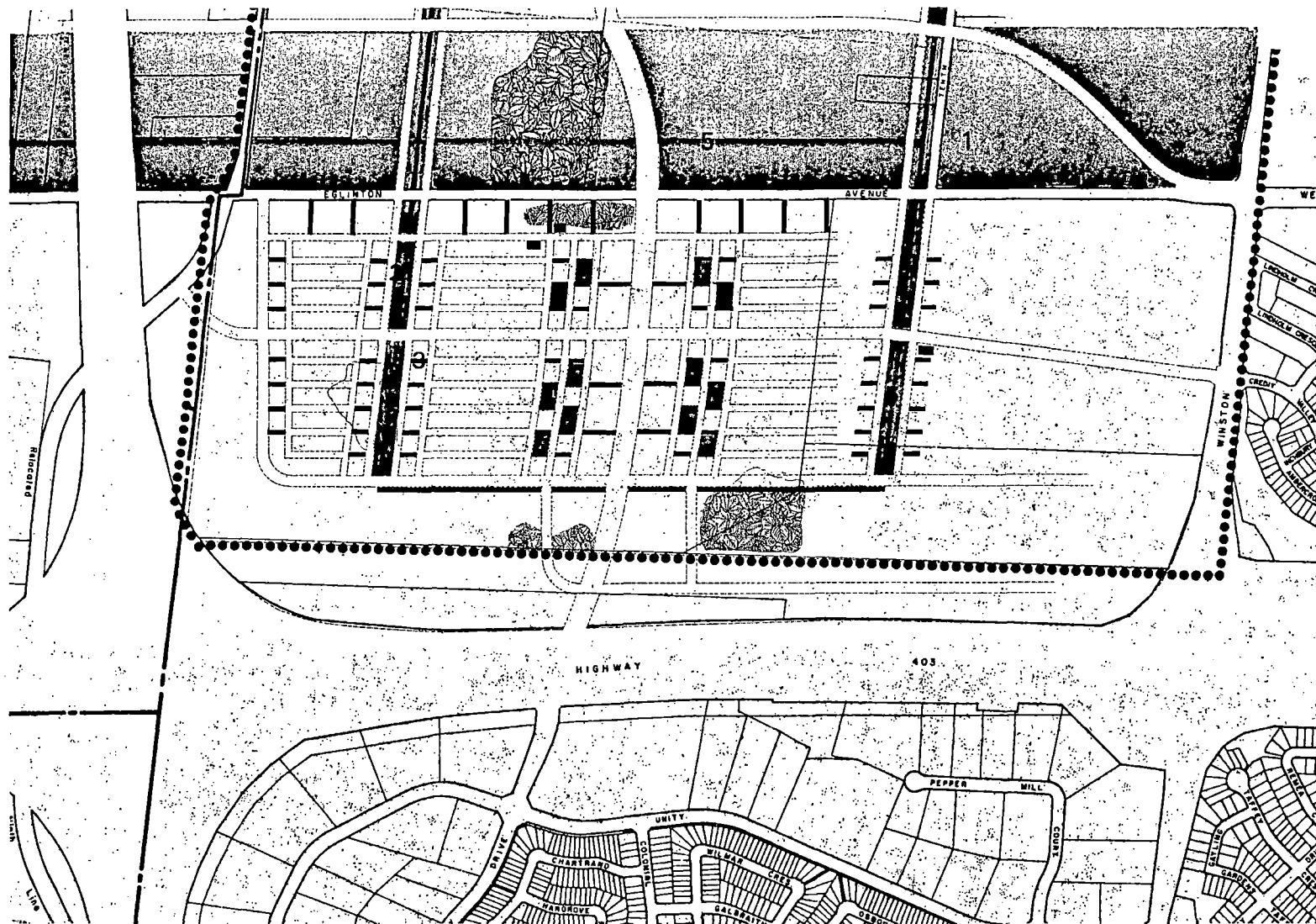




- 1 PUBLIC TRANSIT ROUTE
- 2 MAXI-TAXI ROUTE

PUBLIC AND PRIVATE TRANSIT PLAN

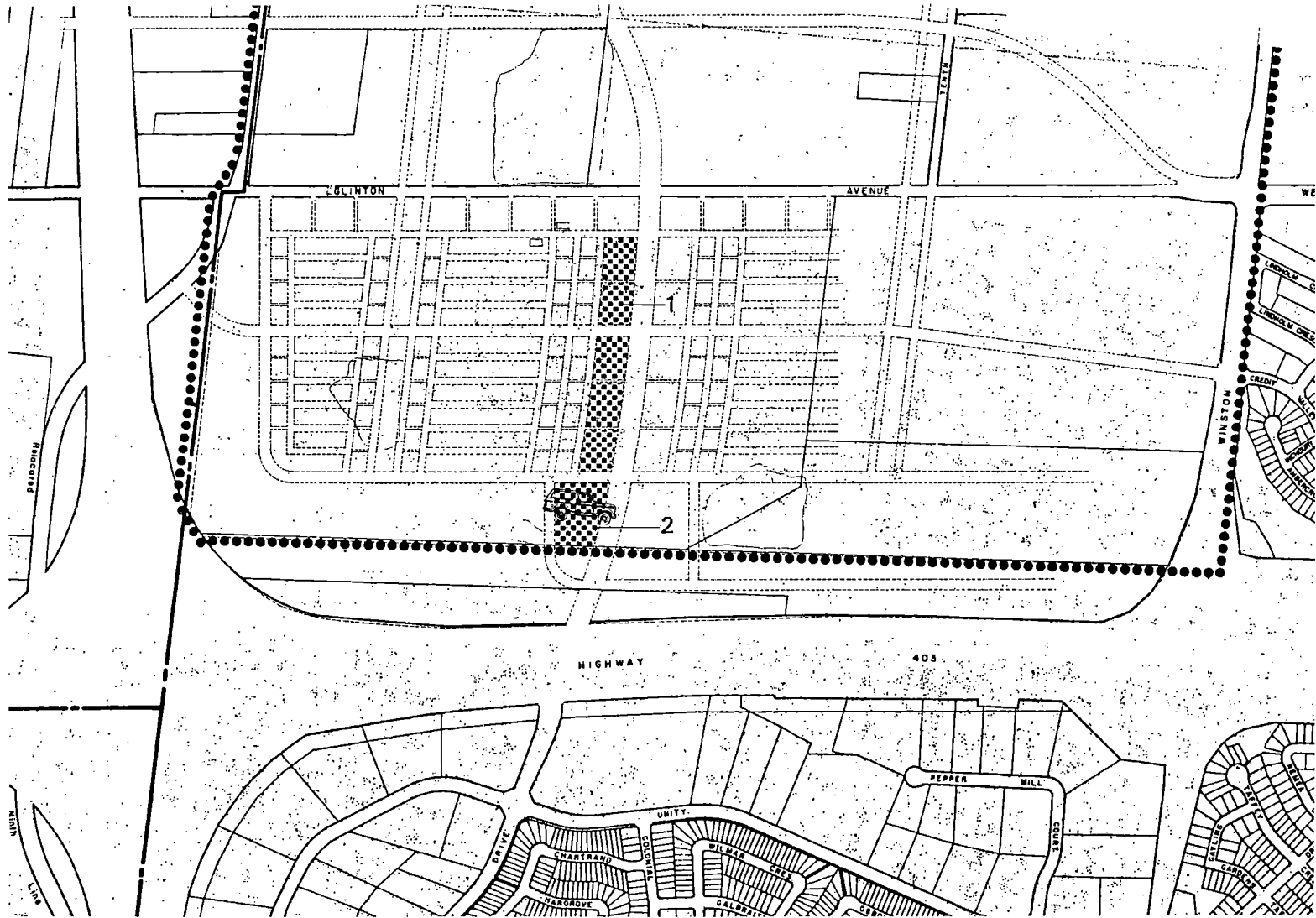




- 1 NATURE/RECREATIONAL/INSTITUTIONAL BELT
- 2 LINEAR PARK BELT
- 3 PEDESTRIAN PATH
- 4 MULTI-PURPOSE SQUARE
- 5 BICYCLE PATH

BICYCLE/PEDESTRIAN/OPEN SPACE NETWORK

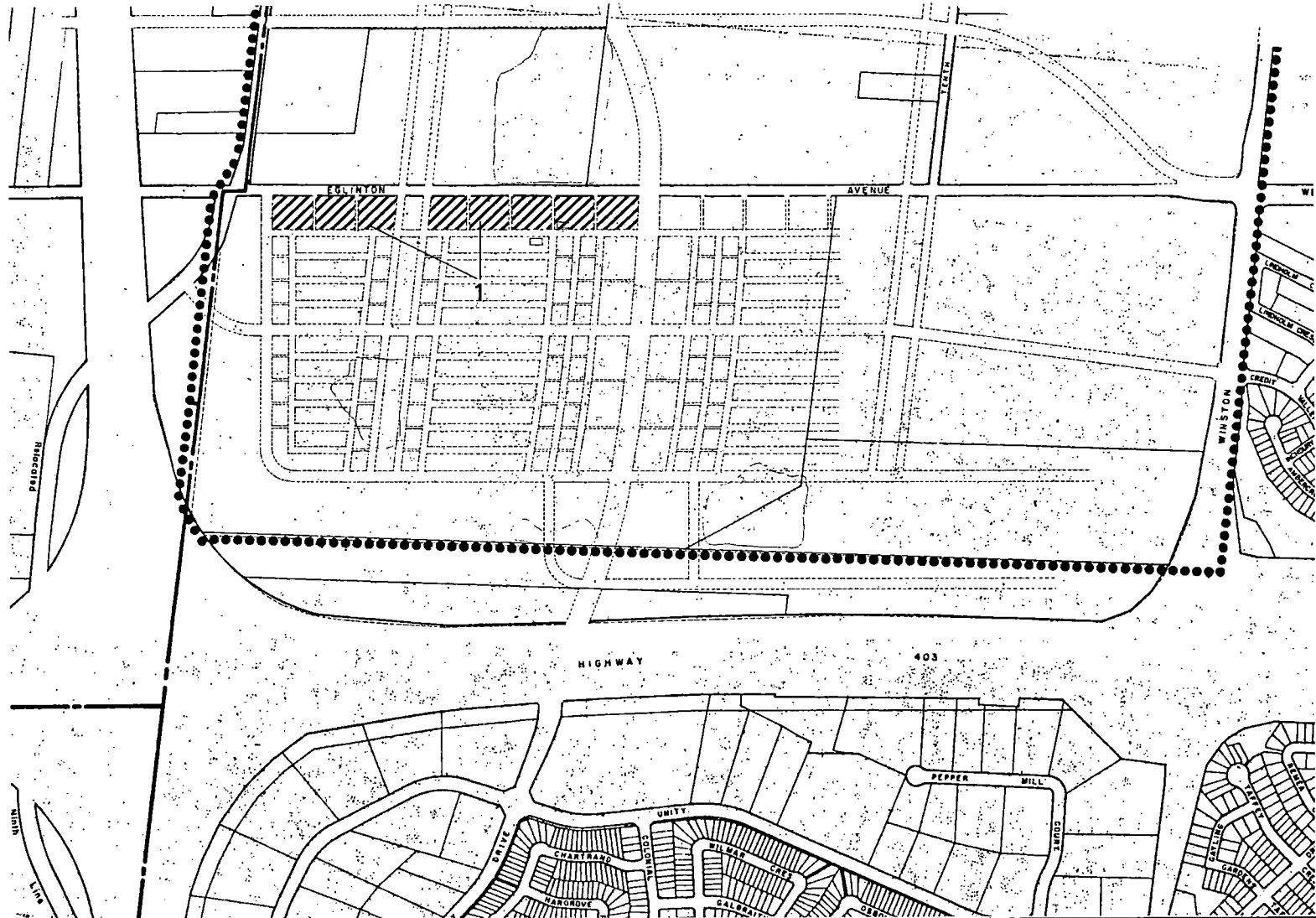


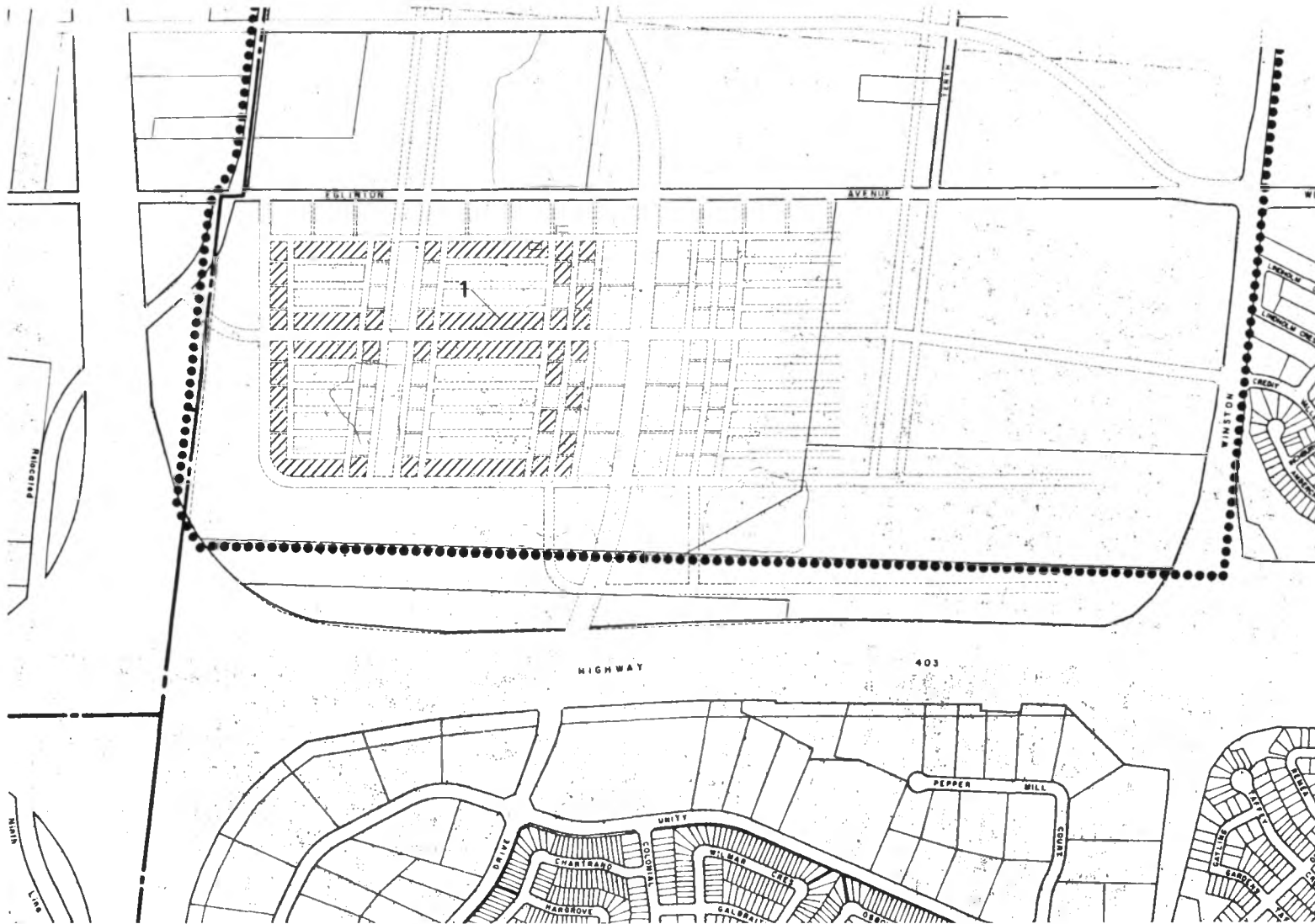


- 1 MIXED USE BELT
- 2 REGIONAL TRANSIT STATION PARKING

MIXED USE BELT PLAN



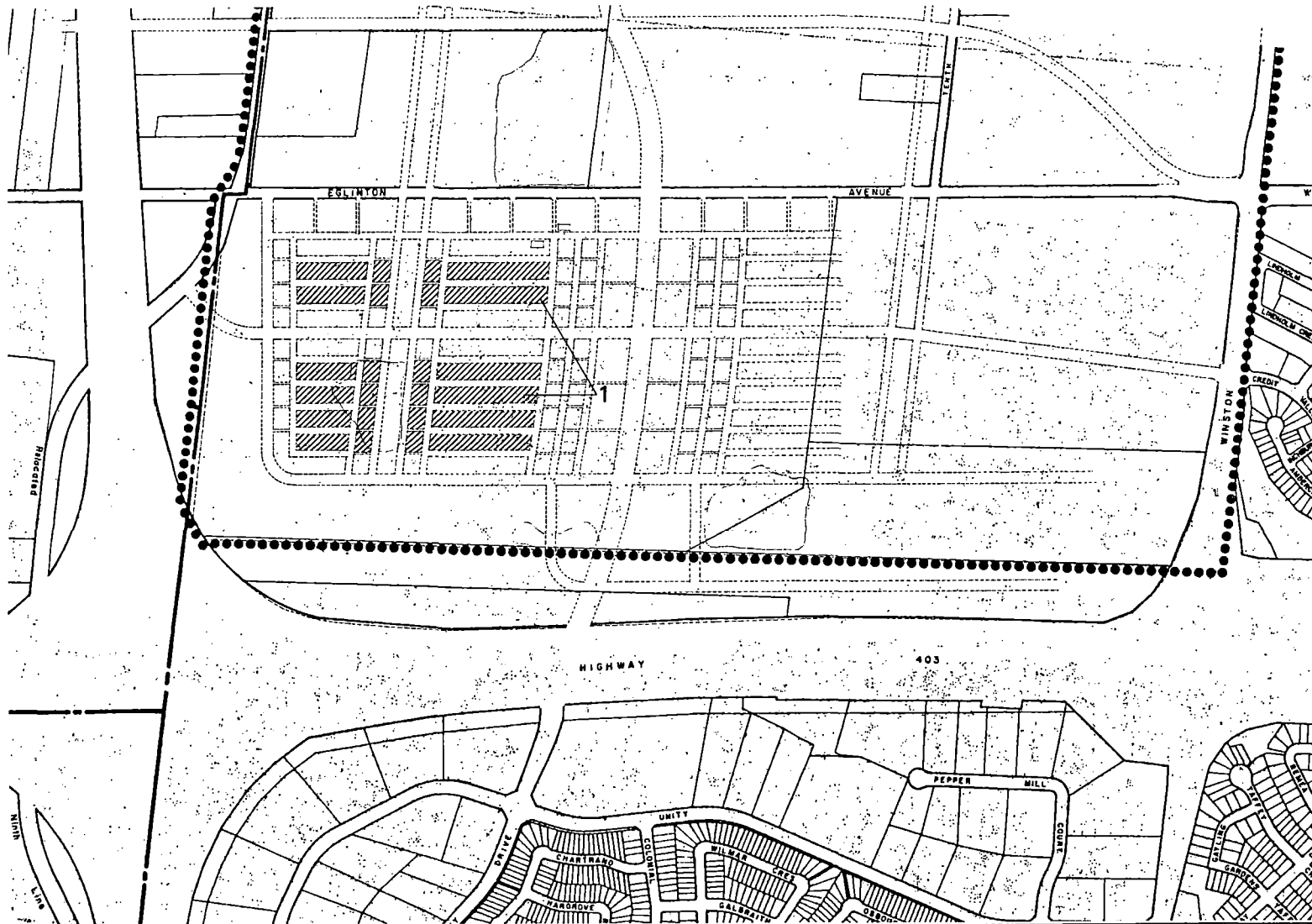




1 MEDIUM DENSITY BELT

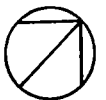
MEDIUM DENSITY BELT PLAN

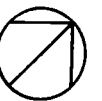
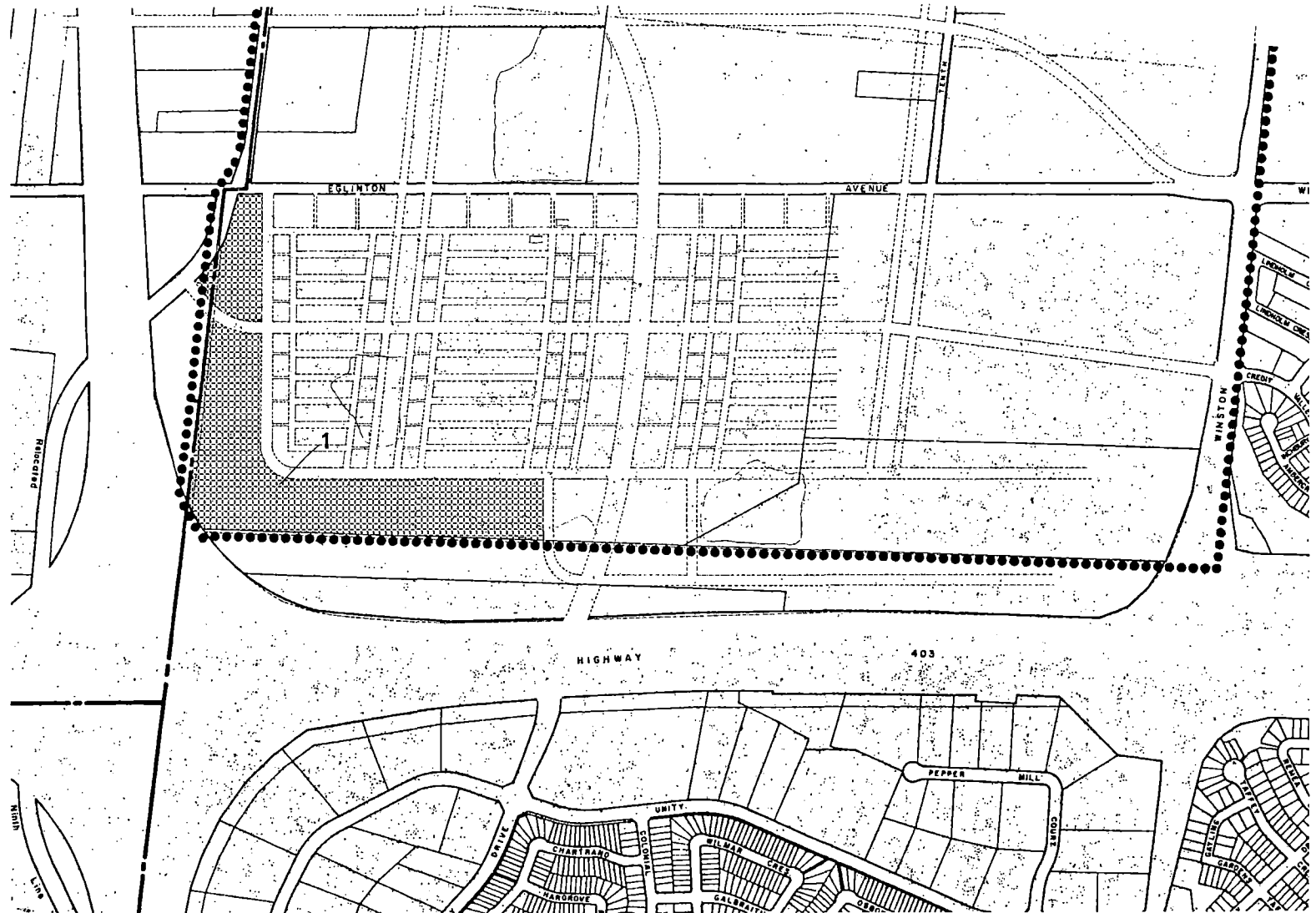


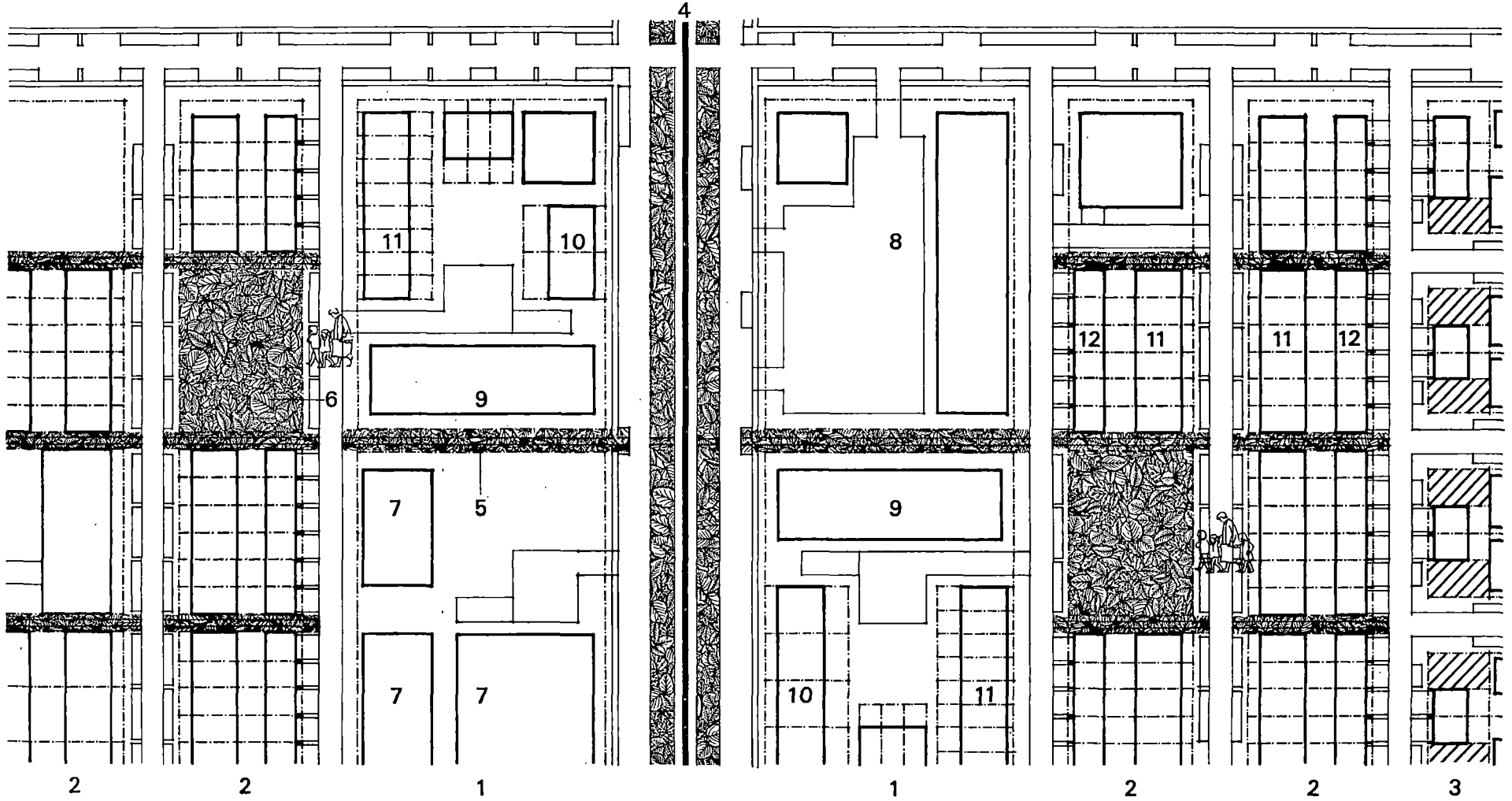


1 MIXED DENSITY POCKET

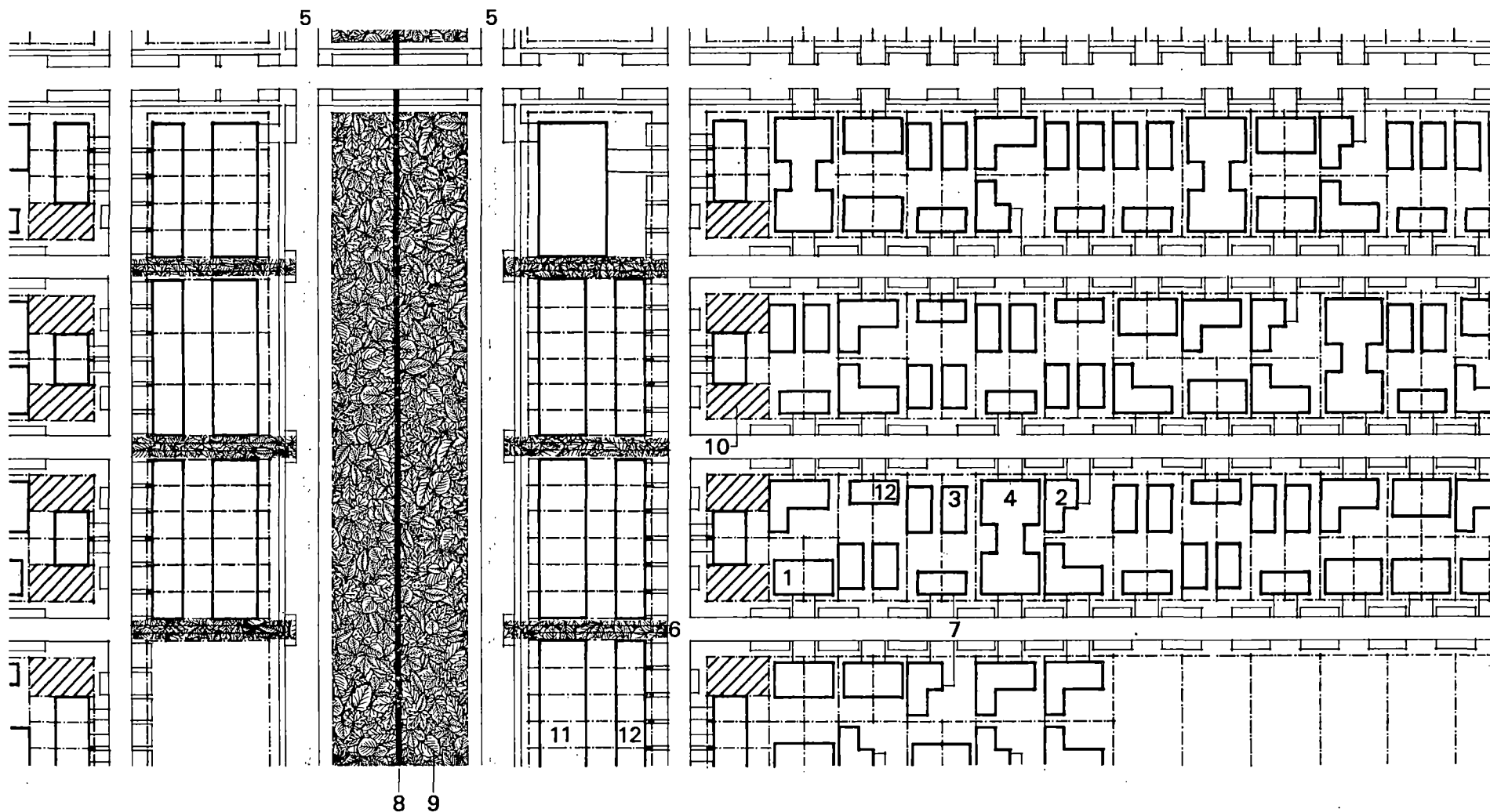
MIXED DENSITY POCKET PLAN





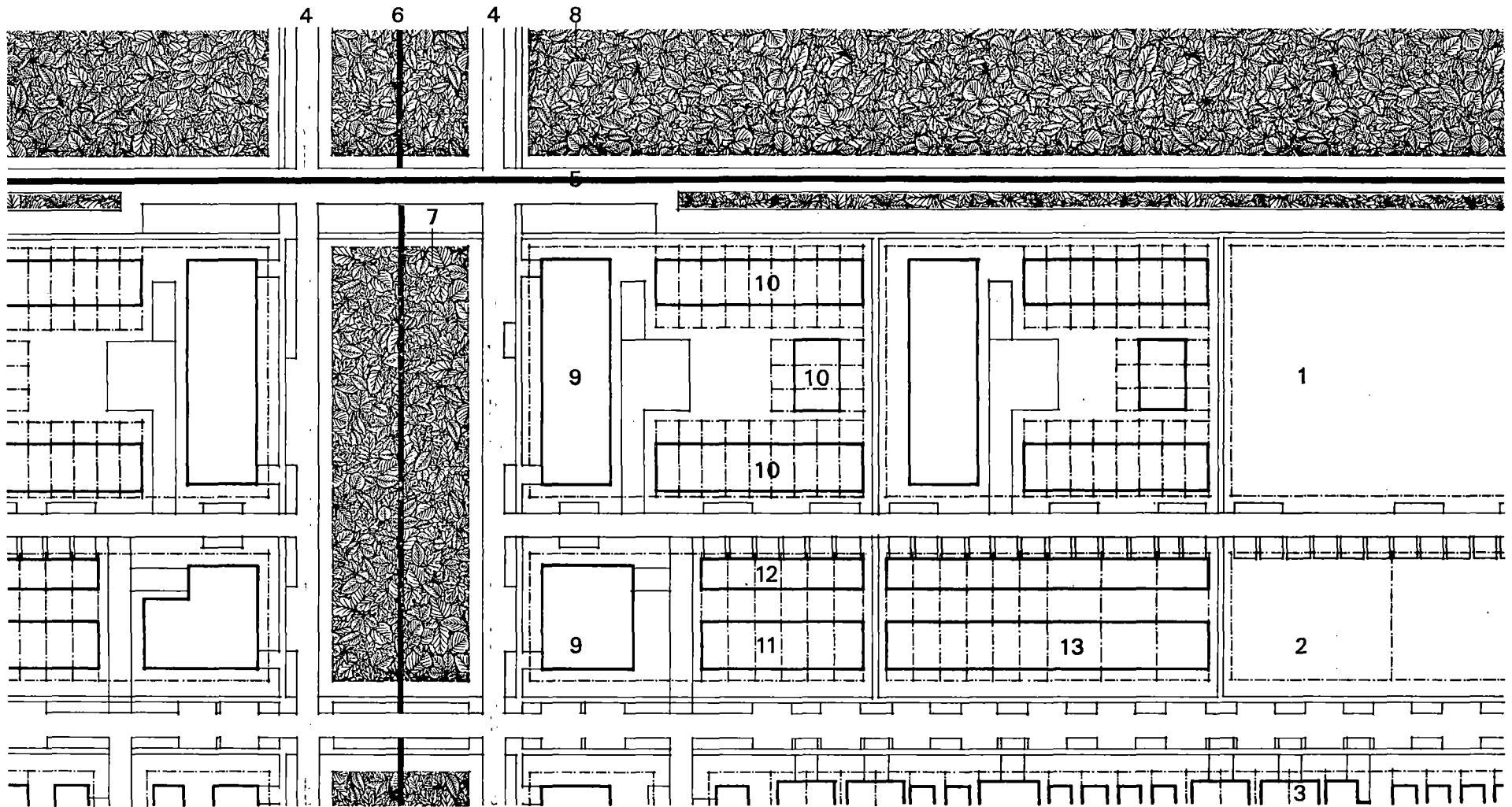


PLAN AT MAIN STREET



- | | |
|---|---|
| 1 CONVERTIBLE HOUSE TYPE
(SINGLE, SEMI-DETACHED, DUPLEX) | 7 PEDESTRIAN/VEHICULAR SHARED STREET |
| 2 EXPANDABLE PATIO HOUSE TYPE | 8 BICYCLE PATH |
| 3 NARROW LOT HOUSE TYPE (DETACHED GARAGE) | 9 LINEAR PARK BELT |
| 4 WALKUP GARDEN APARTMENT TYPE (6 OR 8 UNITS) | 10 PRIVATE DAYCARE |
| 5 MAXI-TAXI ROUTE | 11 TOWNHOUSES |
| 6 PEDESTRIAN PATH | 12 GARAGES WITH SECOND FLOOR APARTMENTS |

PLAN AT LINEAR PARK/MIXED DENSITY POCKET



- | | |
|------------------------|--|
| 1 HIGH DENSITY BELT | 8 NATURE/RECREATIONAL/INSTITUTIONAL BELT |
| 2 MEDIUM DENSITY BELT | 9 APARTMENT SLAB |
| 3 MIXED-DENSITY POCKET | 10 STACKED TOWNHOUSES |
| 4 MAXI-TAXI ROUTE | 11 TOWNHOUSES |
| 5 PUBLIC TRANSIT ROUTE | 12 GARAGES WITH SECOND FLOOR APARTMENTS |
| 6 BICYCLE PATH | 13 TRIPLEX APARTMENTS |
| 7 LINEAR PARK BELT | |

PLAN AT COLLECTOR/ARTERIAL