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Tel Aviv's Midtown/Azrieli North Development as an Integrated Complex of Tower Urbanism

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Tel Aviv's Midtown/Azrieli North Complex is the new hub of the northern central business district (CBD) that functions to connect the activity centers of the historic city to the emerging urban developments in the north and east. The project is a multi-functional urban complex of tower urbanism. This model of integrated vertical urbanism can achieve unique contributions to urban regeneration.

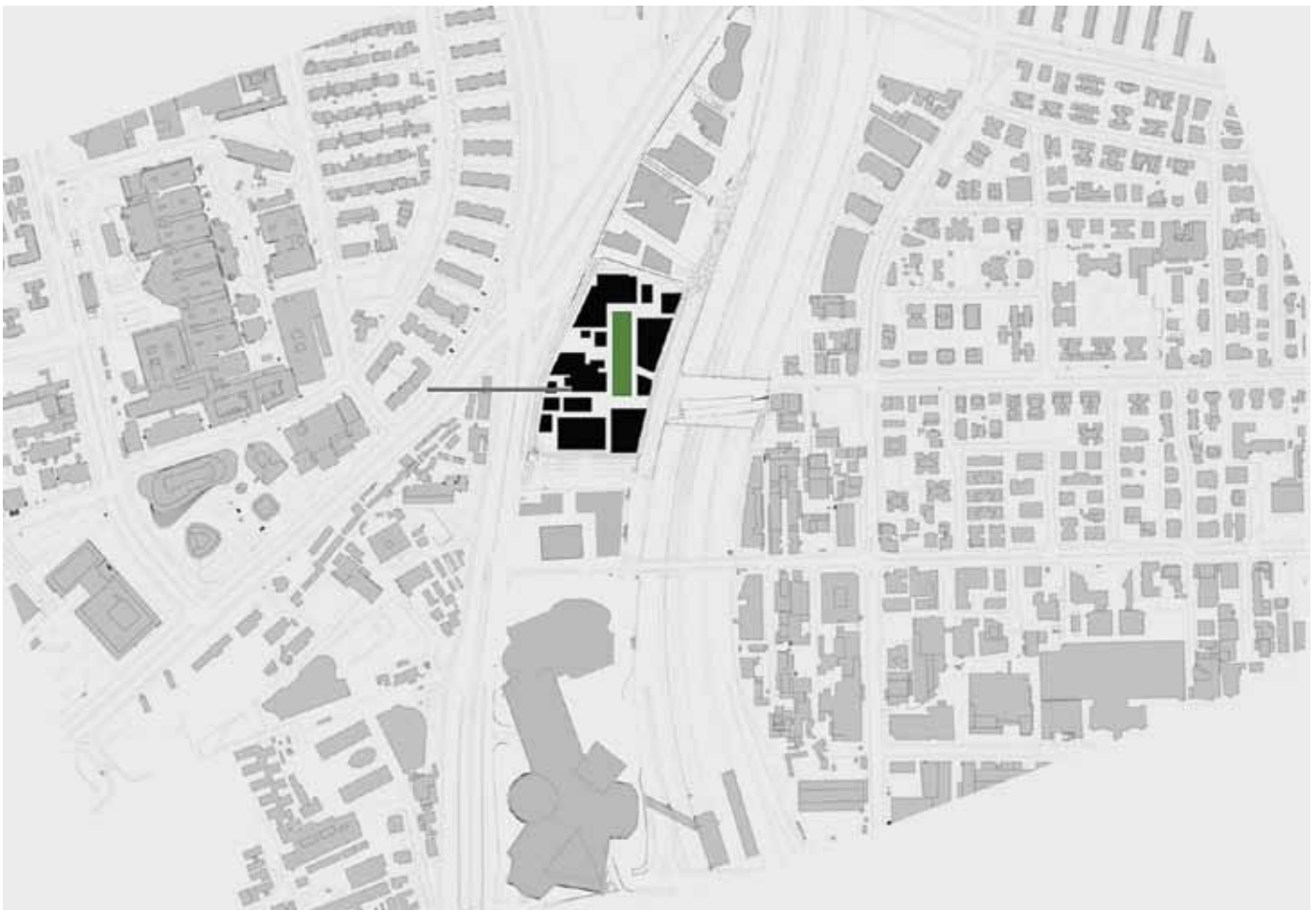
The Midtown/Azrieli North development employs concepts and precedents of the Integrated Multi-functional Urban Complex. This urban design model provides a series of unique urban forms and relationships that can be defined as urban design principles. The set of urban principles defined herein have

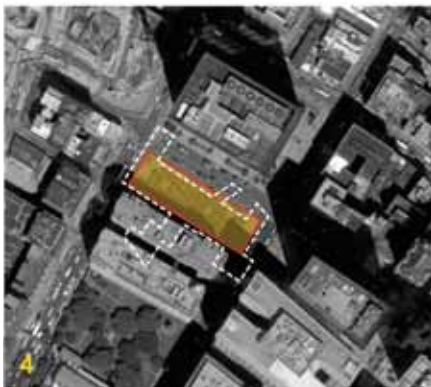
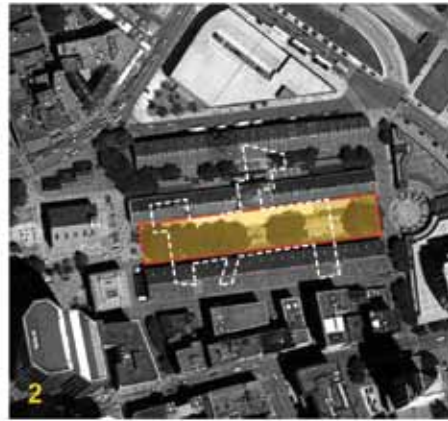
provided the theoretical basis for designing a large and functionally diverse program as a significant new urban component of the rapidly developing city of Tel Aviv. It is the unique attributes and design principles of this model of vertical urbanism and its unique contributions to Tel Aviv that shape the development of Midtown/Azrieli North.

The project is currently under construction. It is a large multi-functional urban complex that will provide integrated facilities for residential, offices, shopping, commercial, public and cultural functions such as major sports and child care facilities, open-space activities, and parking. The program contains a group of four towers of between 40 to 50 floors: two office towers and two residential towers. The towers are functionally and

formally integrated with a low-rise base that provides a major urban plaza and a network of public spaces including a system of streets, lanes, and courts that provide for year-round public activity. At the city scale, the complex will act as an urban hub that connects the neighboring parts of the city.

Among the urban principles that unite the combined vertical and horizontal expression of the complex is the concept of the development of the public streetscape at multiple levels and its integration with the tower forms. This urban design strategy achieves a series of developmental advantages such as creating a network of streets and plazas that provides a human scale spatial system and can make the complex a new urban hub for the developing





1. Schouwburgplein, Rotterdam
2. Quincy Market, Boston
3. Campo de' Fiori, Rome
4. Zuccotti Park, New York
5. Place Georges Pompidou, Paris

urban zone of the northern CBD of Tel Aviv. The complex also seeks to establish a new series of urban connectors that will tie the existing cultural, business, entertainment and restaurant areas of Tel Aviv to the newly developing urban areas in the east.

This linking function of the project as an urban hub is designed to be particularly significant in the area of the site. The project site exists at the edge of the Ayalon highway that is the major internal high-speed cross-city highway. Due to the scale of this major element of urban infrastructure it is effectively a barrier to urban continuity along its total length. Midtown/Azrieli was designed to provide a bridging function that would attract urban flow from both sides of the highway. The meta-function of bridging the highway and enhancing urban continuity was recognized as a potentially significant urban contribution by the city's planning authorities.

Precedents and Principles of the Integrated Multi-Functional Urban Complex

This model of vertical urbanism is an emerging urban typology that generates quality public

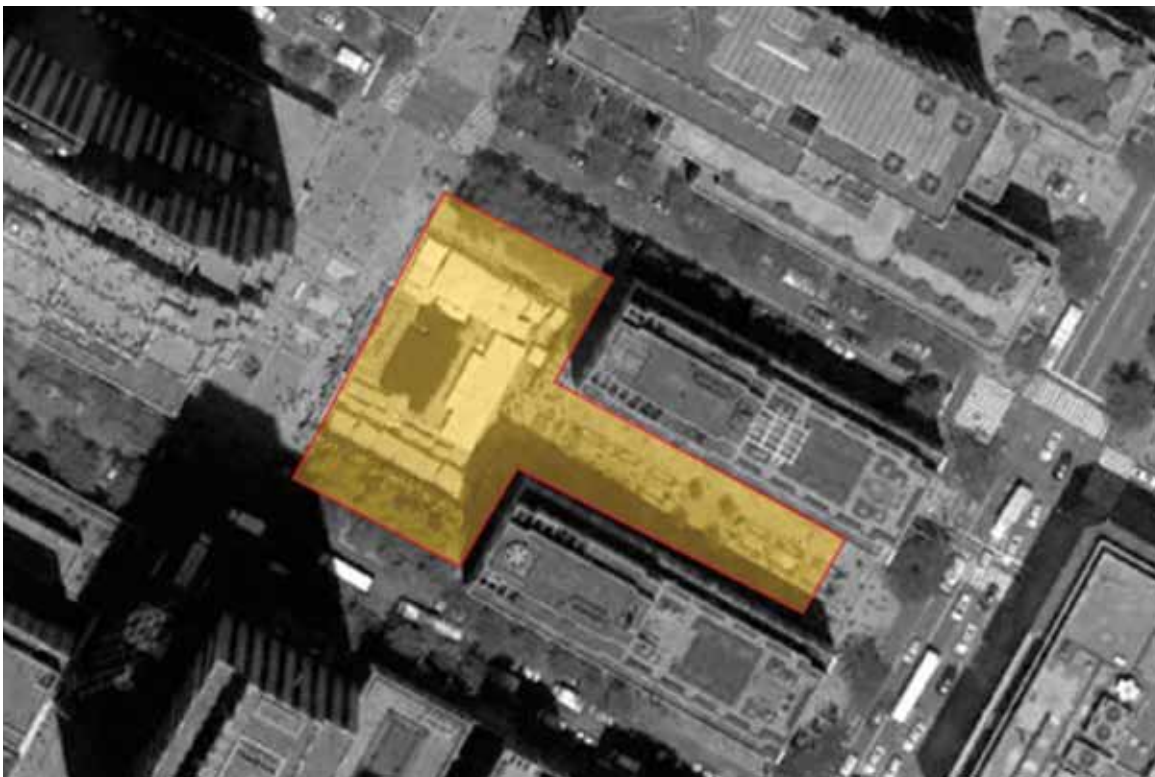
space in the city in a multi-functional spatial complex that integrates vertical and horizontal form and patterns of movement.

Among historical precedents for the tower complex as a medium for the creation of urban place within the fabric of existing cities, Rockefeller Center, New York, 1931-1939 (Architect: Raymond Hood), is an early and important modern example of a multi-functional urban complex that integrates towers and low-rise structures with a spatial infrastructure that creates the sense of a distinctive urban place. The complex was one of the first modern multi-functional urban complexes in Manhattan. In general, it is a highly significant precedent for the early articulation of principles of vertical urbanism that can be applied to create a sense of identity to the multi-tower complex.

Rockefeller Center is one of the earliest examples of the three-dimensional integration of the infrastructural order of spatial systems and movement systems of pedestrians, elevators, and automotive flow and car storage as a total system integrated within an urban model. The complex of office, commercial and entertainment

Opposite: Site plan in relation to the urban context.
Source: Moshe Tzur Architects and Town Planners

Top: Scale comparisons of the central plaza to historic and modern urban spaces. Source: Moshe Tzur Architects and Town Planners



facilities is renowned for its public space system including the famous Rockefeller Plaza and the planned and landscaped street system. As such, it is an early model of vertical urbanism in which the integration of urban landscape design is a prominent ingredient of landscape urbanism.

With respect to the functional integration of flow and movement, the urban design principles of the complex have provided a model that has been extensively developed over the years and a set of design principles that were studied and implemented in many later projects (Okamoto, Williams & Huboi 1969). An important element of the infrastructure of pedestrian movement was the concourse level that provides an underground level of continuous movement beneath the project and also provides an all-weather horizontal connector to the vertical elevator transportation of the towers.

Another of the noted contributions of the Rockefeller Center to the principles of vertical urbanism is the manner in which the spatial infrastructure of major civic space (the Plaza) along with minor civic spaces of squares and streets are designed in direct visual

relationships with the towers. The view of the towers, and the relationships of the towers to the low-rise structures and the open spaces create a dynamic experience, the principles of which have been notably analyzed and defined by Siegfried Giedion (1954).

Rockefeller Center's unique urban design made it an early model of tower urbanism that created a place of twenty-four hour activity within the city. It has also become a model of the potential place-making contribution of integrated complexes of tower urbanism. These principles have been applied and further evolved in projects throughout the world (Abalos & Herreros 2003).

The Concept of "Fragmentary Urbanism" and Its Relevance to the Metropolitan Development of Tel Aviv

In recent models of tower urbanism the tower cluster has become integrated with multi-functional uses and a well-developed system of public spaces to create autonomous places characterized by a strong sense of place and civic identity. Such autonomous urban developments are frequently the result of program and urban circumstances. In such cases in which for reasons of geography, or

due to site conditions such as the isolation of a site as an island due to the system of roads, autonomous urban segments may develop as semi-independent urban enclaves.

Shane (2011) has referred to these urban phenomena as the "fragmented metropolis", and he has introduced theories and case studies of implementation. Urban fragmentation is basically a case in which due to the absence of the continuity of existing urban structure, a new structure can develop on a spatially limited, or geographically constrained, site. In the sense of function and urban identity, the resultant complex generally functions at an urban level as a more or less independent urban unit

A multi-functional integrated tower cluster complex may be considered an autonomous urban complex when its internalized spatial system and the uniqueness of its spatial character achieve a sense of urban place and outstanding urban identity. Thus autonomous urban units are focused upon their contribution of quality civic spaces that they provide in the city. This strong sense of place and interiority of the complex does not preclude its connections to adjacent

developments, and functional urban continuity is a necessity.

Why is the theory of fragmentary urbanism potentially relevant to the contemporary developmental structure of Tel Aviv? Historically Tel Aviv has developed in layers outside of its historic core along the Mediterranean. Tel Aviv is a modern city established in 1909. The historic core of the city has emerged as a consistent and well-structured urban low-rise context noted for its large ensemble of international style architecture that developed between the 1920's to the 1950's under the British Mandate and the town plan of 1925 by Patrick Geddes.

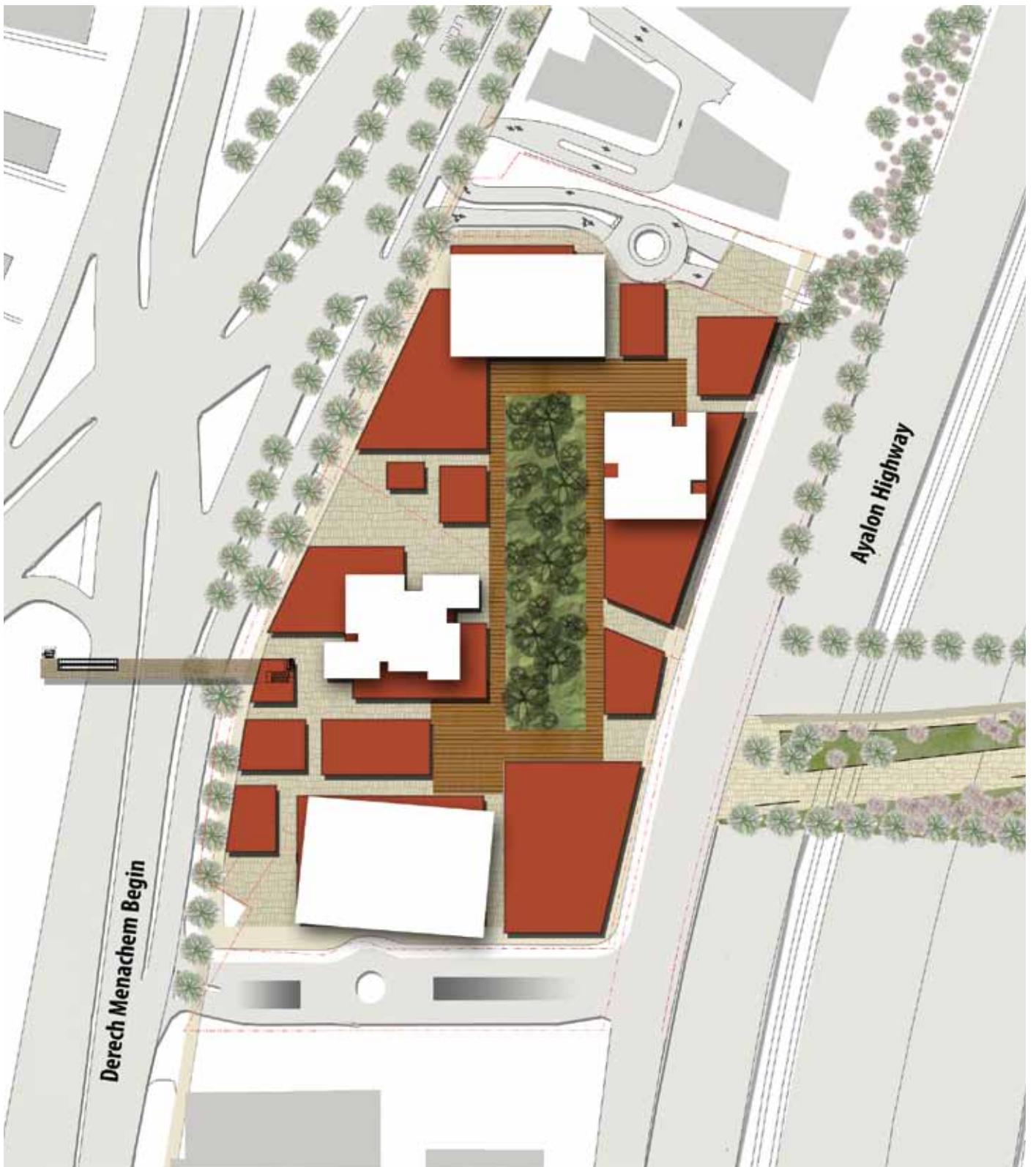
The challenge of Tel Aviv's current urban development beyond the historic seaside core is to establish a set of unique urban principles that can successfully integrate models of skyscraper urbanism that are suitable even with the low-rise scale of the existing urban fabric. Many of the sites beyond the seaside core are former industrial and service areas of the core that must now be redeveloped. In general, all of these areas such as the site of the Midtown/Azrieli complex are structurally non-continuous with the core due to the intervention of major roadways. In addition, their land values also require maximum possible high-density development.

Tel Aviv is currently faced with the need to develop models of dense vertical urbanism that can be applied in urban restoration and urban transformation on sites that are structurally discontinuous with the historic core of the city. The potential to achieve large-scale urban structural impacts requires strategies that can maximize potential urban effects such as providing new major public spaces in the dense areas of the city.

The property of the project site was owned in two separate parcels by two independent corporations. The architectural, spatial, and urban unification of the project was



Bottom: The system of major roads creates an autonomous urban segment. Source: Moshe Tzur Architects and Town Planners



“The challenge of Tel Aviv’s current urban development beyond the historic seaside core is to establish a set of unique urban principles that can successfully integrate models of skyscraper urbanism that are suitable even with the low-rise scale of the existing urban fabric.”

achieved by the project design team in close collaboration with the clients and the Tel Aviv planning authority. In return for the city’s enthusiastic recognition of the potential urban hub and bridging functions of the unified Midtown/Azrieli project, the developers were able to create quality public open space and landscape design. This will include a plaza at a uniquely large scale among Tel Aviv’s existing public spaces.

Tel Aviv’s Emerging Model of “Fragmentary Urbanism:” How the Midtown/Azrieli North Complex Design Creates an Autonomous Urban Entity

The site of the new northern CBD of Tel Aviv is located on a linear strip of land bordered on each side by a major traffic route. On the east is the major intercity north-south connector, the Ayalon Highway; in the west, by Menachem Begin Road. The Midtown/Azrieli North complex has additional towers on its northern and southern borders. In the north there is a large urban park, and beyond this is located the important transportation node of the northern railway station. In the south there is a group of towers connecting to the iconic Azrieli Mall and Center. In the future, east–west pedestrian connections are planned by bridging the Ayalon Highway and the Shaul Hamelech Boulevard. The ability to achieve these urban connectors will be an important contribution of the project.

The heart of the complex is a spatial network of a major north–south oriented landscaped plaza area that is accompanied by a system of courts, streets, and lanes. This spatial system provides a public spatial complex

that is a new urban fabric providing for outdoor seating and spaces for cafés and restaurants. The spaces are accompanied by a system of low-rise commercial buildings, a sports facility and other public uses. The roofscape of these low-rise structures provides outdoor space for additional public and commercial functions that also are a continuation of the main spatial network at ground level. A concourse level also provides additional areas for commercial functions as well as connections to the towers and the planned underground railway system.

Integrated with this sequence of layers (concourse, street, roofscape, towers) and the network of spaces (plaza, courts, streets, lanes), a cluster of four towers are functionally and formally sited as nodes of the generation of pedestrian flows. In the north and south are the office towers; clustered around the central plaza are the housing towers. The interaction and formal integration of vertical and horizontal elements creates a counterpoint aesthetic. The significant formal statement of the horizontal elements will establish a linkage of scale and urban fabric with the arc of existing low-rise housing structures to the northwest of the site.

In viewing the overall urban plan of the area, the new urban fabric of the autonomous urban complex appears to be a model perfectly suited to the nature of the existing urban condition. The layering of the spatial network shelters the major public space from the highways and provides the character of an urban oasis to the development. From the

surrounding highways the major spaces and functions such as the sports hall will be visible.

The new block structure responds to the scale of the neighboring and historic urban fabric of Tel Aviv. The north–south orientation of the main plaza will establish a formal duality with the neighboring blocks to the southeast of the complex. The cut faces of the low blocks on the west of the complex are a formal gesture reacting to the geometry of the major intersection of the road systems on this boundary.

Principles of Vertical Urbanism in the Midtown/Azrieli North Center as an Autonomous Urban Complex

The model of vertical urbanism that has been termed the Integrated Multi-functional Urban Complex can be seen in the autonomous urban complex of the Midtown/Azrieli North Center. This model of urban design has demonstrated its capability to provide an interpretation of vertical urbanism that can function in a variety of urban conditions to increase density, to accommodate urban redevelopment, and to fulfill a variety of key urban design functions in the evolving metropolis.

This model operates under a series of general principles that provide a variety of mediating variables in the form and function of the urban unit. While these principles have been brought together to form a unified model at the Midtown/Azrieli North Center, they have been individually developed and experimented with in a range of recent projects.

The Tower Cluster and Identity Core

The cluster of towers is a medium of design that provides for multi-level spatial connections and the potential introduction of special functions such as bridge structures. This is an emerging medium of vertical urbanism that provides remarkable potential for development as integrated three-dimensional complexes. This urban medium provides for future unique forms of three-dimensional organization of the tower cluster into new tower forms.

The organization of the multiple towers of the cluster provides for the possibility of the formation of a central plaza. At Midtown/Azrieli North this space is a large rectangular civic space. Due to its scale it is landscaped rather lavishly, providing plant variations

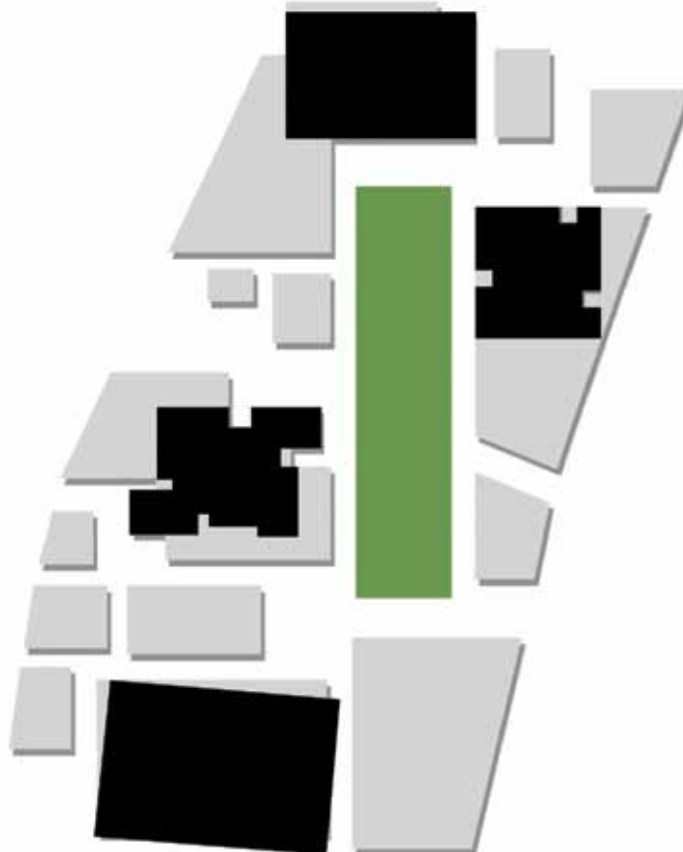
and differing conditions of shade and seating. This core is the terminus of the spatial network that connects to it through a series of informal street connections. The geometric and axial character of the spatial system creates strong visual relationships. The simple geometric form of the central plaza emphasizes its function as the project center and the major core space.

The relationship between the tower cluster and the major interior core (or cores) is an essential component of the identity of the complex as a place. The relationship of this space to the tower elements defines the identity of the complex. Giedeon's visual analysis of the dynamically changing views of the towers at Rockefeller Center as one moves through the Plaza area serves to

demonstrate how the towers and core relationship establishes a unique character and identity for the center. In the case of Midtown/Azrieli North these visual relationships are complex due to the diversity of the tower forms (housing versus office), their relationship to the accompanying block structure, and their diverse axial relationships to the main plaza. This establishes an urban condition that is simultaneously tranquil due to the core geometry and that of the entourage of blocks, as well as dynamically changing as one navigates the main space.

The Integration of Horizontal and Vertical Formal Elements and Relationships

Beyond the relationship of the tower cluster to the identity core as a generative theme of the Midtown/Azrieli North complex, the



Opposite: Representation of the master plan: towers, urban fabric, public space, and central plaza. Source: Moshe Tzur Architects and Town Planners

Bottom: The volumetric masses and the integration of towers with urban fabric at the central plaza. Source: Moshe Tzur Architects and Town Planners

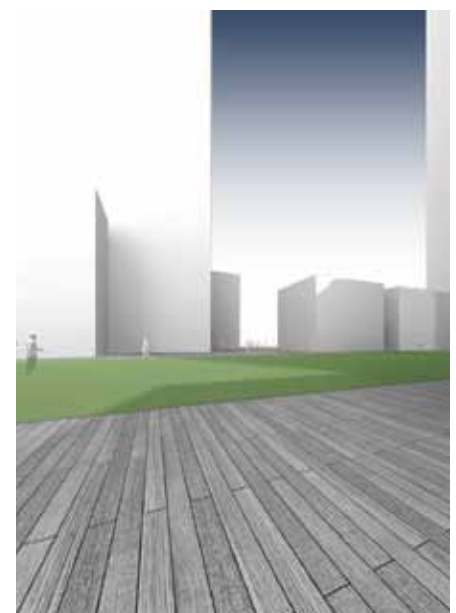
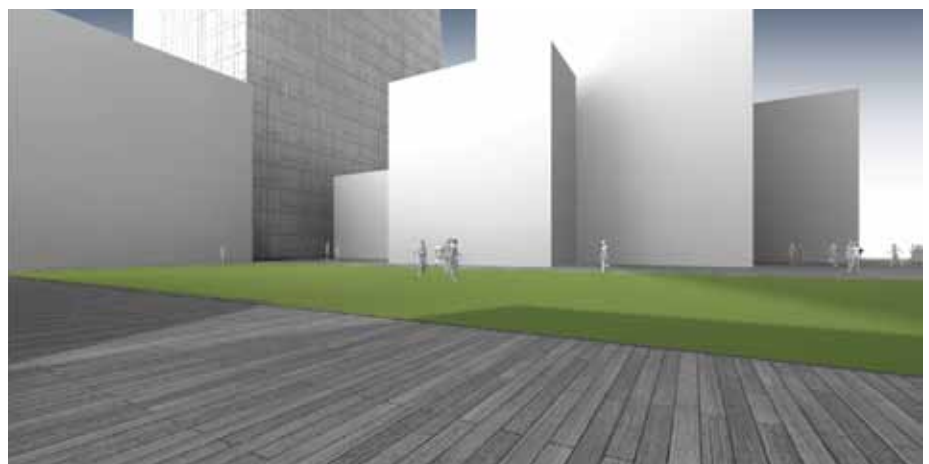
formal relationships developed between the vertical elements of the tower cluster and the horizontal composition of the low-rise base has created a unique experience of a three-dimensional ensemble. This is a challenging new design model for vertical urbanism as a medium of urban regeneration of the city particularly in conditions in which autonomous or semi-autonomous urban complexes are a logical developmental alternative.

Further with respect to the significance of interiority and identity as important design issues, the challenge of formal integration through a volumetric system of vertical and horizontal elements becomes a significant design medium.

Urbanism of Layered Zones

The layering of form and functions in the Midtown/Azrieli center operates to strengthen the sense of identity. Layering operates both horizontally and vertically to establish the design zones of the complex. The vertical zones from the bottom-upward include parking and service, concourse, the street level network, low-rise public roofscape, bridge structures, and tower roofscape. Included in this series of vertical layers are possible interpenetrations from one level to another, for example, by atria. One can begin to understand the design of the complex through the diagramming of these relationships in section.

The horizontal system of layers radiates out from the central core of the complex to provide a diverse series of layers of spatial experience. In the case of Midtown/Azrieli North these layers are more regular at the core and become more adaptively irregular at the periphery. This transition is accomplished by adapting the collaged low-rise block structure to the geometry of the periphery. Thus, the collage technique acts as a flexible planning medium that supports formal adaptability to the geometry and characteristics of the urban surroundings.



Bottom: The functional and formal integration of towers and urban fabric at the site boundary. Source: Moshe Tzur Architects and Town Planners. Rendering by Studio 84 Ltd.

The Public Space Network and Scalar Gradients

The expression of vertical and horizontal path systems are integrated into a total movement network. The public space network at ground level constitutes a complex series of urban form. The plaza, courtyard, street, covered street, arcade, and lane are forms that can be developed as an urban spatial continuity. The network of public space is the center's contribution to the civic experience of the city. The physical and landscape design of this spatial network provides new challenges for the profession of the landscape architect in Israel. It has provided an opportunity to create a landscape urbanism that can convey a sense of place, urban culture and history.

One of the unique urban attributes of the Midtown/Azrieli complex is the provision of the experience of a scalar gradient of elements and spaces from the smallest spaces to the largest skyscraper. This continuous gradient of building and landscape elements and continuities of scale integrates the dynamic spatial experiences area of the complex. We are thus beginning to experience new forms of urban intensity

through the total three-dimensional design of integrated complexes of vertical urbanism.

The formal language of the base is integrated with the formal language of the towers. Spatial intensity is a major attribute of planning with a system of low-rise blocks that accompanies the tower cluster and defines the network of quality public spaces. The spatial intensity and depth of this form of collage urbanism enables the open space network to be modulated by the form and organization of the collage of the system of low-rise blocks.

Urban Life in a Garden Atmosphere

The horizontal blocks of the complex create a variety of urban forms such as shopping streets, covered streets and interior malls, or Galleria. The elements of urban form grant to the complex its unique atmosphere as an urban environment providing for work, dwelling, shopping, entertainment, sport, and food service. The twenty-four hour cycle of activity particularly around work, residential, shopping, food service, and entertainment acts as an urban magnet that creates the life of the complex as an autonomous urban unit. The urban quality of

the open space network will be a significant addition to the civic space of this area of the city. It also will act to attract the flow of visitors and supports local enterprises.

Concourse

While the open space system provides for the function and public use of the exterior spatial network, the concourse provides an underground continuous level that connects the whole complex both vertically and horizontally. It also connects between public transportation, parking, and the street level. The concourse level acts to provide spatial continuity even during inclement weather. Despite it being underground, it can be designed to provide the pleasant, well-lit and well-designed quality that we have become accustomed to in the inventive environments of our shopping urbanism.

The Urban Continuity Between the Complex and the City

The Midtown/Azrieli North Complex will maintain and stimulate future major pedestrian connections with neighboring complexes along urban axes: to the north through Volovelsky Park and the railroad transportation complex, and to the east by



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bridging the Ayalon Highway. The planned pedestrian bridge connections to west will provide an important flow corridor to and from Tel Aviv's major cultural area in the neighborhood of the Tel Aviv Museum. In the south there will be a connection developed to the Azrieli Center; it will enter this important existing urban complex through its planned new addition.

By the very nature of its geographic constraints the autonomous complex tends to develop urban continuity through few, but important and monumental, routes. This approach to the design of few, but major, urban links appears to be a general characteristic of contact between the autonomous urban unit and the neighboring urban pattern.

The Diversity and Future Potential of the Integrated Multi-Functional Urban Complex as a Model of Vertical Urbanism

Each of these urban design concepts can be employed as a design variable. For each of these variables there exists a range of design possibilities. As one begins to identify the integrated multi-functional urban complex as a model of vertical urbanism for the

future, formal possibilities and urban design potential of the model begins to emerge. The Midtown/Azrieli North complex will demonstrate its capability to create a hub of urban spatial intensity even in a problematic developmental scenario such as Tel Aviv, and it will present a model that contains the flexibility to adapt to various urban design conditions as will become clear once construction is completed.

Conceived as a model that integrates these principles into a dynamic formal and functional urban system in which the linked skyscraper cluster is the seminal design element, the future developmental possibilities of this model of vertical urbanism as a design vehicle of urban transformation appears to have great potential. The challenge is to begin to formulate these variables as a system in which the skyscraper cluster acts as the generative medium of the design, and the structure of urban flows acts as an integrative system in the urban context.

As a project, the Midtown/Azrieli North complex will begin the process of urban design experimentation in which the

integrated multi-functional urban complex acts as a flexible model of vertical urbanism. While in recent decades there have been many examples of multi-functional urban complexes, in order to optimize the developmental (as well as formal/structural) attributes of such urban complexes, it becomes essential to understand the interaction of these design principles. This is the frontier of a new systematic definition of vertical urbanism that Midtown/Azrieli North has begun to formulate. Once completed, the project will enable the city's planning authority to study how the design model of the integrated multi-functional complex enables the extension and strengthening of Tel Aviv's existing urban structure.

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