

Critical Care Unit

Healthcare Design

INDE 403

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Inspirational Images



Materials, furniture, and artwork all contribute to the users' experience within a space, which leads to the ultimate goal of a positive experience. This can be achieved by creating a common theme throughout a unit.

Research & Evidence Based Design

Layout

Some suggestions for design strategies to achieve a successful critical care unit include keeping clear paths to move equipment in and out of rooms, and orienting the patient beds towards a window to promote healing, while still allowing them to be viewed by staff from a nurses station. Providing large windows for staff and families to view nature has been shown to reduce stress. Wayfinding and an intuitive floor plan can make it easier for visitors and staff to navigate the unit. [The Center...,2015]

Materials

According to FGI, flooring with no pattern or large patterns can help reduce falls, as well as color contrast between walls and floors. Wall finishes should be washable, smooth, and have smooth seams. The use of brighter colors such as blue will help to provoke positive feelings. To help reduce falls and or stress, using supported paths, non-glare finishes, and seamless transitions all can help create a safer critical care unit. [American...,2018].

Mission Statement

Tranquility is the state of being calm, worry free, and serene. Beaches are an example of this for many people, and while a critical care unit may seem anything but that, the goal of this unit is to create spaces that patients, staff, and visitors will feel at ease and tranquil.



Mood Board

This floor plan illustrates the layout of a medical facility, featuring a central corridor system connecting various functional areas. The plan includes the following rooms and their respective square footages:

- Top Section:**
 - Bariatric Critical Care Room: 335 SF
 - Critical Care Room: 335 SF
 - Critical Care Room: 335 SF
 - Critical Care Room: 335 SF
 - Respite Room: 154 SF
 - Staff Lounge: 193 SF
 - Critical Care Room: 335 SF
 - Critical Care Room: 335 SF
 - Critical Care Room: 335 SF
 - Critical Care Room: 335 SF
 - Toilet Room: 60 SF
 - Toilet Room: 60 SF
 - Toilet Room: 60 SF
 - Toilet Room: 60 SF
 - Toilet Room: 60 SF
 - Toilet Room: 60 SF
 - Staff T.R.: 83 SF
 - Staff T.R.: 83 SF
 - Staff Storage: 129 SF
- Left Wing:**
 - Equipment Supply Room: 240 SF
 - Patient Elevator
 - Nurses Station: 179 SF
- Central Core:**
 - Med Safety Zone: 72 SF
 - Trash Room: 68 SF
 - Clean Supply Room: 140 SF
 - Storage: 137 SF
 - Supervisors Office: 126 SF
 - On Call Room: 98 SF
 - T.R.: 112 SF
 - On Call Room: 98 SF
 - Mechanical Room: 83 SF
 - Server Room: 54 SF
 - Soiled Work Room: 136 SF
 - Environment Service Room: 68 SF
 - Med Safety Zone: 71 SF
 - Janitors Closet: 65 SF
 - Nourishment Area: 75 SF
- Right Wing:**
 - Nurses Station: 178 SF
 - Patient Elevator
 - Equipment Supply Room: 240 SF
- Bottom Section:**
 - Toilet Room: 60 SF
 - Critical Care Room: 335 SF
 - Critical Care Room: 335 SF
 - Critical Care Room: 335 SF
 - Critical Care Room: 335 SF
 - Toilet Room: 60 SF
 - Toilet Room: 60 SF
 - Toilet Room: 60 SF
 - Toilet Room: 60 SF
 - Toilet Room: 60 SF
 - T.R.: 106 SF
 - T.R.: 106 SF
 - ADA T.R.: 86 SF
 - Multi-Purpose Room: 211 SF
 - Consult Room: 94 SF
 - Waiting Area: 875 SF
 - Reception: 182 SF
 - Vending: 38 SF
 - Visitor Elevator
 - Visitor Elevator
 - Critical Care Room: 335 SF
 - Critical Care Room: 335 SF
 - Critical Care Room: 335 SF
 - Bariatric Critical Care Room: 335 SF
 - Toilet Room: 60 SF
 - Toilet Room: 60 SF
 - Toilet Room: 60 SF

Scale: 1/16" = 1'-0"

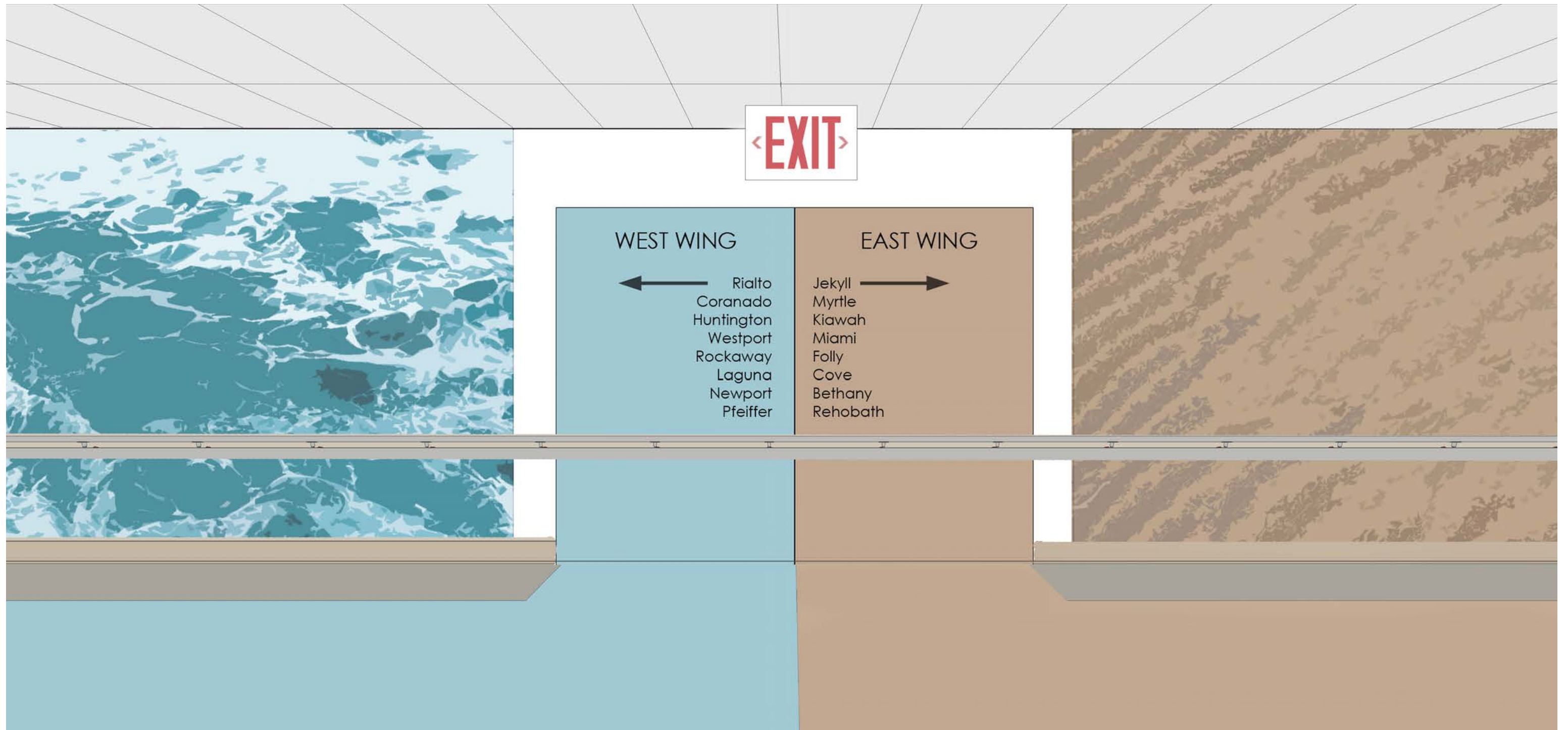
Orientation: North arrow pointing towards the top of the plan.



Wayfinding Through Flooring



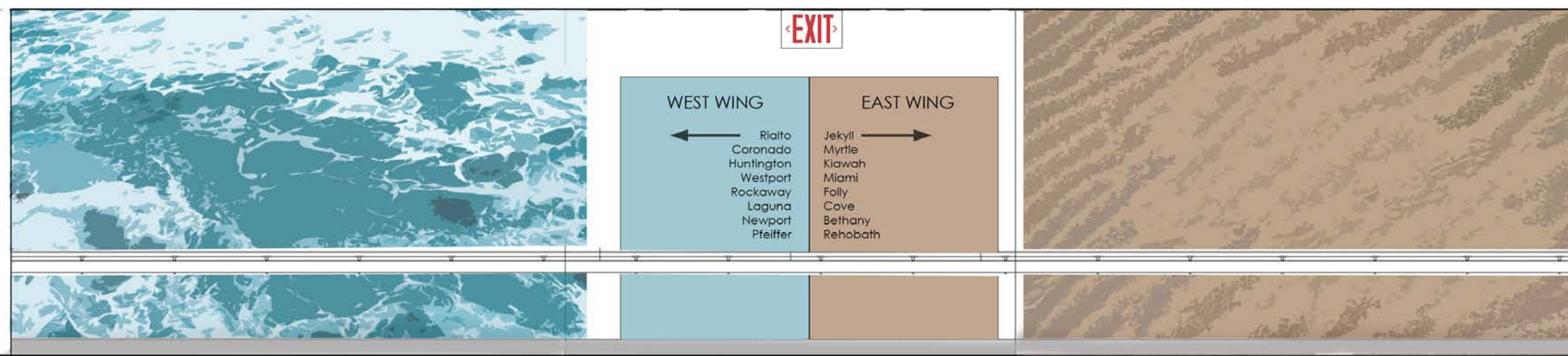
The use of different colored LVT helps families and visitors follow a path leading them to patient rooms. Armstrong's Mixer Champagne leads to the East wing, while Armstrong's Mixer Blue Lagoon leads to the West wing. Since the floor plan is configured in a racetrack shape, this also helps with wayfinding.



Wayfinding Through Signage

Wayfinding begins upon leaving the waiting area. The colored signage continues down into the flooring where the colors will lead guests in the right direction.

Cool tones of blue materials are implemented throughout the West wing while tans and neutrals are primarily used throughout the East wing.

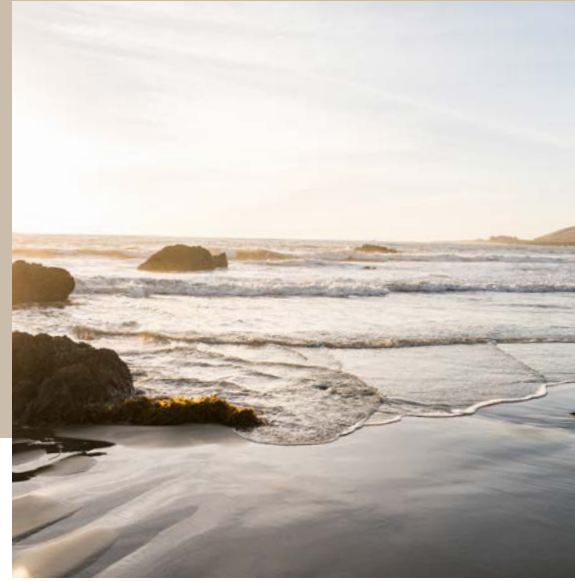
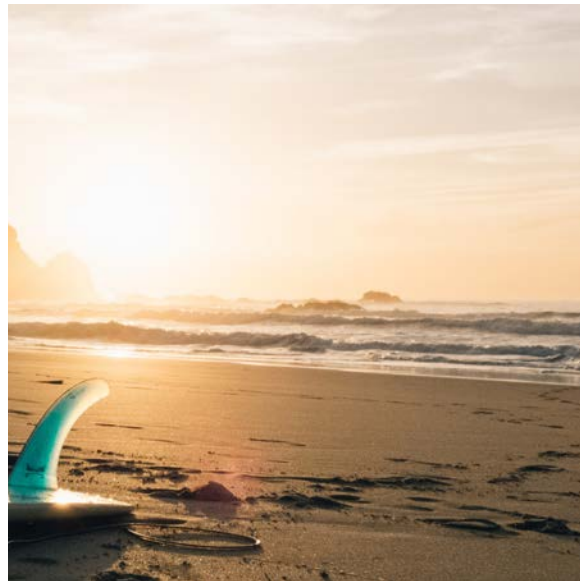


SCALE: 1/4" = 1'-0"



SCALE: 1/8" = 1'-0"

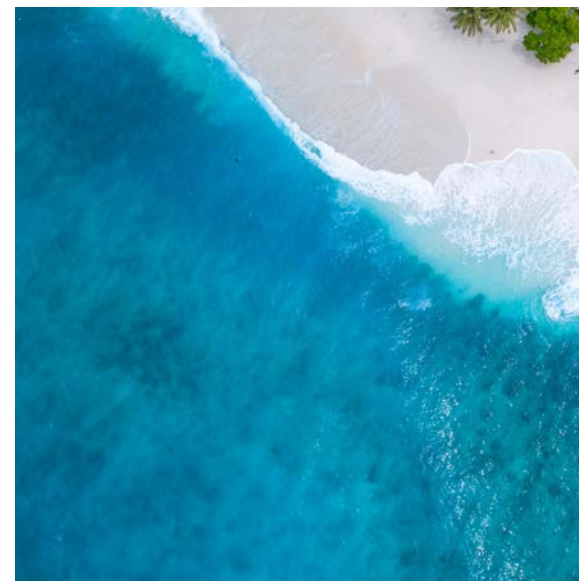
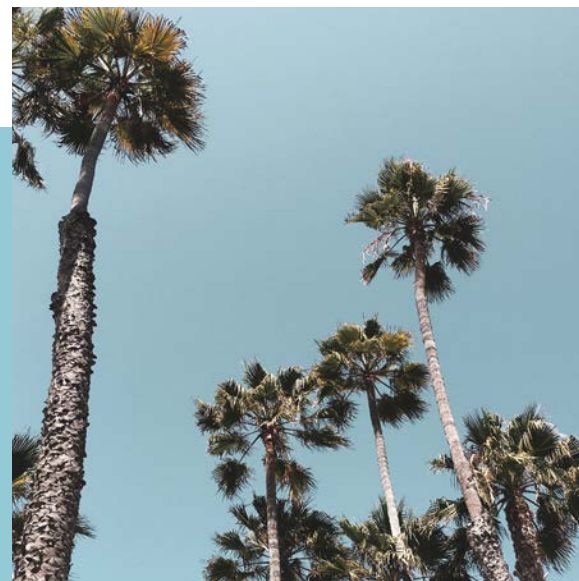
Wayfinding Elevation



East Wing East Coast

Artwork of natural elements has been shown to reduce stress, promote healing, and provide a sense of place. Murals specific to the beach locations are used throughout the corridors to help achieve this, and further contribute to giving each room its own identity.

West Wing West Coast



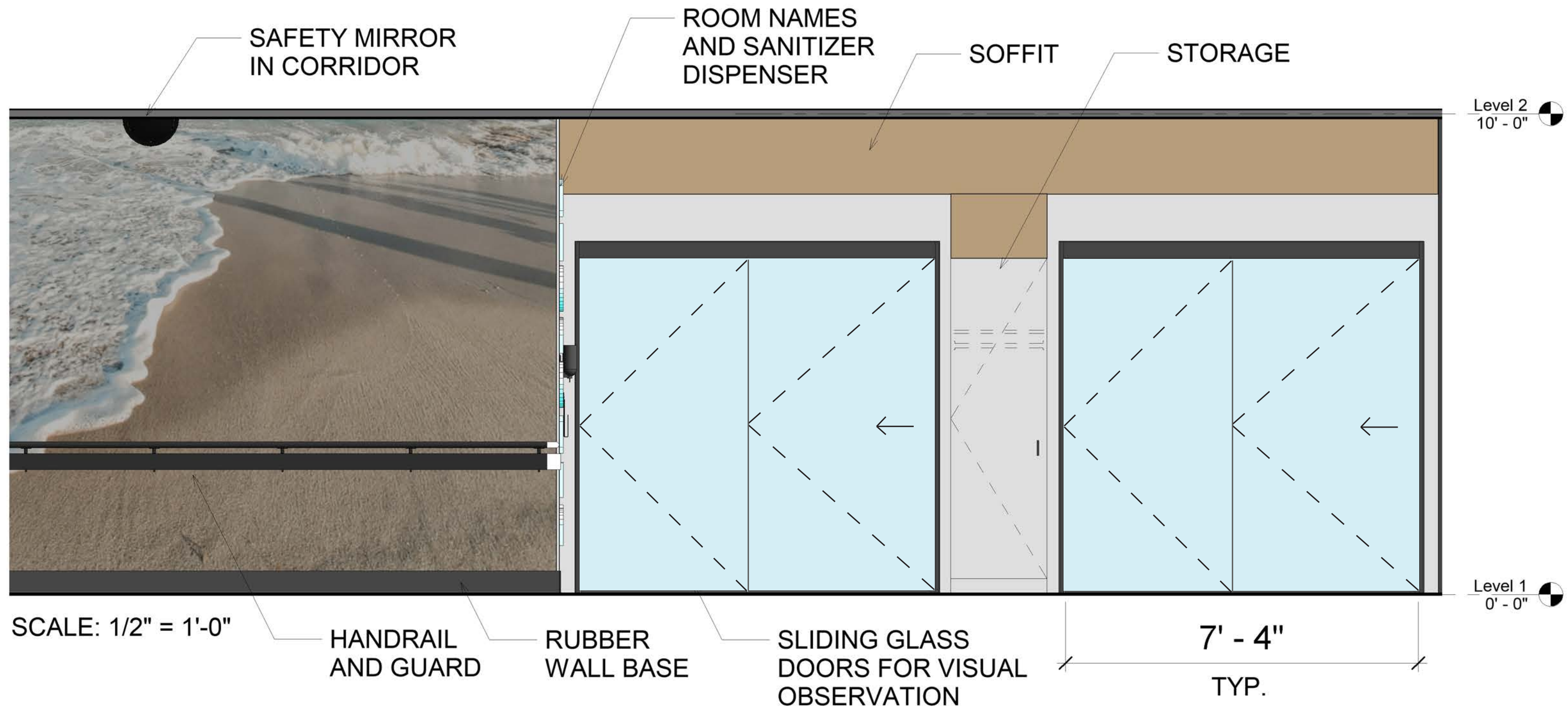


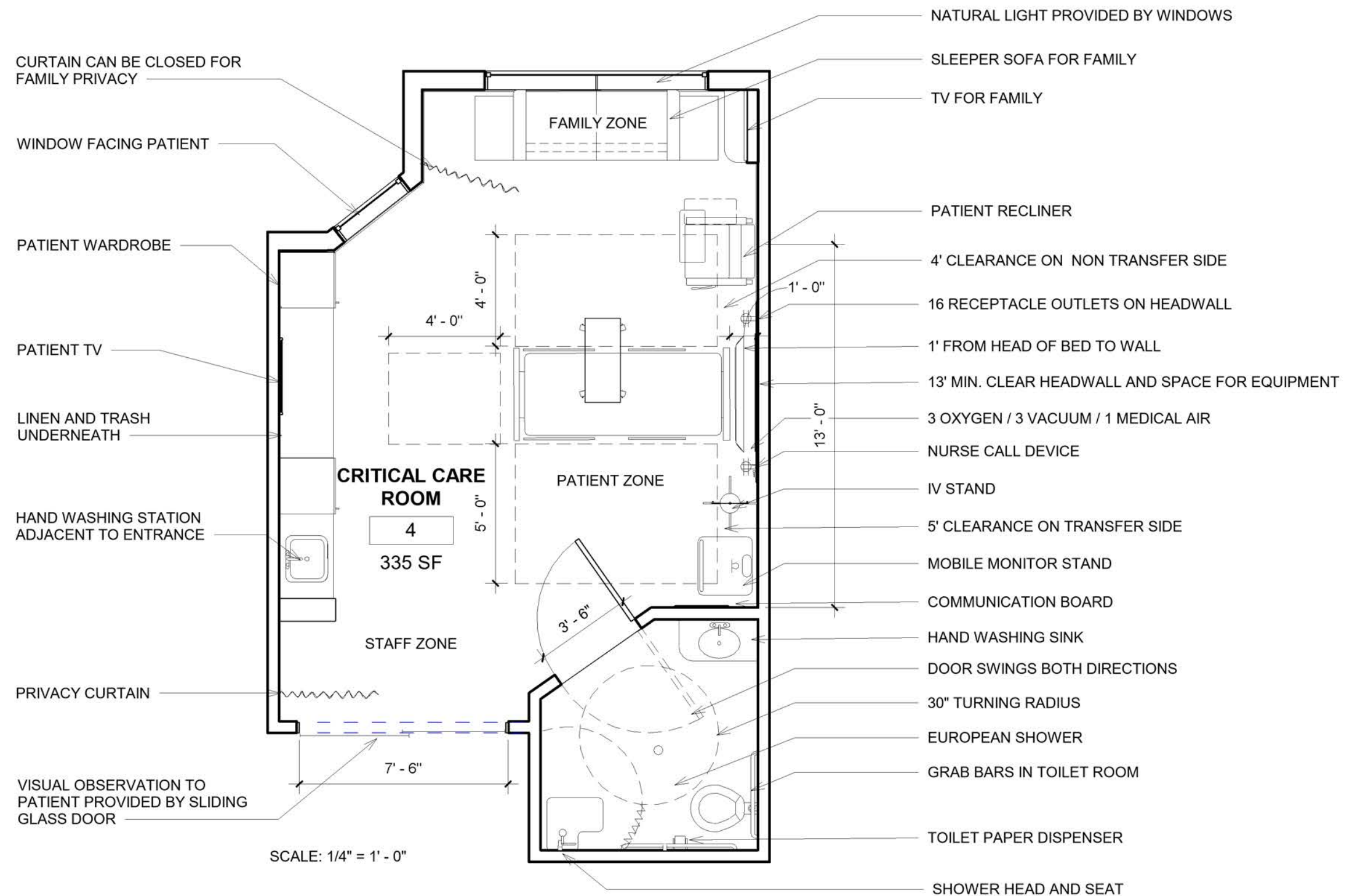
Wayfinding Through Room Names



Patient rooms in the west wing are named after beaches on the West Coast, while patient rooms in the east wing are named after beaches on the East Coast. This gives each room its own identity and is intended to make it easier to remember than numbers.

Patient Room Corridor Elevation





Patient Room Floor Plan with FGI Requirements

Patient Room View From Front



Patient Room View From Back





West Wing Centralized Nurse Station

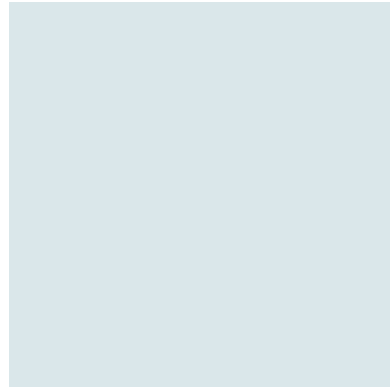


East Wing Centralized Nurse Station

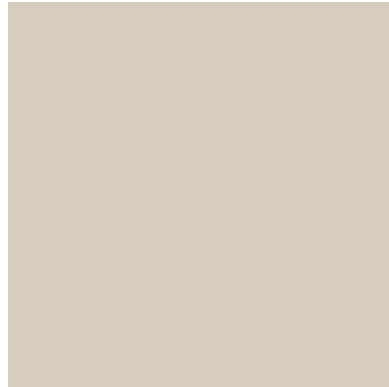
Patient Room Finishes



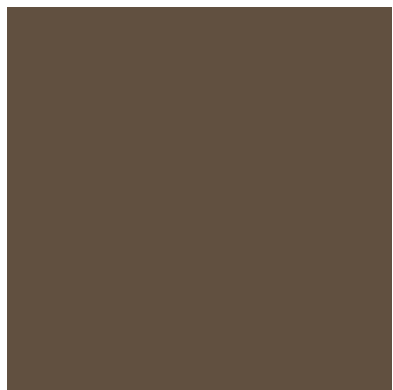
SW6510



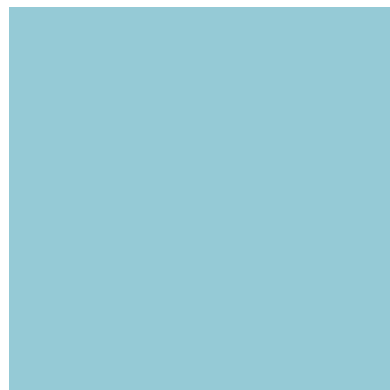
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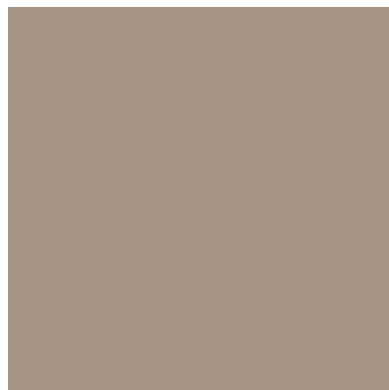
SW7036



SW7041



SW6047



SW7508

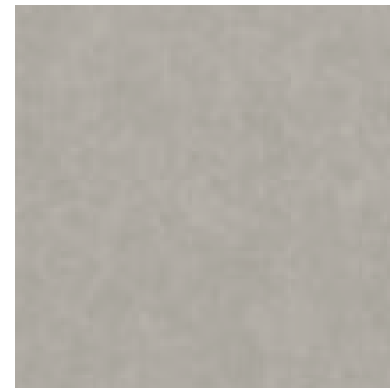
Various shades of paint by Sherwin Williams are used throughout the patient rooms on the walls and soffit. Using an eggshell finish will reduce glare, while also allowing for easily cleanable surfaces.



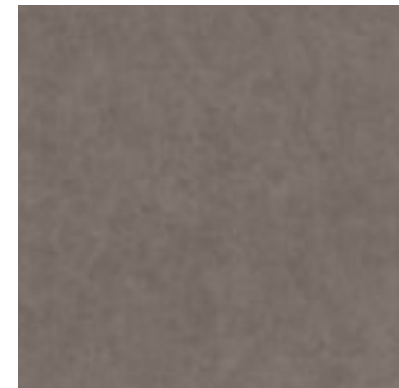
Accessories
Chemetal, Brushed Aluminum



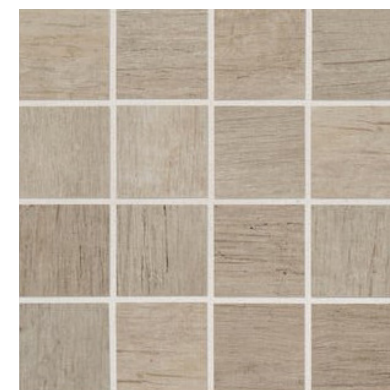
Countertops
Corian, Sandstone



Flooring
LVT – Armstrong, Club Soda



Flooring
LVT – Armstrong, Root Beer Float

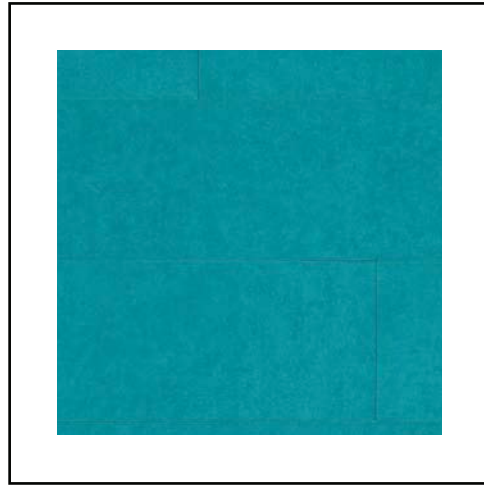


Toilet Room Flooring
Tile, Balboa Beige

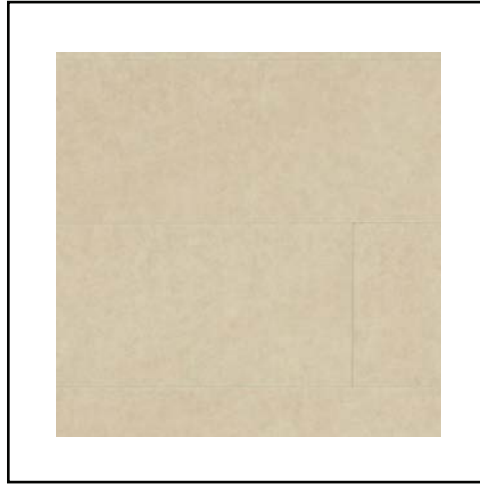


Casework
HPL – Wilsonart, Cocobala

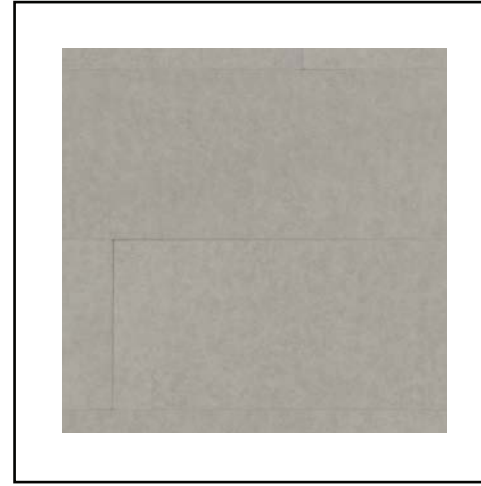
Public Spaces Finishes



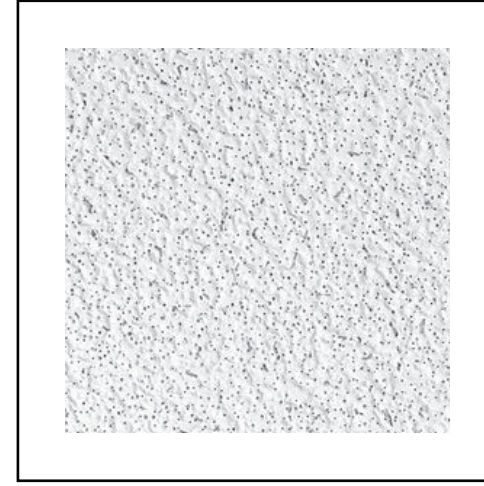
Corridor Flooring
LVT- Armstrong, Blue Lagoon



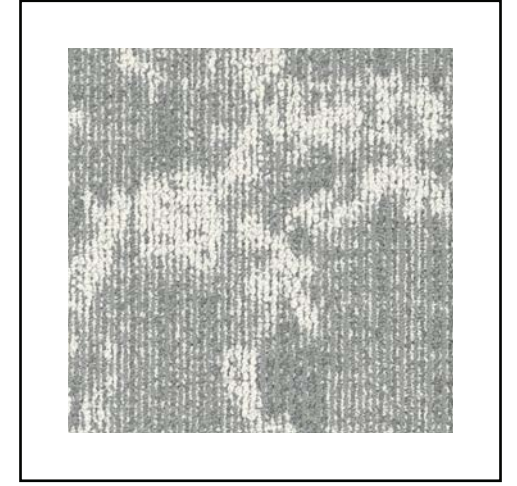
Corridor Flooring
LVT- Armstrong, Champagne



Corridor Flooring
LVT- Armstrong, On the Rocks

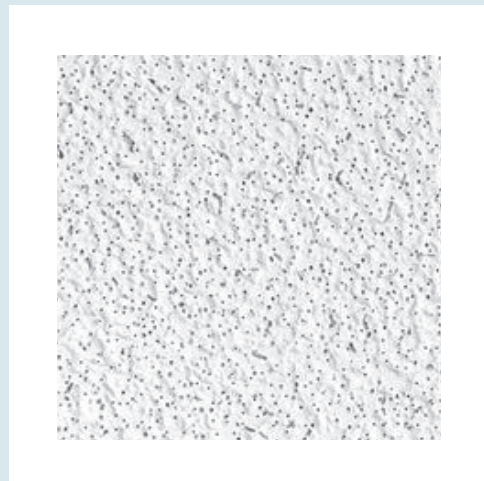


Ceiling
2x2 ACT

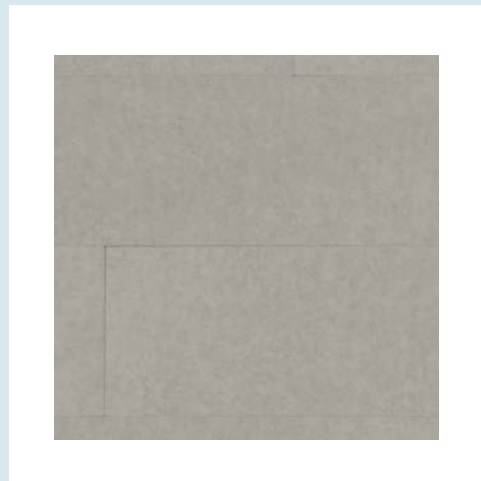


Waiting Area Flooring
Carpet - Mohawk, Chitalpa

LVT is an appropriate choice because of its durability, as equipment and foot traffic are a big factor of its use. Carpet is used in the waiting area to absorb sound and reduce the noise level.



Ceiling
2x2 ACT



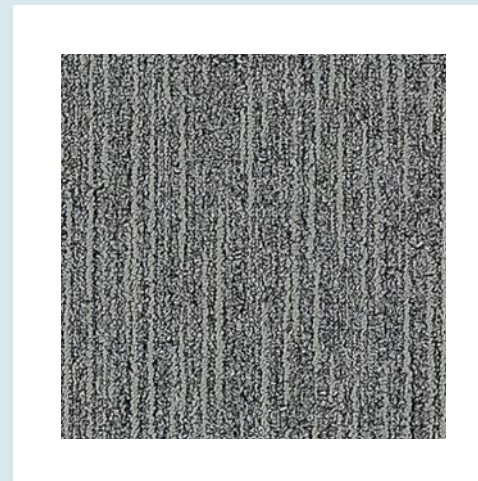
Corridor Flooring
LVT- Armstrong, On the Rocks



Accessories
Chemetal, Brushed Aluminum



Countertops
Corian, Sandstone



Nurses Station Flooring
Carpet - Mohawk, Light Slate

Staff & Support Spaces Finishes

The use of carpet near the nurses stations, using acoustical tiles for the ceiling, and eliminating the use of metal drawers and racks all help to reduce noise levels throughout the critical care unit [Hamilton & Sheply, 2015].

Evidence Based Design Through Furniture

“...Research reveals that furniture can play a role in eliminating patient harm and improving the healthcare experience for patients, their families, and caregivers.”

– Eileen Malone & Barbara Dellinger
[Furniture Design Features and Healthcare Outcomes]



Reduce surface contamination linked to healthcare associated infections:

Surfaces are bleach cleanable and seamless, while upholstery is also bleach cleanable, nonporous and smooth to prevent microbial growth.



Reduce patient falls and associated injuries:

All seating options include armrests, and are sturdy enough to not be easily tipped over. The patient recliner supports foot position changes and none of the furniture has sharp or hard edges.



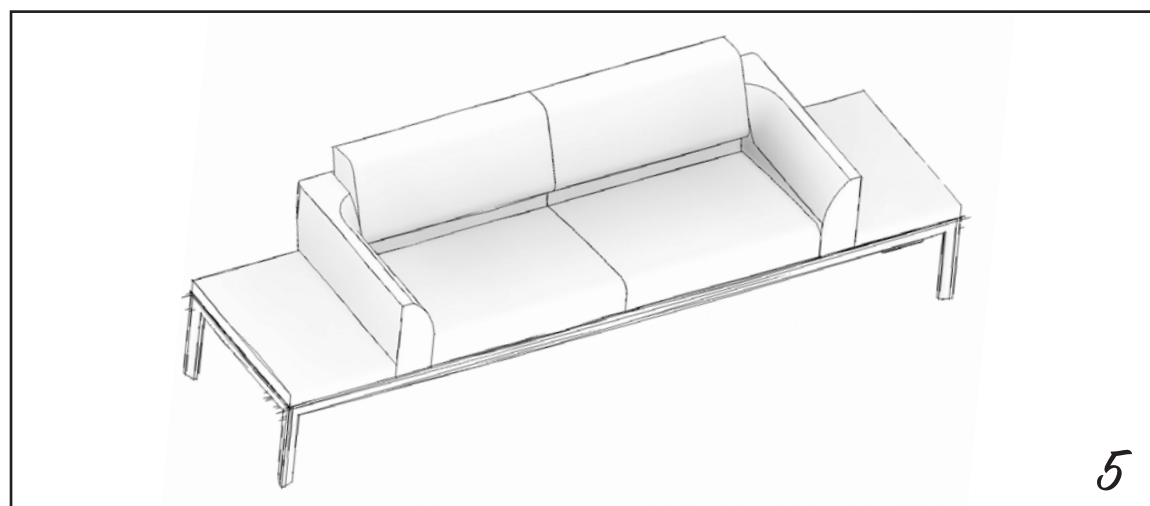
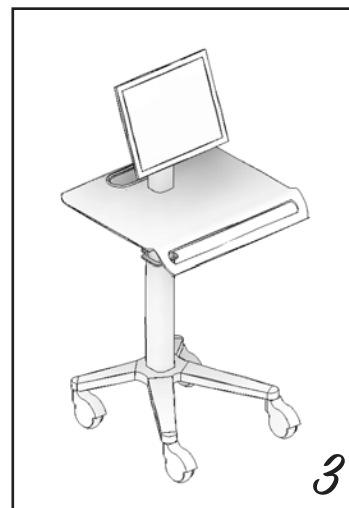
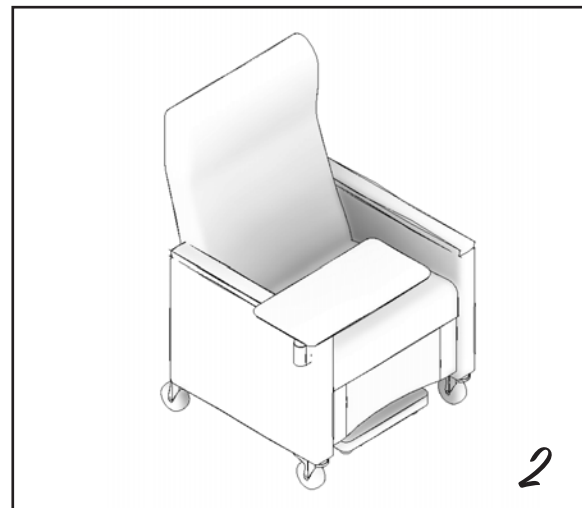
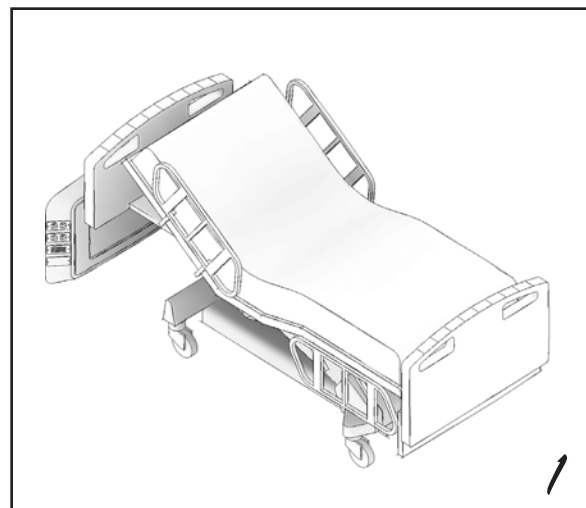
Improve communication and social support for patients and family members:

Within the social space for families, multiple styles of seating are provided along with breaking those seating areas up into smaller groups that are semi-private, and spaces for interacting with other families.



Improve staff effectiveness, efficiency, and communication:

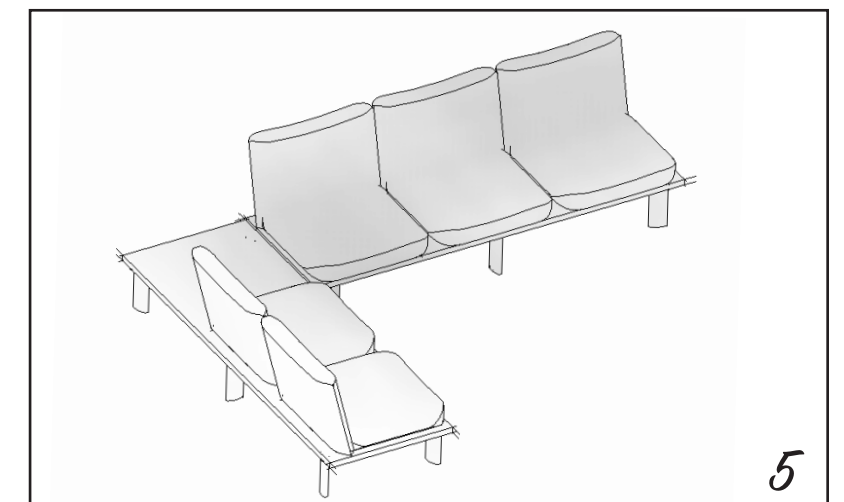
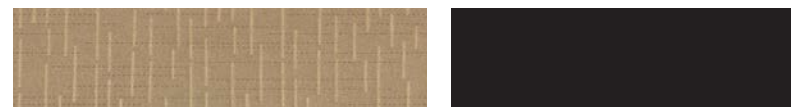
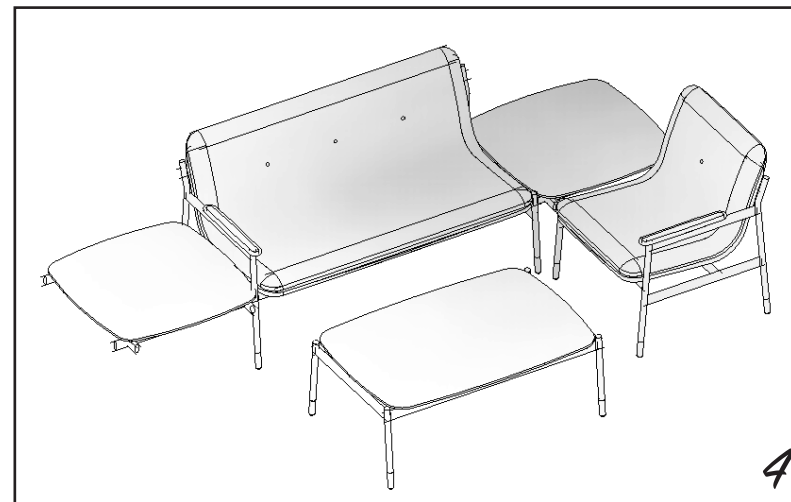
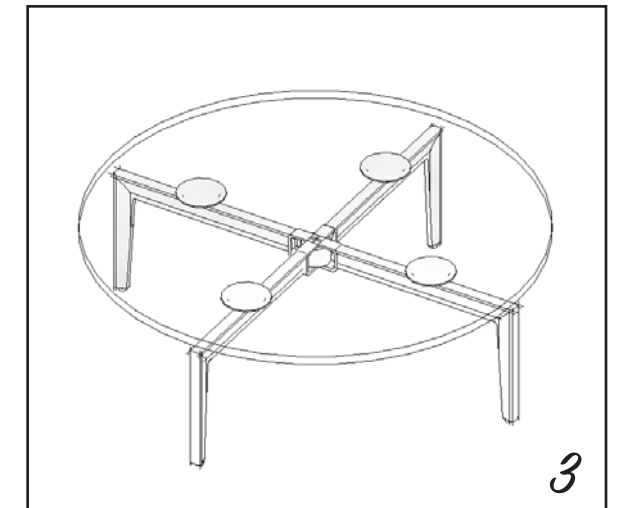
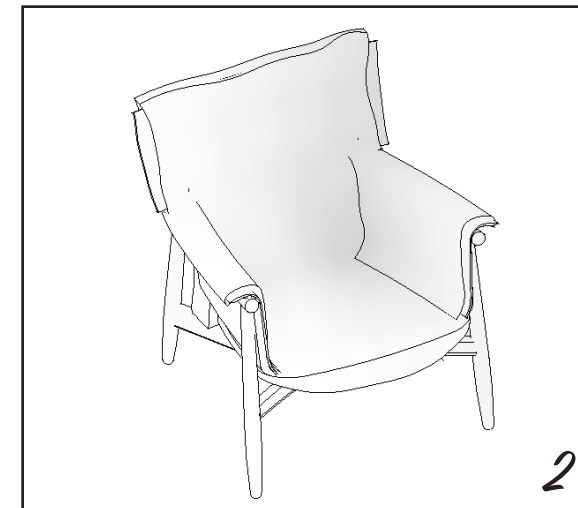
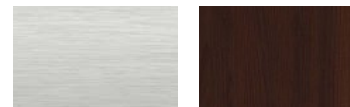
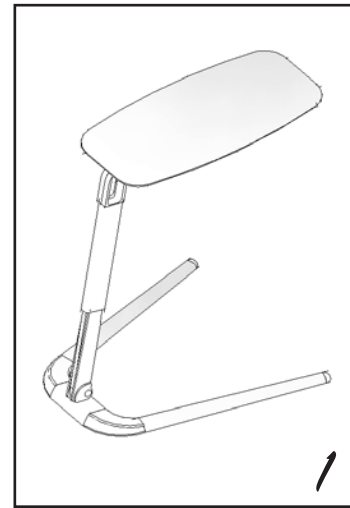
The chairs at the nurses stations are height adjustable in order to accommodate ones ergonomic needs. The upholstery on seating in the respite room and at nurses stations are all soft in order to absorb sound.



- 1* Hill-Rom 405 Hospital Bed
- 2* Steelcase Mineral Recliner
- 3* Steelcase Pocket Mobile Worksurface
- 4* Hill-Rom Overbed Table
- 5* Steelcase Surround Sleeper Sofa

Patient Room Furniture

- 1 Steelcase Coalesse Free Stand
- 2 Steelcase Coalesse Embrace Lounge Chair
- 3 Steelcase Turnstone Bassline Table
- 4 West Elm Brighton Lounge
- 5 West Elm Boardwalk Seat



Public Area Furniture



Waiting Area & Reception

Sources

- American Society for Healthcare Engineering. [2018]. *Guidelines for design and construction of hospitals and outpatient facilities*. Chicago, IL.
- The Center for Health Design. *Intensive Care Patient Room Annotations*. [2015].
- Hamilton, D. K., & Shepley, M. M. C. [2015]. *Design for critical care: an evidence-based approach*. London: Routledge
- Malone, E., & Dellinger, B. [2011]. *Furniture Design Features and Healthcare Outcomes*.
- Schulz, B. [2019]. MCD. *Revamping Critical Care*. Retrieved from <https://lsc-pagepro.mydigitalpublication.com/publication/?m=55877&i=637053&p=30&ver=html5>

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