

#### introduction

Today's fight against the invisible threat of COVID-19 poses a new set of challenges that require quick, concise and innovative solutions. This is especially true for spaces of care and healing, though many of the concerns that need to be addressed into those spaces can also translate to spaces for low to moderate risk employees.

To address these challenges, it is important to think not only of aesthetics, but of all functional design considerations to create safe, comforting environments. These considerations include cleanability, durability, practicality and technology. The integration of these considerations is continuously evolving, and it is imperative during these trying times that designs are revisited and re-examined for improvements and that future projects adopt these design considerations with adaptability in mind. Additionally, spaces of care and healing must still embrace the importance of beauty and design in order to achieve a much needed sense of order and calmness, especially in times of uncertainty.

The strategies and solutions presented in the following report can be adapted to the unique needs of each healthcare system or employer. Some of the ideas presented can be implemented quickly and seamlessly to existing spaces to address immediate COVID-19 concerns, while others may influence new design, maintenance and infrastructural standards.

"Design acknowledges change. Its meaning encompasses change in our times. To design is to 'create order and to function according to a plan.' The notion of change and design move along the same path."

- Sara Little Turnbull
Inventor of 3M's N95 mask



This is an interactive <u>Adobe Acrobat PDF</u>, please refer to the menu on the bottom of the page for navigation.

#### table of contents

click title to navigate

INTERIOR DESIGN CONSIDERATIONS	
ENTRANCE & WAITING	4
OUTPATIENT CLINICS	6
INPATIENT ENVIRONMENTS	9
WORK ENVIRONMENTS	12
STAFF SUPPORT SPACES	15



# interior design considerations

INFECTION PREVENTION	Prevention of viral, bacterial, and fungal infections through hand sanitation zones and cleaning protocols.
MATERIALITY	Finish selection should be made considering many different factors such as cleanability and durability, not aesthetics alone.
COMMUNICATION	Clear and concise signage should be displayed to communicate current facility protocols and recommended guidelines.
TECHNOLOGY	Using technology to offer alternative methods of delivering care, provide innovative ways to communicate, and maximize hands-free interactions.
NAVIGATION	Directional elements tied into the design of the space serve as an easy to comprehend guide to navigate throughout a facility.
PROXEMICS	Decompression of dense spaces can be achieved by reducing seat counts and by distancing users from one another.
STORAGE	Sufficient storage should be provided for both personal belongings as well as for protective equipment and disinfectants.

## entrance & waiting



NFECTION PREVENTION



MATERIALITY



COMMUNICATION



TECHNOLOGY



NAVIGATION



PROXEMICS



STORAGE



Shady Grove Fertility Clinic & Surgery Center Rockville, MD

## entrance & waiting



INFECTION PREVENTION



MATERIALITY



COMMUNICATION



TECHNOLOGY

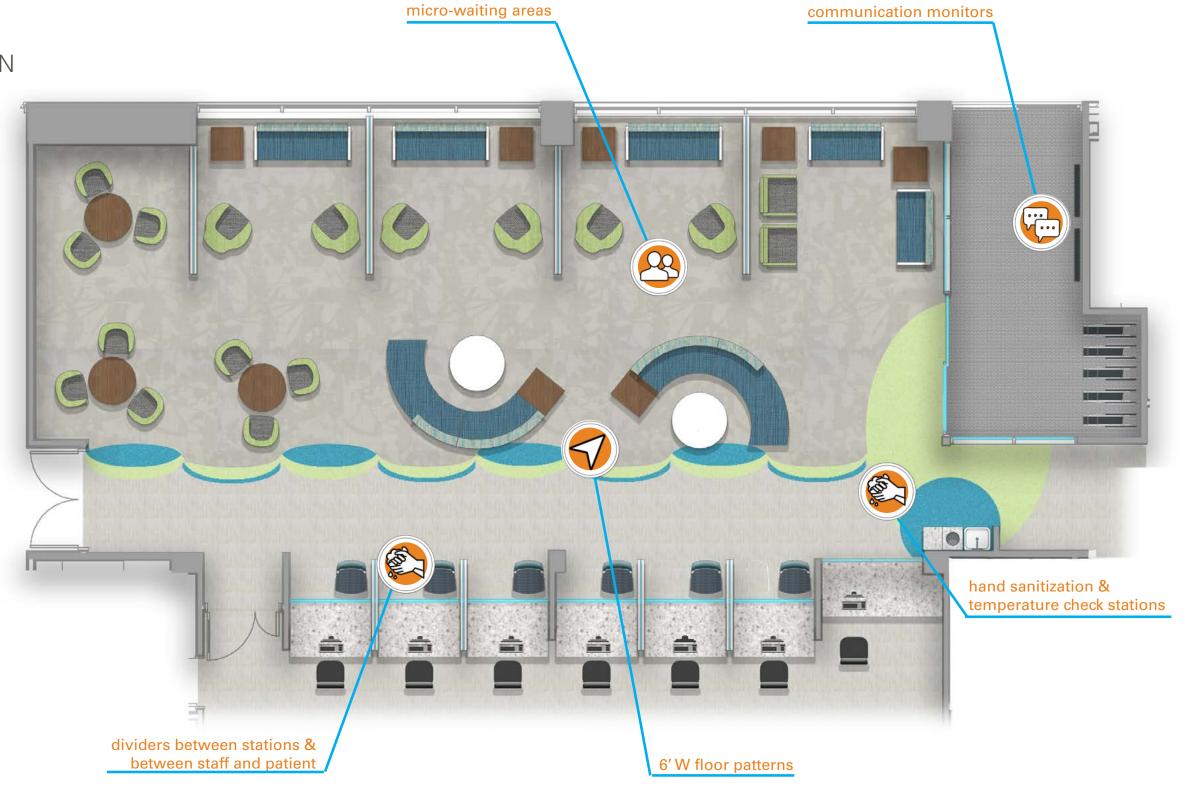


NAVIGATION



PROXEMICS





# outpatient clinics



INFECTION PREVENTION



MATERIALITY



COMMUNICATION



TECHNOLOGY



NAVIGATION



PROXEMICS



STORAGE



Mercy Medical, Sister Caritas Cancer Center Springfield, MA

## outpatient clinics



INFECTION PREVENTION



**MATERIALITY** 

decentralized vitals & charting



COMMUNICATION



TECHNOLOGY



NAVIGATION



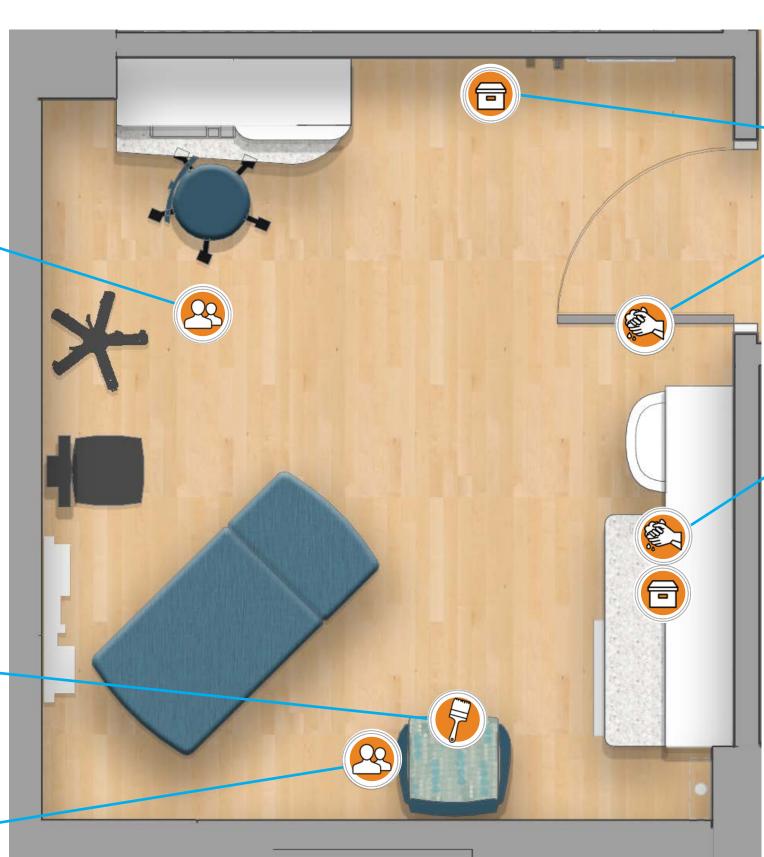
PROXEMICS



STORAGE

furniture with nonporous shell & coated upholsteries

> create social distance between patient & staff



hooks for personal belongings

privacy door swing to eliminate need for fabric curtain

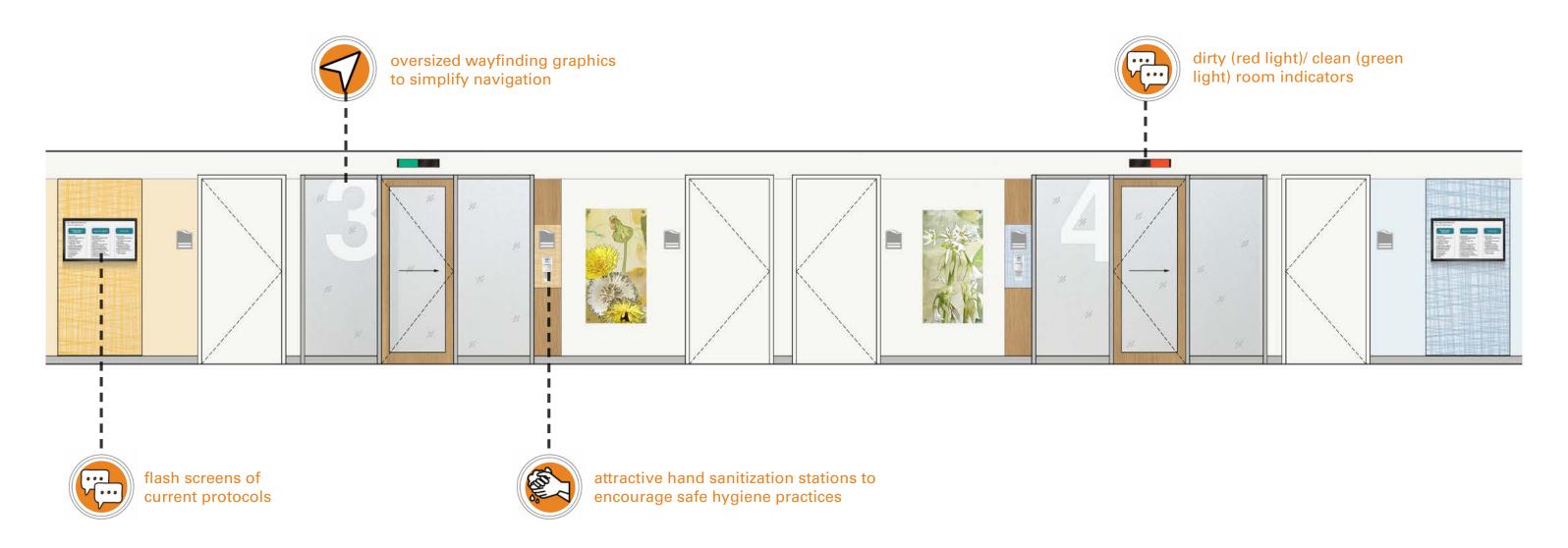
hand wash station & PPE storage

table of contents

e4harchitecture.com

e4h ENVIRONMENTS FOR HEALTH ARCHITECTURE

#### outpatient clinics





INFECTION PREVENTION



COMMUNICATION



NAVIGATION



MATERIALITY



TECHNOLOGY



PROXEMICS



## inpatient environments



NFECTION PREVENTION



MATERIALITY



COMMUNICATION



TECHNOLOGY



VAVIGATION



PROXEMICS



STORAGE



University of Vermont Medical Center Burlington, VT

## inpatient environments



INFECTION PREVENTION



MATERIALITY



COMMUNICATION



TECHNOLOGY

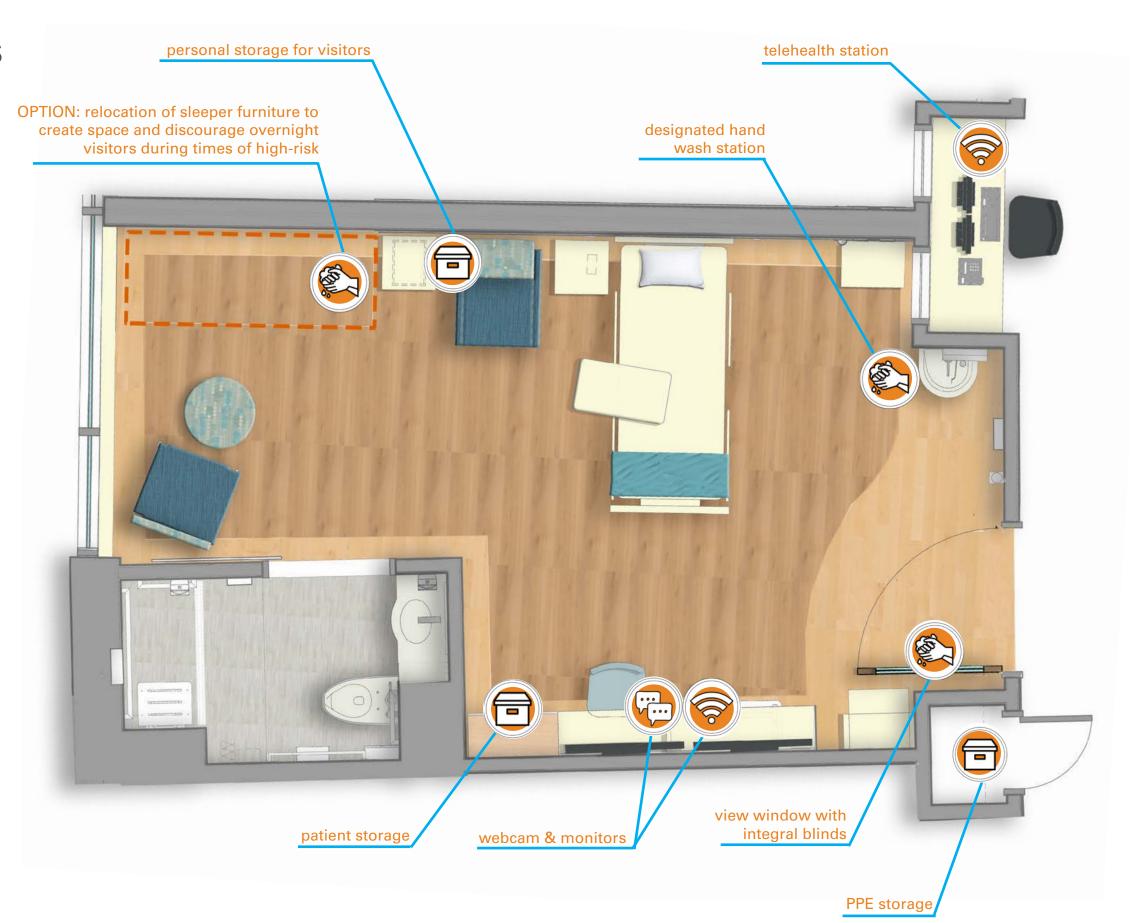


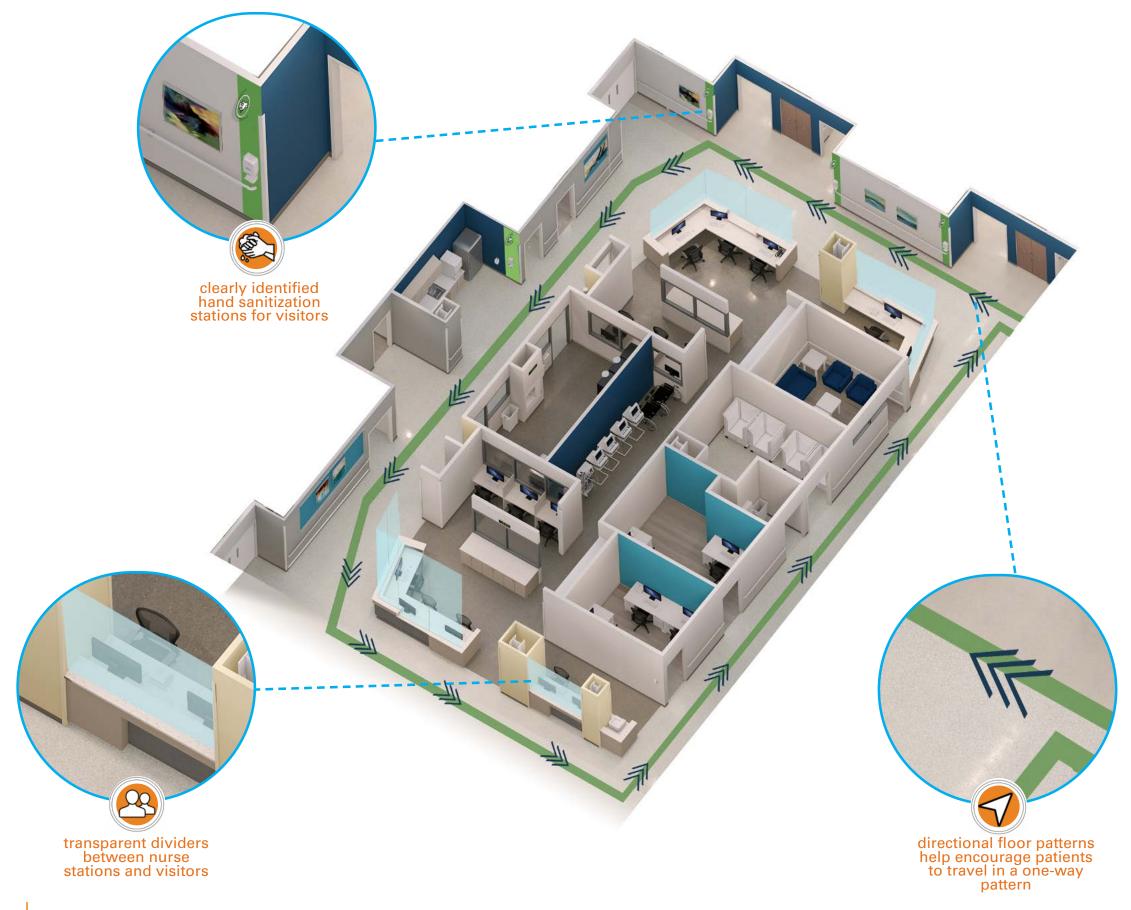
NAVIGATION



**PROXEMICS** 







## inpatient environments



INFECTION PREVENTION



MATERIALITY



COMMUNICATION



TECHNOLOGY



NAVIGATION



PROXEMICS



## work environments



INFECTION PREVENTION



MATERIALITY



COMMUNICATION



TECHNOLOGY



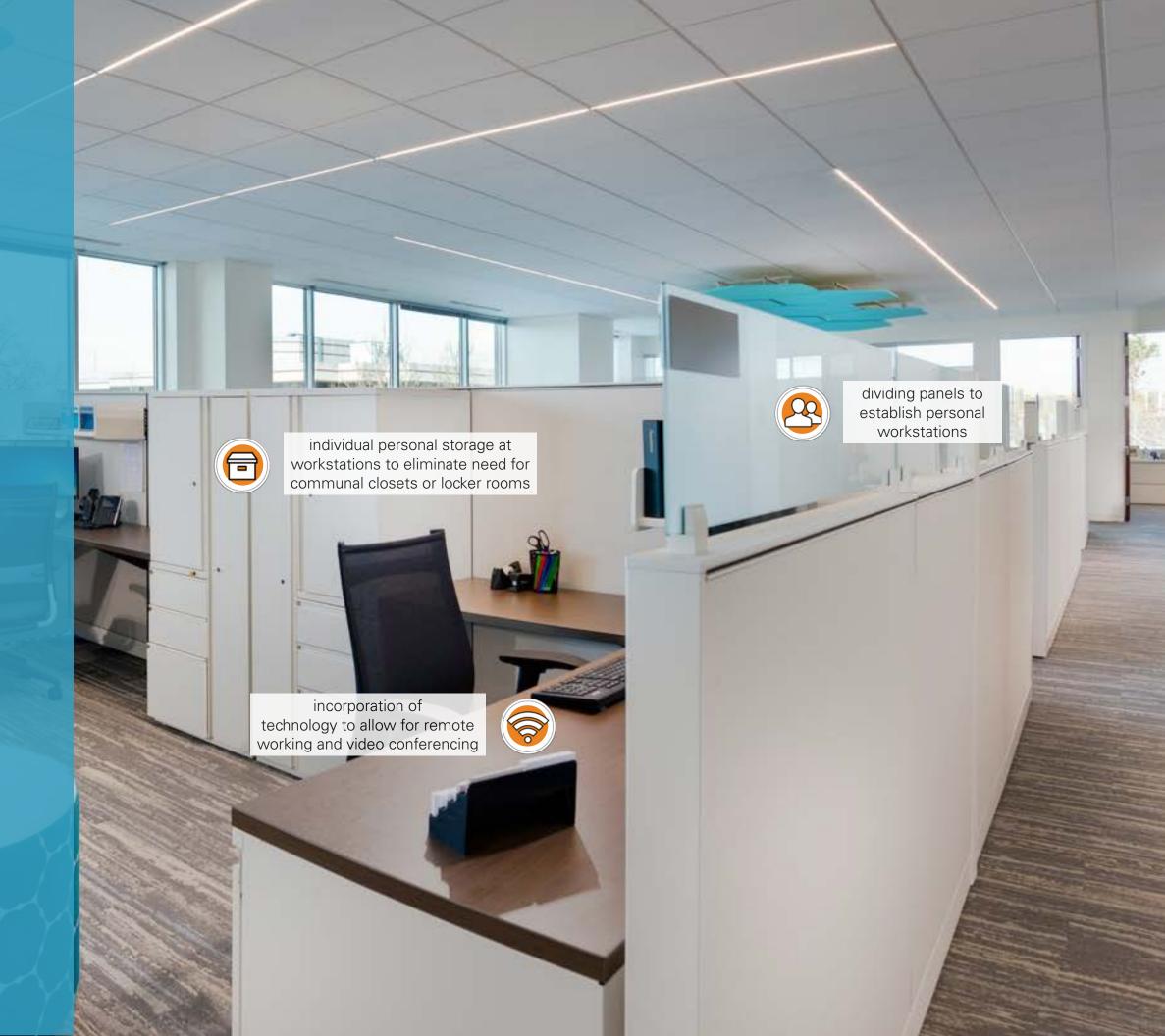
NAVIGATION



PROXEMICS



STORAGE



Shady Grove Fertility Clinic & Surgery Center Rockville, MD

#### work environments



INFECTION PREVENTION



MATERIALITY



COMMUNICATION



TECHNOLOGY



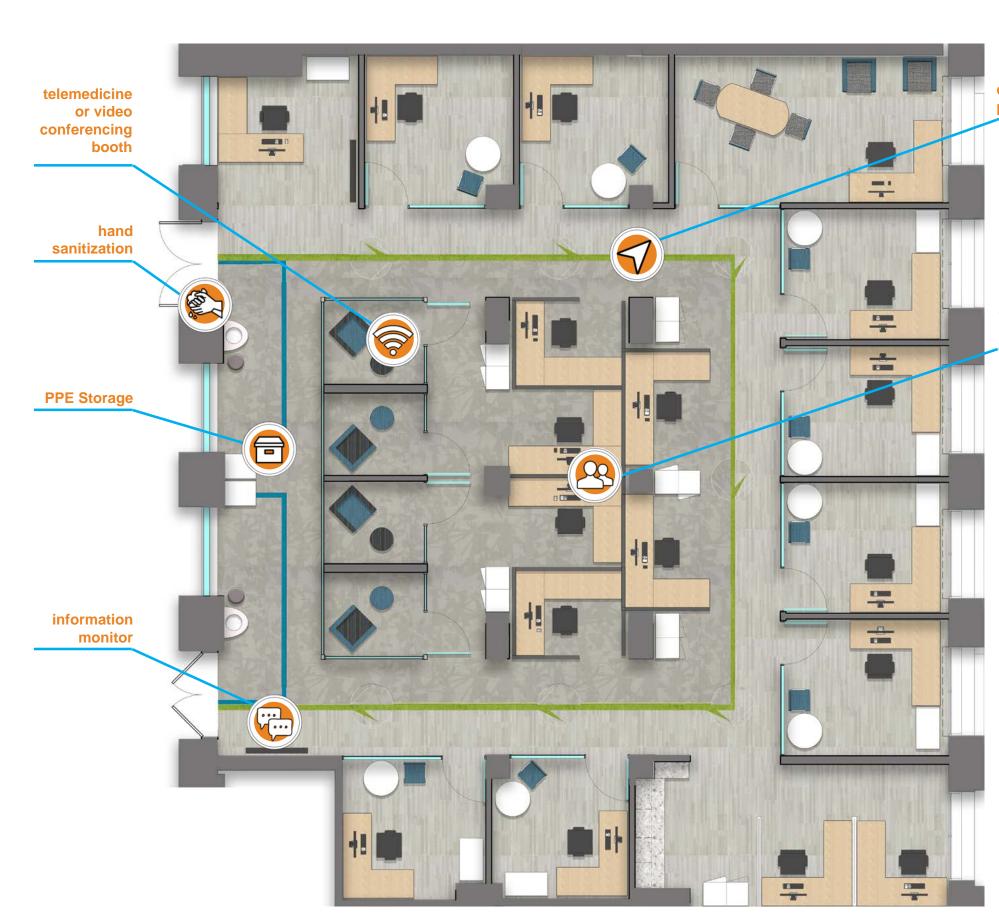
NAVIGATION



PROXEMICS

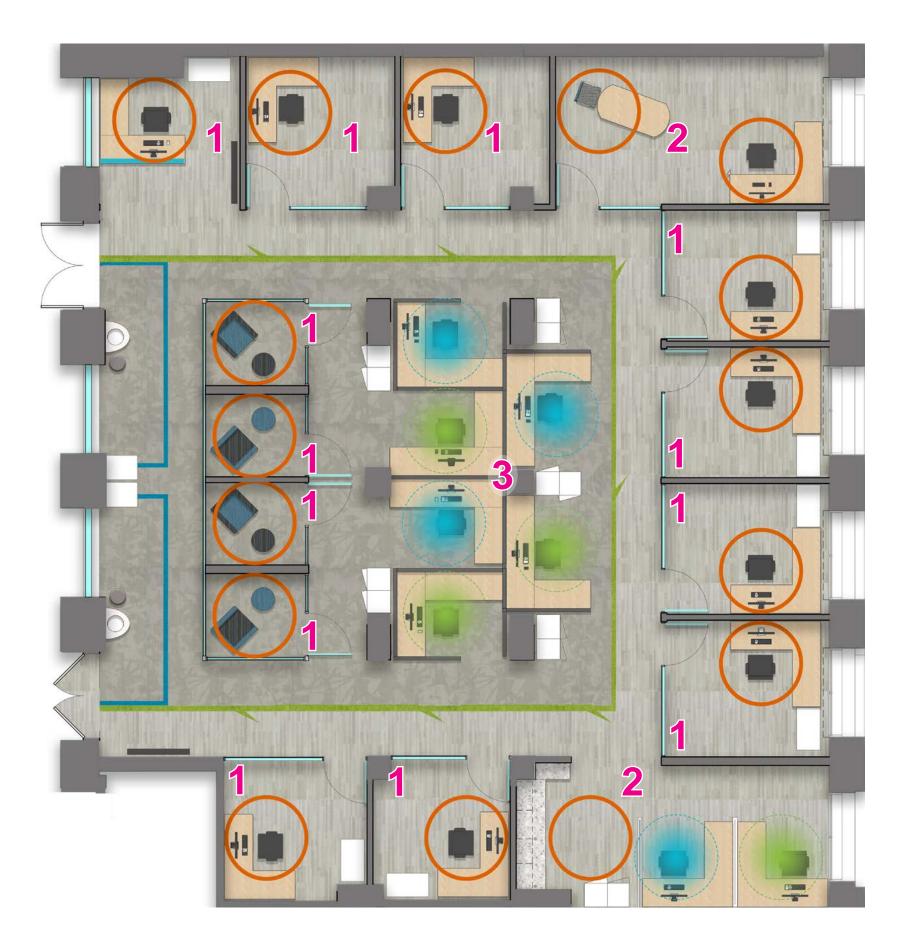


STORAGE



directional floor pattern

oversized workstations w/ dividing panels



#### work environments

Alternate work days for staff working in open office environments





Identify required 6' distance and provide maximum occupancies for each room



# MAXIMUM OCCUPANCY

table of contents e4h ENVIRONMENTS FOR HEALTH ARCHITECTURE

## staff support spaces





MATERIALITY

COMMUNICATION TECHNOLOGY NAVIGATION PROXEMICS furniture with non-porous shells and metal legs Northwell Health, 600 Community Drive Manhasset, NY

occupancy sensored lighting to limit interactions with switches

## staff support spaces



INFECTION PREVENTION



MATERIALITY



COMMUNICATION



TECHNOLOGY



**NAVIGATION** 



PROXEMICS



STORAGE

automatic door swing operator for hands-free operation

