

Facilities Management

Enhanced Cleaning and Disinfection

Building Preparation and Space Planning

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Healthy Fall Re-Opening 2020 Plan for Brown University Buildings



Like all individuals and organizations, Brown University has experienced a significant shift in operations over the past weeks and months related to the Covid-19 pandemic. As we work together to reopen University buildings, Facilities Management remains dedicated to its mission of maintaining Brown's core values in re-opening buildings and facilities, as safety will continue to be paramount.

Outlined below is an overview of our University building re-opening plan. The operations outlined here will be carried out by Brown Facilities Management in partnership with EH&S, Strategic Sourcing, Office of University Communications, Health Services and key department stakeholders, faculty, students and staff. We appreciate your patience and collaboration.



CLEANING & DISINFECTING

Cleaning, disinfecting of spaces and ongoing enhanced cleaning.

- Maintain cleaning and disinfecting practices in accordance with CDC and EHS approvals.
- Perform cleaning of indoor spaces that have been unoccupied.
- Perform routine clean and disinfecting of spaces that have been occupied.
- Perform enhanced cleaning and disinfecting of frequently touched indoor surfaces.
- Disinfect areas if possible cases arise, per direction of EHS and Health Services.
- Maintain routine cleaning practices of outdoor areas.
- Assist laboratories with cleaning products as supplies allow.
- Provide break rooms with cleaning products as supplies allow.
- Maintain hand sanitizer stations at major building entrances, elevator stops and high traffic areas.



PREPARE THE BUILDINGS

Operational pre-return Inspections, HVAC and domestic water system checks

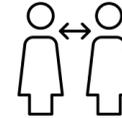
- Ready building mechanical, electrical, plumbing and monitoring systems
- Flush domestic water lines
- Reset building occupancy schedules and demand control ventilation.
- Improved central air filtration and sealed edges of filters to limit bypass.
- Install hand sanitizer stations in designated locations.
- Perform necessary building inspections and repairs.



PREPARE THE GROUNDS

Maintain safe, clean and healthy landscapes and grounds

- Inspect areas around buildings for trash and debris and remove accordingly.
- Ensure all building entrances and loading docks are clear of litter and debris.
- Continue to mow lawns and fields.
- Inspect parking lots and clear of litter and debris.
- Continue tree management and care.
- Maintain off-campus properties



SUPPORT DISTANCE SPACE LAYOUTS

Assist customer/occupant social distancing practices for decreasing density, adjusting traffic patterns.

- Support facility space usage changes for social distancing.
- Assist customers in evaluating reduction in capacity of spaces – e.g. decreasing chairs in a conference room.
- Provide necessary signage regarding the importance of social distancing as needed.



OVERSIGHT OF CONTRACTORS & VENDORS

Campus building and maintenance contractors

- Engage contractors and vendors in back-to work plan
- Ensure continued compliance by contractors of the on-campus work protocols for construction.
- Ensure indoor and outdoor construction projects are being inspected by Facilities staff for compliance.



CUSTOMER/OCCUPANT RESPONSIBILITIES

Recommended customer/occupant actions

- Review, share and monitor compliance.
- Reconfigure indoor and outdoor spaces to allow for social distancing.
- Assist in identifying high-use entrances and traffic areas.
- Remove and/or clean high-touch shared tools such as computer keyboards whiteboard markers, remote controls, etc.
- Assist in controlling the building entry points including deliveries.
- Comply with signage guidelines.

Facilities Management

The most efficient way to request service is by calling FM Service Response Center at 401-863-7800.



Enhanced Cleaning and Disinfecting

CDC Considerations for Institutes of Higher Education



Cleaning and Disinfection:

- Clean and disinfect frequently touched surfaces (e.g., door handles, sink handles, grab bars, hand railings, bathroom stalls, dining hall tables) within facilities at least daily or between use as much as possible.
- Develop a schedule for increased, routine cleaning and disinfection.
- Use products that meet EPA disinfection criteria.
- Encourage students, faculty, and staff to keep their personal items (e.g., cell phones, other electronics) and personal work and living spaces clean.
- Encourage students, faculty, and staff to use disinfectant wipes to wipe down shared desks, lab equipment, and other shared objects and surfaces before use.

FM Cleaning and Disinfecting Procedures

- FM has modified custodial tasks sheets to include:

Disinfecting of all high touch surfaces, performed M-F twice a day and daily on weekends

Chair Handles and Backs	Podiums	Toilet & Urinal Flushometers
Trash Receptacle tops and handles	Paper Towel and Toilet Tissue Dispensers	Sink Faucets & handles
Table tops	Mailboxes	Tablet Arms & brackets
Kiosk Buttons	Light Switches	Stair Rails
Elevator buttons outside and inside elevator cabs	Vending Machine Buttons	Hydration Stations

FM Cleaning and Disinfecting Schedule



- Research buildings are cleaned and disinfected between 3pm – 11pm or 11pm -7am AND now include a Day Floater 7 days/week on day shift from 7am-3pm.
- Custodial will continue to clean all non-research facilities following task sheet assignments between 11pm-7am.
- The “Floater” program has been modified, in support of CDC COVID-19 guidance to include high touch areas in facilities. Floaters now provide support in two roles:
 - Cleaning of high-visibility, high-use or high-profile areas such as restrooms, heavily-used classrooms, conference rooms, meeting rooms, entrance lobbies, elevators, break rooms or other areas designated to receive focused cleaning efforts.
 - Cleaning and disinfecting of frequently touched surfaces

DIY Program



- Individual responsibility will make a major impact in supplementing Custodial activity.
- As the campus reopens:
 - Containers of disinfecting wipes will be placed in classrooms and common areas so that individuals using these spaces can disinfect prior to use
 - All faculty, staff and students returning to campus will be provided with face coverings, hand sanitizer and a container of wipes to be utilized while on campus and particularly within their individual spaces.
 - Self-responsibility when using common equipment (copy machines, printers etc.) will be promoted and the use of the wipes provided will be strongly recommended.

Smart Inspect Daily Cleaning and Disinfecting Log



- Utilizing Smart Inspect, the Brown-Daily Cleaning and Disinfecting Supervisor Check List was developed. This checklist will allow:
 - Managers and Supervisors to check off assignments as they're completed, and will serve as a record of the date/time of inspection.
 - All data will be compiled and reviewable by Senior Management via dashboard and reports.
 - Documentation will comply with RIDOH.
 - Standard Operating Procedures have been created.

Protexus Handheld Electrostatic Sprayer

- Delivers a charged droplet with an attractive force 15x greater than gravity. This magnetic attraction to all surface areas ensures consistent, 360-degree application of disinfecting and sanitizing solution.
- EPA registered sanitizer & disinfectant tablets that readily dissolve in water with a one (1) minute dwell time
- Safe for humans, materials and the environment
- Eliminates and controls odors



Adenosine Triphosphate Procedures (ATP) Validation

- FM is utilizing adenosine triphosphate (ATP) meters to allow rapid testing to assess the cleanliness of surfaces.
- ATP testing will allow the management staff to verify that proper disinfecting protocols have been followed by identifying minute traces of organic matter remaining on surfaces.
- Quality Assurance /Quality Control inspections, combined with ATP testing, are part of FM's robust efforts to ensure effective cleaning and disinfecting.





Building Preparation and Space Planning

Heating, Ventilation, & Air Conditioning (HVAC) and Water Systems

- Following CDC and ASHRAE Recommended Best Practices:
 - HVAC Systems: Ensure ventilation systems operate properly, increase circulation of outdoor air as much as possible, increase filter efficiency.
 - Water Systems: Flush all systems to minimize the risk of Legionnaires' disease and other diseases associated with water, take steps to ensure that all water systems and features (e.g., sink faucets, drinking fountains, decorative fountains) are safe to use after a prolonged facility shutdown.

Heating, Ventilation, & Air Conditioning (HVAC) Systems

- The majority of research and laboratory spaces operate with 100% outside air supply, with air exchange rates that meet or exceed American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE) standards relative to COVID-19 Guidance.
- Academic, administrative and classroom spaces operate with a variety of mixed air ventilation systems.
- FM has taken the following measures:
 - An assessment has been performed on all building systems. Narratives and a matrix has been developed identifying the configuration of each system. This information is available on FM's website.
 - Preventive Maintenance performed, where possible ventilation increased and increased filter efficiency to a MERV13 to reduce airborne transmission.

Building Ventilation Matrix

BUILDING NAME	PORTFOLIO	EQUIPMENT DESCRIPTION	TYPE OF AIR HANDLING UNIT	INCREASED VENTILATION	OCCUPANCY (SCHEDULE / CONTINUOUS)	FILTER RATING	FILTER BANK HAS BEEN CHECKED FOR AIR GAPS AND AHU CHECKED FOR PROPER OPERATION	OPERABLE WINDOWS
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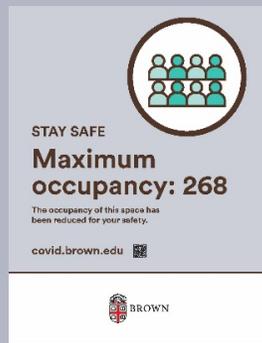
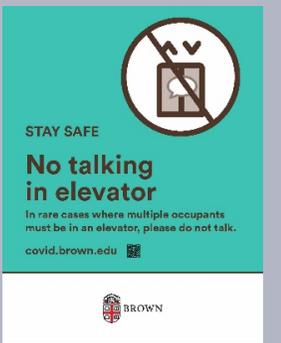
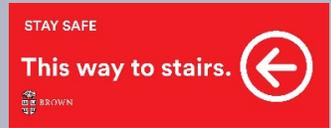
Air handler types are identified as 100% OA (Outdoor Air), mixed air, or return air. Units classified as 100% outdoor air use 100% outdoor air for ventilation. Units classified as mixed air use a blend of outside air and air being returned from the space. When the outside air can be used for cooling the percent of outside air will vary from the minimum level to 100% based on temperature demand. Units classified as return air use air recirculated from the space for ventilation.

ALUMNAE HALL	ACADEMIC NON-RESEARCH	QTY 3 AIR HANDLING UNITS	MIXED AIR 15% OA / 85% RA	NO	SCHEDULE	MERV 8 Upgrade to MERV13 in progress	YES	YES
ANDREWS MEMORIAL BUILDING	ADMIN/SUPPORT	AIR HANDLING UNIT	100% OA	100% OA	SCHEDULE	MERV 8 Upgrade to MERV13 in progress	YES	YES
ANDREWS MEMORIAL BUILDING	ADMIN/SUPPORT	QTY 13 AIR HANDLING UNITS	MIXED AIR (LOCAL) 20% OA / 80% RA	IN PROGRESS	SCHEDULE	MERV 8 Upgrade to MERV13 in progress	YES	YES
ANDREWS MEMORIAL BUILDING	ADMIN/SUPPORT	AIR HANDLING UNIT	MIXED AIR (LOCAL) 20% OA / 80% RA	IN PROGRESS	SCHEDULE	MERV 8 Upgrade to MERV13 in progress	YES	YES
ANGELL ST 164	ACADEMIC NON-RESEARCH	QTY 1 AIR HANDLING UNIT	RETURN AIR 0% OA - 100% RA	NO	SCHEDULE	MERV 8 Upgrade to MERV13 in progress	YES	NO
ANGELL ST 164	ACADEMIC NON-RESEARCH	QTY 3 AIR HANDLING UNITS	MIXED AIR 15% OA - 85% RA	IN PROGRESS	SCHEDULE	MERV 8 Upgrade to MERV13 in progress	YES	NO

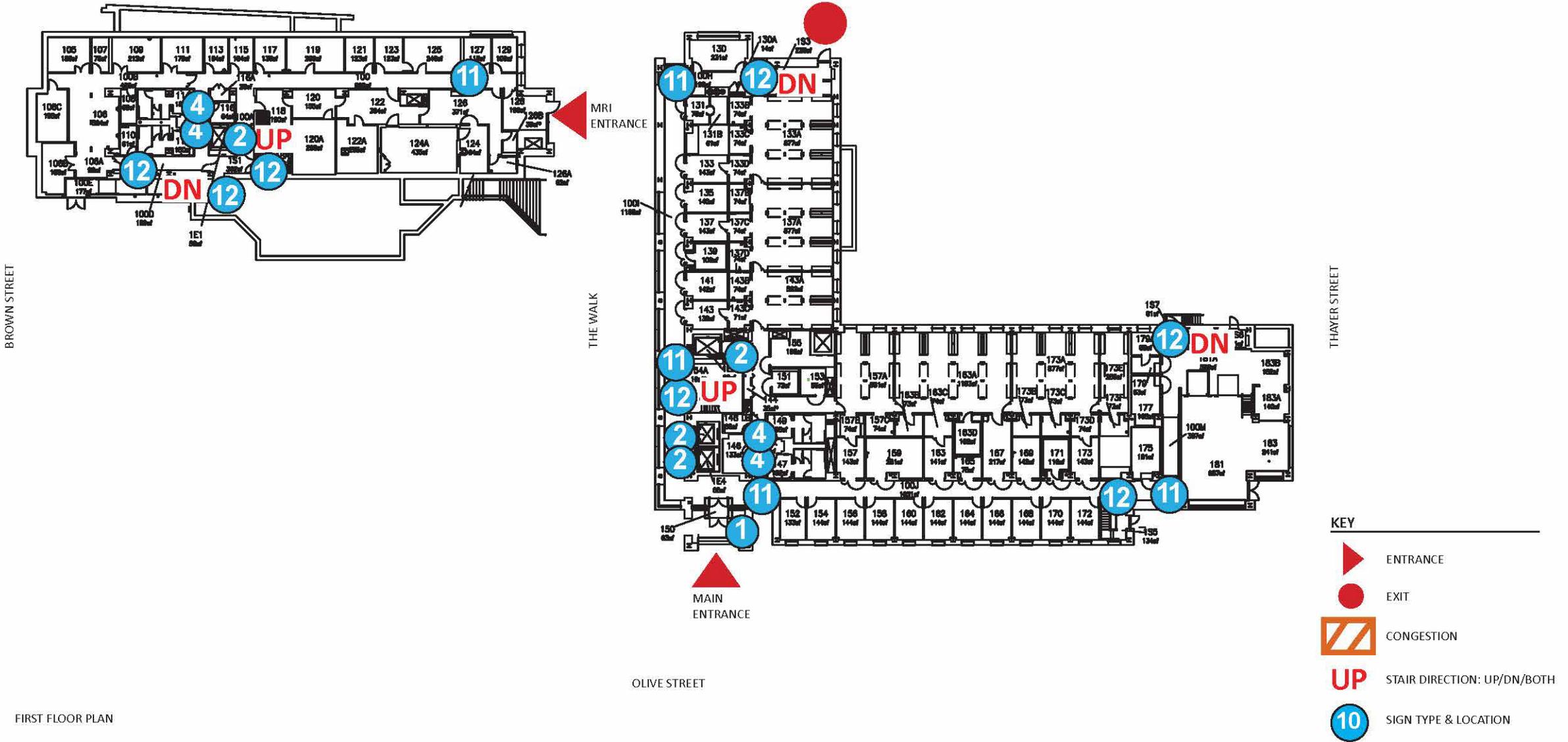
Water Systems

- FM staff is performing the following on a periodic basis:
 - Flushing of domestic water lines to include:
 - Sinks, toilets, showers, traps, and seals
 - Flushing of drinking water fountains and hydration stations
- Continue with Brown's water treatment program for mechanical systems

Re-Opening: signage



Research Re-Opening: SIGNAGE



FIRST FLOOR PLAN

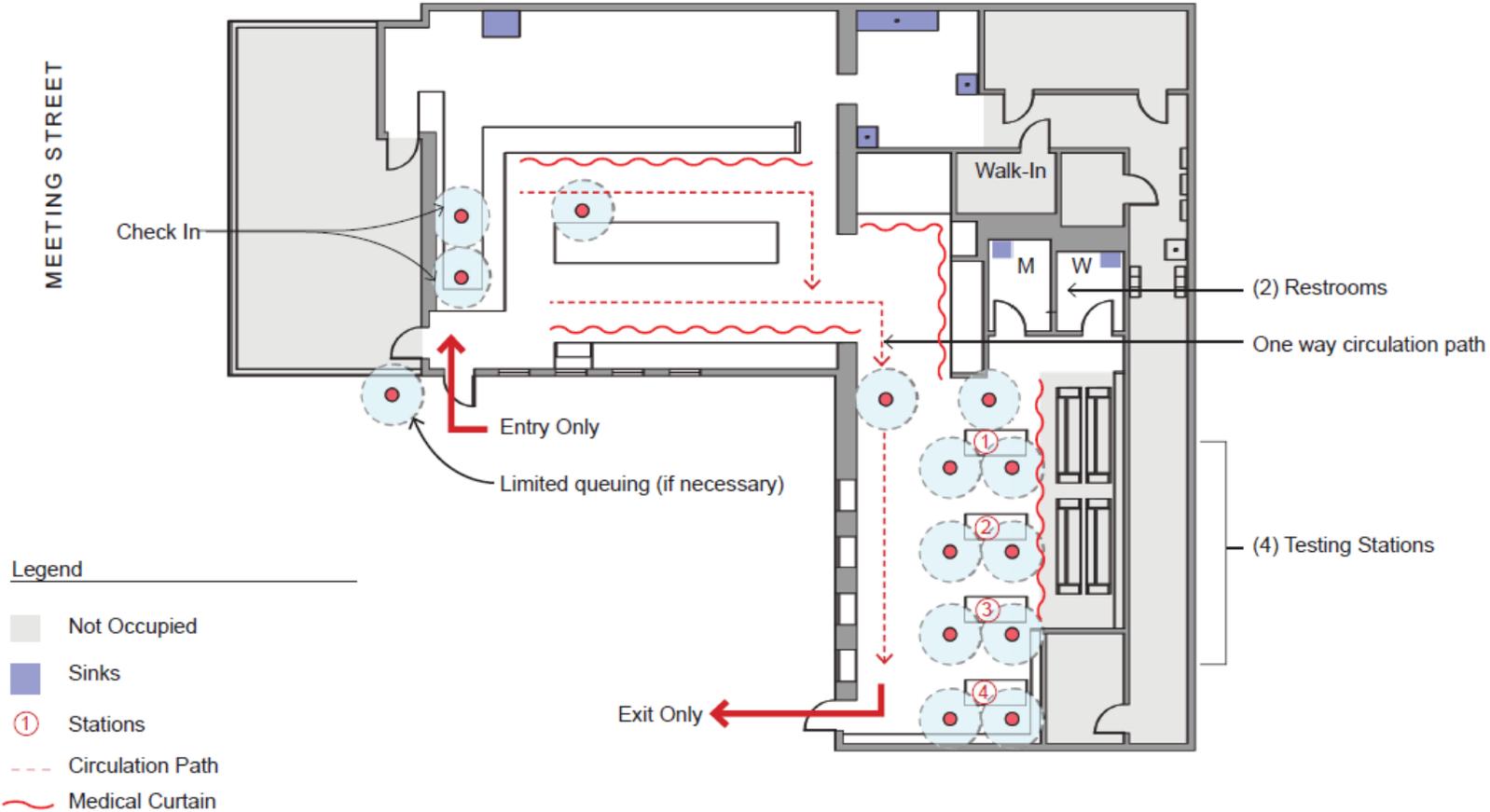
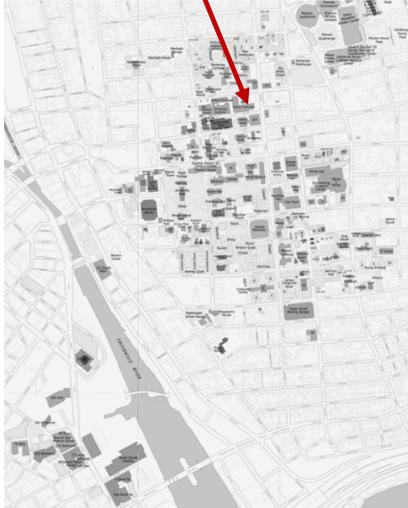
Return to Campus Coordination Tracking



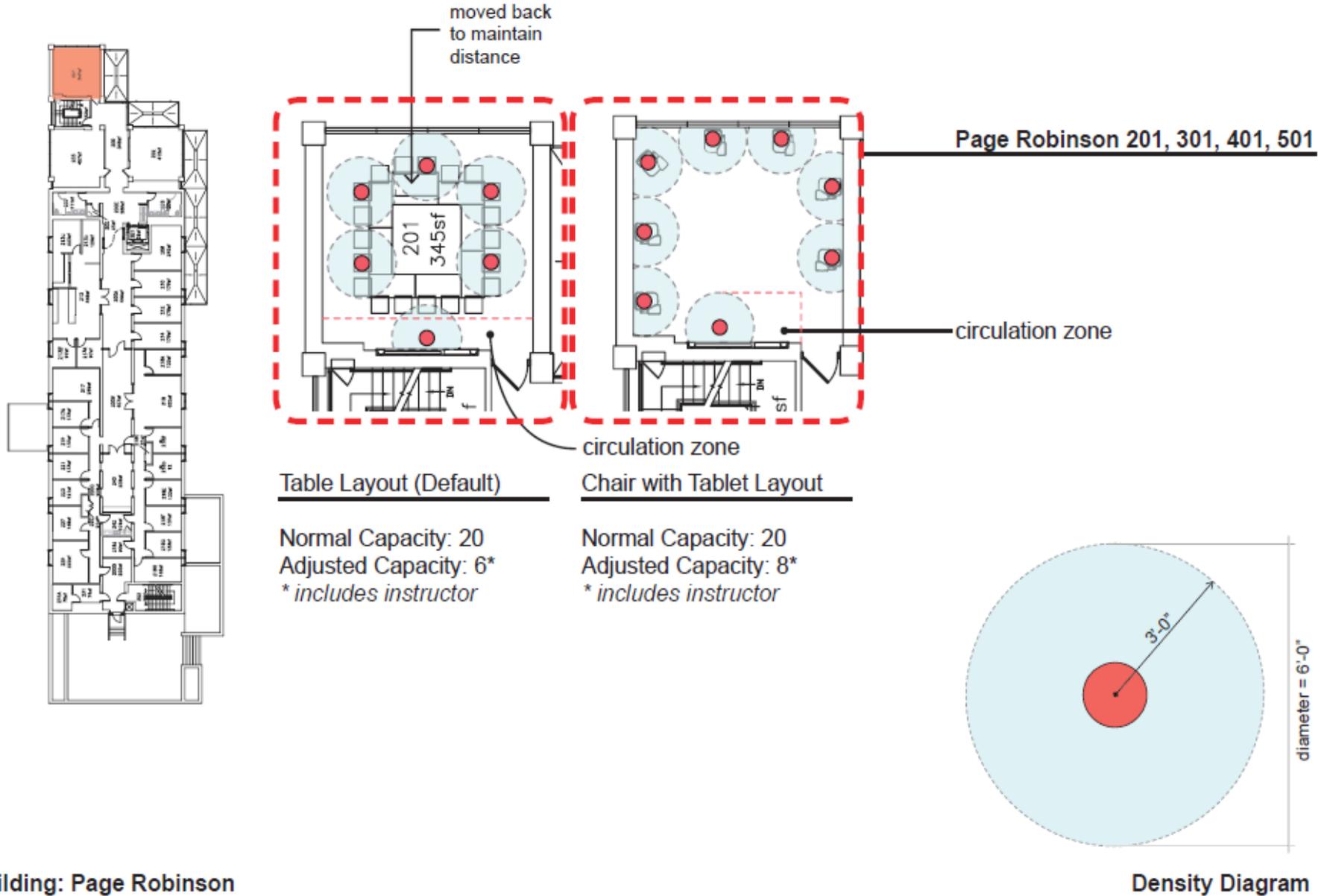
Portfolio , Building Usage, Building												Occupying Departments	
Portfolio	Building Usage	Building Abbr	RTC Plan Approval Date	Completed Drawings for Signage Install	Building signage installed (Ops Div 1)	Common Lounge (Bracket System Installed - Ops Div 1)	HVAC System Checked & Operational (Ops - Div 8/9)	Building Inspection / Clean & Disinfected (Ops Div 4)	Purell station at main entrance (Div 4)	Deployment of DIY supplies	Notice - OK to Occupy Sent to Dept.	Bfm Group Desc	Common Lounge Notes
ACADEMIC NON-RESEARCH		HOPE190		6/9/2020	1	1	1	1	1			German	Room 214
ACADEMIC NON-RESEARCH												Italian Studies	
ACADEMIC NON-RESEARCH												Registrar	
ACADEMIC NON-RESEARCH		HOPPIN		NA								Inactive Assign	None
ACADEMIC NON-RESEARCH		JOHN050		6/9/2020	1	1	1	1	1			Environmental Health and Safety	None
ACADEMIC NON-RESEARCH												Theatre Arts and Performance Studies	
ACADEMIC NON-RESEARCH		KASSAR	6/18/2020	6/15/2020	1	1	1	1	1		6/26/20	Mathematics	Room 100D
ACADEMIC NON-RESEARCH												Registrar	
ACADEMIC NON-RESEARCH		LADDOBSERV	6/23/2020		1	1	1	1	1		6/26/20	Physics	None
ACADEMIC NON-RESEARCH		LIPPITTHSE		6/10/2020	1	1	1	1	1			Center for Language Studies	Room 104
ACADEMIC NON-RESEARCH												Center for The Study of Race and Ethnicity In America	
ACADEMIC NON-RESEARCH		LISTART	Approved prior to 6/23	6/9/2020	1	1	1	1	1		6/26/20	Bell Gallery	Room 120
ACADEMIC NON-RESEARCH												CIS Administration	
ACADEMIC NON-RESEARCH			6/25/2020								6/26/20	History of Art and Architecture	
ACADEMIC NON-RESEARCH				7/1/20						7/13/20		Registrar	
ACADEMIC NON-RESEARCH			6/23/2020								6/26/20	Visual Art	
ACADEMIC NON-RESEARCH		LYMANHALL		6/9/2020	1	1	1	1	1			Theatre Arts and Performance Studies	Room 105
ACADEMIC NON-RESEARCH		MACFARLANE	6/23/2020	6/22/2020	1	1	1	1	1		7/7/20	Classics	None
ACADEMIC NON-RESEARCH		MANNING		6/9/2020	1	1	1	1	1			Haffenreffer Museum	None
ACADEMIC NON-RESEARCH												University Chaplaincy	

ACADEMIC NON-RESEARCH												The Harriet W Sheridan Center for Teaching and Learning	
ACADEMIC NON-RESEARCH			6/25/2020									University Library	
PERCENTAGE COMPLETE					95%	95%	76%	94%	94%	0%			
ACADEMIC RESEARCH	ACAD	BH		5/29/2020	1	1	1	1	1			Molecular and Nanoscale Innovation	X - stands installed in Rms 330, 410,723, 750, 1st flr lobby area

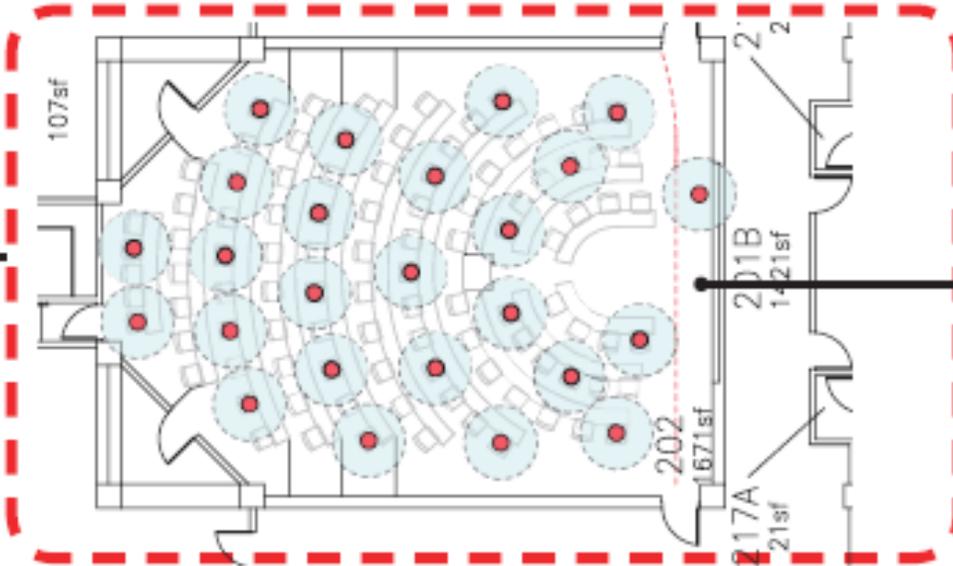
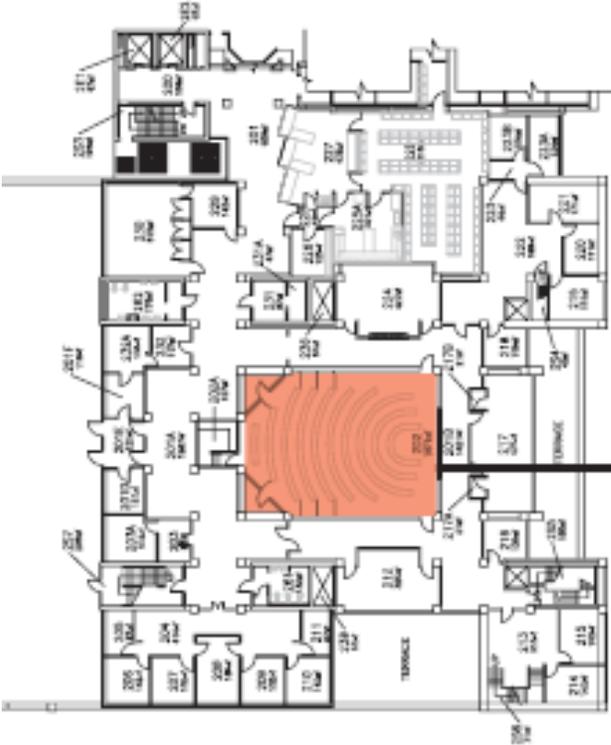
205 Meeting Street: Pilot Testing Facility



Classroom Test Fits - Small



Classroom Test Fits - Large



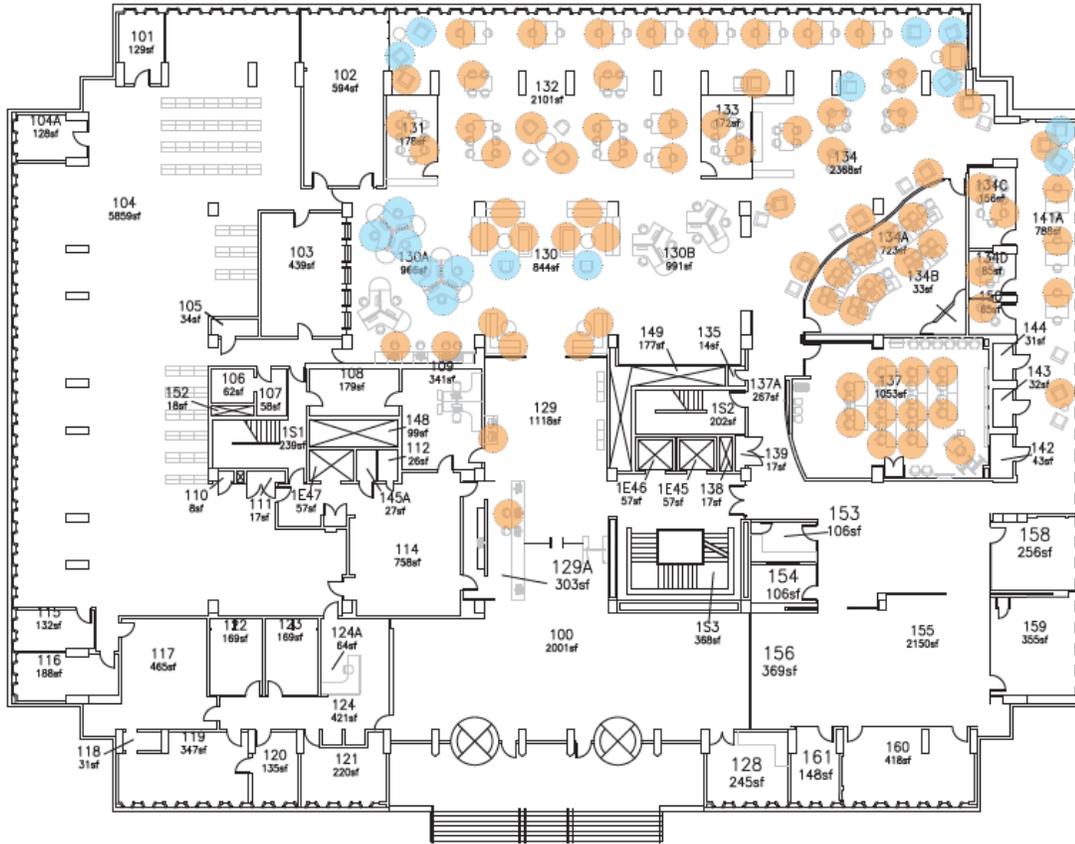
Biomed Center 202

Normal Capacity: 107
Adjusted Capacity: 25*
** includes instructor*

3' circulation zone



Library Test Fit



FIRST FLOOR PLAN



SECOND FLOOR PLAN

KEY

● 6'-0" DIAMETER CONFLICT

● 6'-0" DIAMETER NO CONFLICT

Dining - Planning for a Healthy Fall

Legend

- Sanitizing station
- - - Proposed circulation path
- - - - Hard barrier (i.e. Plexiglass)

- Signage (type varies)
- Station

4 Add applicable restroom signage at restrooms

Rope off all seating areas and post signage indicating no seating allowed.

Lap queue during peak times; if low volume patron can proceed directly to station

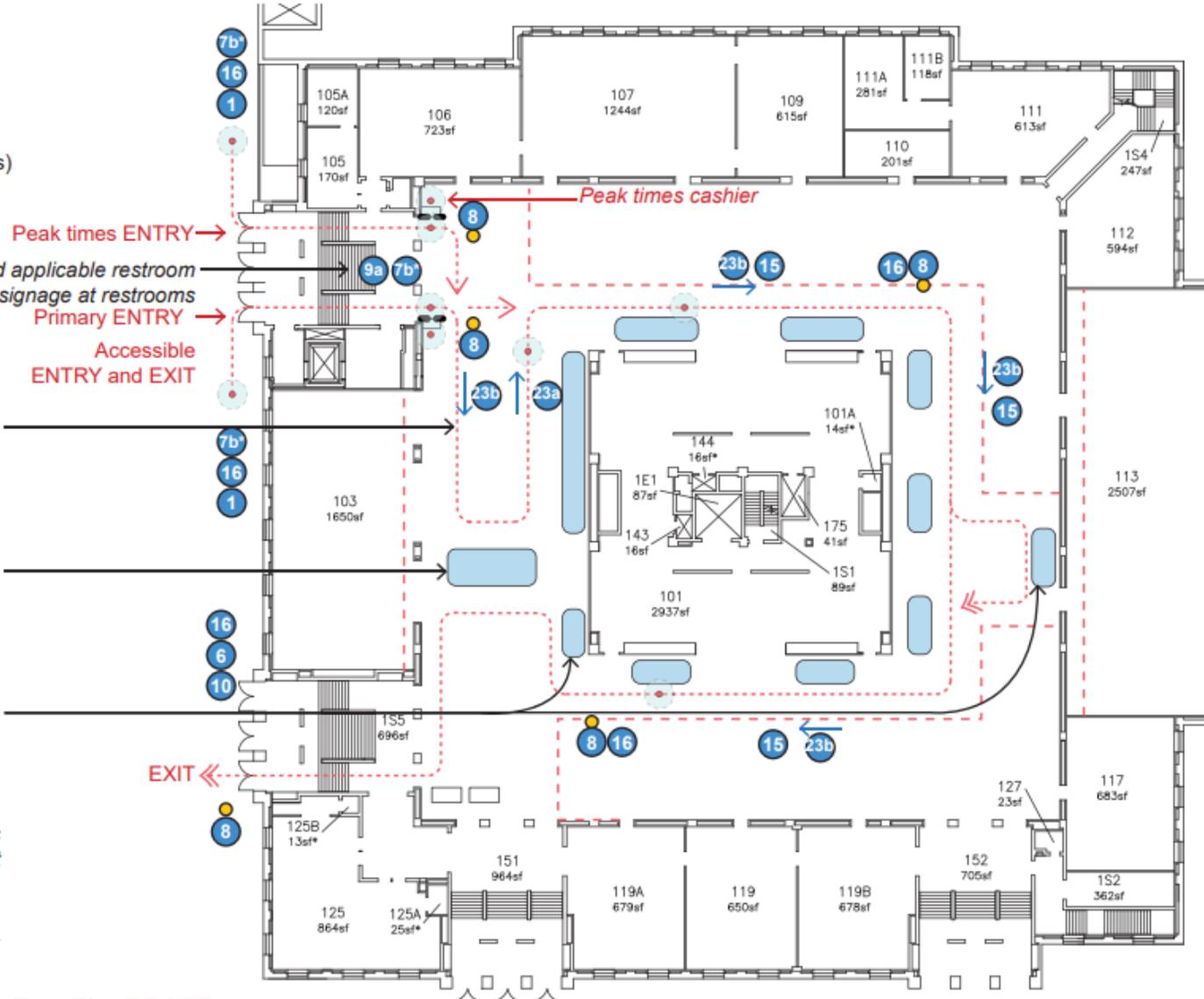
Rotate and relocate coffee station

Drinks stations

18 Install floor-adhered physical distancing stickers throughout

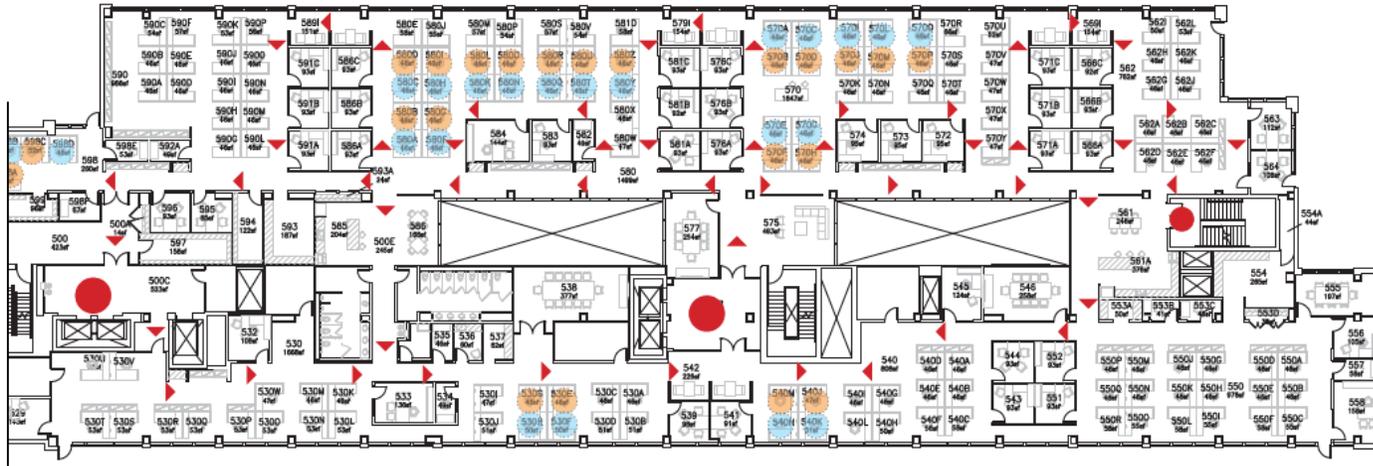
Consider propping interior doors open to minimize points of contact

All non-wall mounted signage requires insert on post

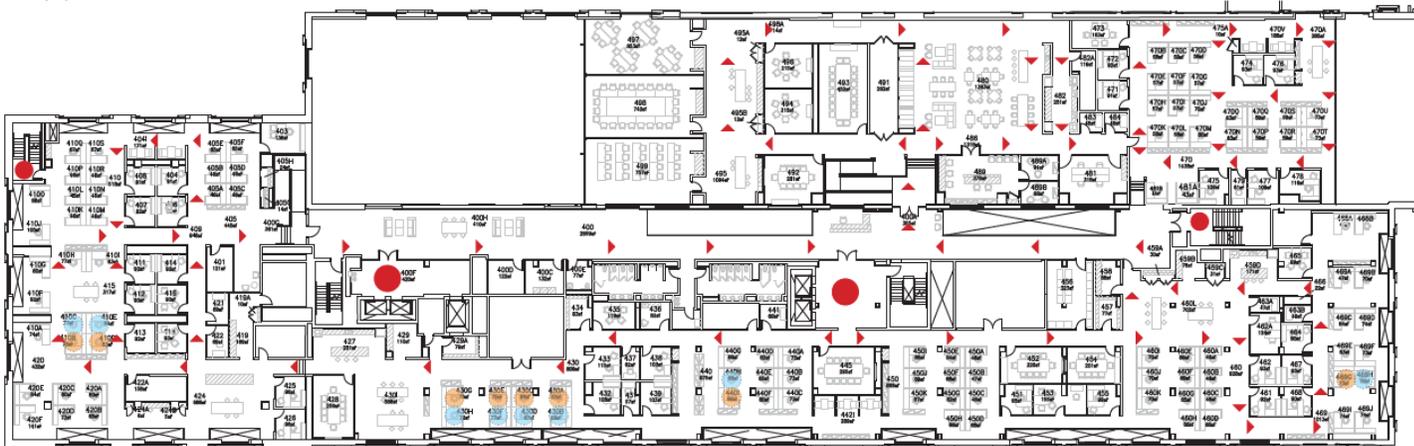


Sharpe Refectory - Pick Up Test Fit - DRAFT

Administration Test Fit: SSL



SIXTH FLOOR PLAN



FOURTH FLOOR PLAN

KEY

-  6'-0" DIAMETER CONFLICT
-  6'-0" DIAMETER NO CONFLICT
-  EGRESS
-  DIRECTIONAL 'ONE-WAY' TRAVEL

Facilitate and encourage healthy, positive and fun, socially distant gatherings with outdoor furniture

Proposed Sites & Layout



Main Green – 53 Adirondacks



Hughes & Patriots Courts – 24 Adirondacks, 15 tables

Scope

- 107 Adirondack chairs (Black)
- 20 30" diameter tables (Charcoal)
- 20 42" diameter tables (Charcoal)
- 100 Stacking chairs (25 of each color)

Furniture Selections



Net Chair



Curve Adirondack Chair



MICROMESH TOPS

Round Tables

Key

-  (4) Adirondacks with 6' diameter
-  42" Table & (3) Chairs with 6' diameter
-  30" Table & (2) Chairs with 6' diameter



BROWN

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