Cape Cod Hospital - New Addition
Design Narration for Cape Cod Commission

TSOI KOBUS DESIGN

Context

The Cape Cod Hospital new cancer center and bed addition is located in the southwest corner of the hospital complex, 187 feet from the Mugar building at its closest point. The Mugar building is located towards the southeast corner of the complex, but not as far south as the new addition. By staggering the two buildings in plan, the patient rooms on the sides facing the opposite building still have mostly unobstructed views of the cape.

Towards the northeast corner of the complex is the main cupola of the original hospital, 384 feet away from the northeast corner of the new building. Finally, the closest point of the highest parapet on the existing main building and entrance, north of the new addition, is about 150 feet.

The top of the penthouse of the new addition is 99'-4" above the 1st floor slab, which is at the same level as the existing hospital. This height is 6 inches less than the top of the Mugar penthouse, which is 99'-10". The top of the flagpole on the Mugar roof is 27'-3" taller than the new addition. The cupola dome is 86' high, which is 13'-4" less than the height of the new building, and the top of the parapet on the existing main building is at 55'-8".

The new addition is most visible from Lewis Bay Rd., where the hospital's Gleason House and landscaping will remain in the foreground, softening the view of the new building from the street.

Volumetric Design

The addition is composed of three functional volumes: 1) the cancer center on the 1st and 2nd floors, 2) inpatient beds on the 3rd, 4th and 5th floors, and 3) an education center on the top floor along with the penthouse, which screens all of the mechanical equipment from view. The three distinct volumes stack vertically to provide security separation as well as zoned operation and organized patient circulation.

The geometric design follows the functional composition while presenting a somewhat faceted impression to the neighborhood. Instead of the simple extrusion of the footprint, the new building expresses the shape of each functional block with a distinct profile while still appearing as a unified composition.

The 1st floor cancer center has a rectangular profile and the largest footprint, acting as a podium for the new building. The 2nd floor detaches from the podium below and floors above to downscale the massing. The entry and lobby welcome patients and their families with a human-scaled canopy and vestibule.

The main body of the addition, which "floats" above the recessed, glass-enclosed 2nd floor, creates the illusion of lightness. These three inpatient floors have distinct north

and south façades. The north façade, which is facing the existing campus, has a flat, calm face to blend in with the rest of the campus. However, the south façade is intentionally bent with an open "V" shape, which not only metaphorically welcomes visitors with outstretched arms, but also brings elongated vistas into the patient rooms.

The "eyebrow" shape of the canopy at the top of the building is the formal pinnacle of the design. It not only evokes the lighthouse of Cape Cod Healthcare's identity; it also stands as a beacon in the community for healing.

Material Composition

The material palette of the building is inspired by nature but also serves a sustainable purpose. Clay-based terracotta is a particularly natural, environmentally friendly, and robust material that maintains its appearance after many decades. The terracotta panels dominate the façade, respecting the existing hospital context of brick and stucco. There are two different colors of terracotta. A medium blue-grey terracotta envelops the plinth of the building, giving it weight and connecting it to the earth. Limestone-colored terracotta clads the majority of the new building, expressing lightness and, from a distance, helping it fade into the Cape horizon.

The wood-look, aluminum-panel soffit of the "eyebrow" on the top floor highlights its nature-based design while being able to withstand Cape Cod's harsh environment. This material is repeated at the main-entrance canopy and 2nd floor exterior soffit. Patients and visitors experience this familiar, "warm" material upon entering the building and while enjoying the 2nd-floor roof terrace.

The patient and visitor experience is further enriched on the inpatient bed floors by having natural light and views at the ends of the primary corridors. These windows are expressed on the exterior by a vertical "light slot" framed by blue aluminum panels that help to integrate the three patient bed floors while reflecting light and color into the corridors.

Fenestration Design

The fenestration design in the addition is a composition of solid and void forms. The 2nd floor of the cancer center and 6th-floor education center are completely transparent with continuous glass facades. These horizontal voids are connected to the vertical west-facing "light slot", defining the edge of the solid forms.

The 1st floor of the cancer center has minimum window openings due to the location of the two concrete-enclosed linear accelerators in the southwest corner. The repetitive window pattern on the north and east facades reflects the cancer center clinical layout. The south and north entries are formed with glass-enclosed volumes to welcome patients and families with natural light.

The 3rd through 5th floors contain both intensive care and medical/surgical inpatient rooms. These two types of inpatient rooms have dissimilar modules because of the difference in Department of Public Health requirements, equipment demands, and patient care. Therefore, a randomized window pattern was developed to accommodate the programmatic needs, allowing all three inpatient floors to have a consistent fenestration without compromising the design integrity.

Lighting and Landscape Design

All new exterior lighting will be downlighting and dark-sky compliant. The maximum height of proposed light poles will be less than 20 feet.

The site design will use native plants found in surrounding natural areas and materials that are contextually appropriate and suited to the site. Planting is being designed to increase biodiversity, reduce potable water use for irrigation, increase drought tolerance, and minimize maintenance requirements, and it will provide habitat and create connections between the site and its surrounding ecosystems. The site design will increase the area of open space on site and maintain existing open space.

A central open space proposed at the main entry is a large "island" that extends from Lewis Bay Rd. to the primary porte cochere on the south side of the new building. This area will be a "rain garden", planted with native plants and capturing rainwater that will be released gradually over time. The 2nd-floor patient terrace will be planted with shrubs and small trees on mounds to serve as a wind screen and shading for occupants. Evergreen shrubs will be planted along the edge of the 6th-floor terrace.

The site design provides planted buffers around the entire perimeter of the site and within the interior of the campus, and the majority of the mature trees will be preserved.