

Building Information





The Odyssey Condominium

Aaron Snyder
Structural Option

Building Information

Site / Location

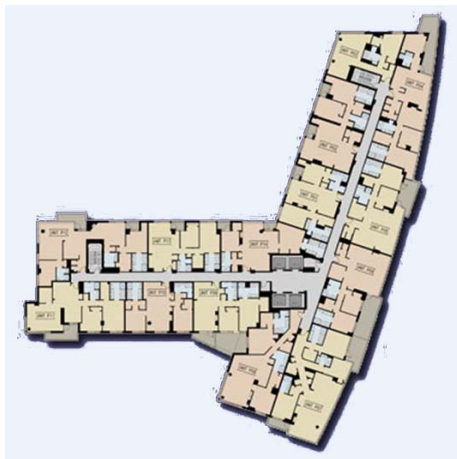
The Odyssey Condominium is located at 2001 15th street outside downtown Arlington, Virginia.

Residential and office buildings of similar height surround the site to the North and West. The building sits on a triangular plot between 15th street and Claredon Blvd with the East edge of the site bordered by N. Scott St shown in the accompanying site plan.



Architecture

The architectural program of the Odyssey is typical of a multi-use residential building with parking and commercial space on the lower levels and residential units throughout a tower structure. The condominium units and suites of a typical floor are depicted in a layout below. Larger two-bedroom suites are located primarily throughout the East (right) tower and extent of the West (left) tower. The units feature comfort amenities, full height windows with a ceiling height of 8'-8" and perimeter drop soffit at 7'-10" containing mechanical duct and sprinkler piping.



The retail and condominium main entry and lobby are made accessible by pedestrian or vehicle through a central courtyard with an accompanying garden. The penthouse level features an outdoor rooftop swimming pool and terrace, a pool lounge, and a state-of-the-art fitness center. A concrete column and steel-beam trellis framework following the curvature of the east elevation stands out on the rooftop as "a bold element" to the building design.



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Building Envelope

The Odyssey's main tower rise from the first floor above the parking garage levels, partially accompanying the retail stores on the north side. The east elevation displays full height aluminum curtain wall systems alternating with strip brick veneers incorporating sliding aluminum punch windows with partially surrounding metal panels. Extending from the condominiums on the East elevation are exposed concrete slab balconies with aluminum railings and mesh infill. The remaining elevations are primarily brick veneer and sliding windows with aluminum frames. The penthouse and mechanical loft are split with metal panel and brick veneers including both aluminum framed punch and strip windows.



Electrical

The Odyssey's power is distributed through two main transformers in the basement vault. Main transformer #1 is a 120/208v 3phase-4w at 45kva. The transformer feeds a 600Amp 3phase-4w C/T Cabinet distributing to 5 Main disconnects switches ranging in 600A, 1000A, and 1200A. Main disconnect switches #1-#4 extend through the building to 2-3 1000A cable tap boxes distributed at adjacent floors for apartment loads. Main disconnect switch #5 is the house panel (MDP-L) with a 600Amp MCB 3phase-4w, 250v and feeds the penthouse mechanical room panel and main electrical room panel. Main service transformer #2 is standard 277/480v 3phase-4w at 45kva. The transformer feeds an 1800-Amp 3phase-4w C/T Cabinet in the adjacent switchgear room through a 24" cable tray. The cabinet feeds 3 main panels/disconnect switches: Main distribution panel with main switch (MDP-1H), Main service disconnect #2, and Emergency Service disconnect switch. Emergency power is provide by a 250KW generator at 277/480v 3phase-4w located in the first basement level adjacent to but separate from the switchgear and transformer vault. The generator feeds the fire pump and emergency service including the elevators with a 400Amp auto transfer switch.



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Lighting

The underground garage is predominantly lit with surface mounted strip florescent lights with T8 lamps. These fixtures are also found in the stairways, trash rooms, electrical closets, and upper level corridors. These lights run off of 277W while the remaining light fixtures found in the building run off of 120W. Lobby spaces have surface light fixtures set in linear groupings to ascent walls and lounge areas. Corridors on the lower levels are lit by wall mounted fixtures partially on emergency circuits to meet safety, fire, and egress requirements. The townhouses and Odyssey condominium units use recessed incandescent lights in the kitchen and closets, and wall mounted fixtures in the bathrooms. The living, bedroom, and dining spaces experience day lighting effects through the curtain-wall windows with track lighting in living spaces.



Mechanical

The Odyssey's mechanical system is designed with several components to complete the entire heating and cooling of the complex. The underground garage has 2 intake and exhaust fans 25,000 - 42,000 CFM each, depending on level. Circulating fans move the air throughout the space with electric unit heaters to control the temperature. The units are heated and cooled with individual water to air heat pumps ranging from 600 - 1800 CFM. A 2-cell cooling tower and several additional AHUs are located on the roof to cool public spaces such as the penthouse exercise room. Also, a 14,000 CFM HVAC unit on the roof supplies 100% outside air for heating and cooling of public corridors throughout the building.