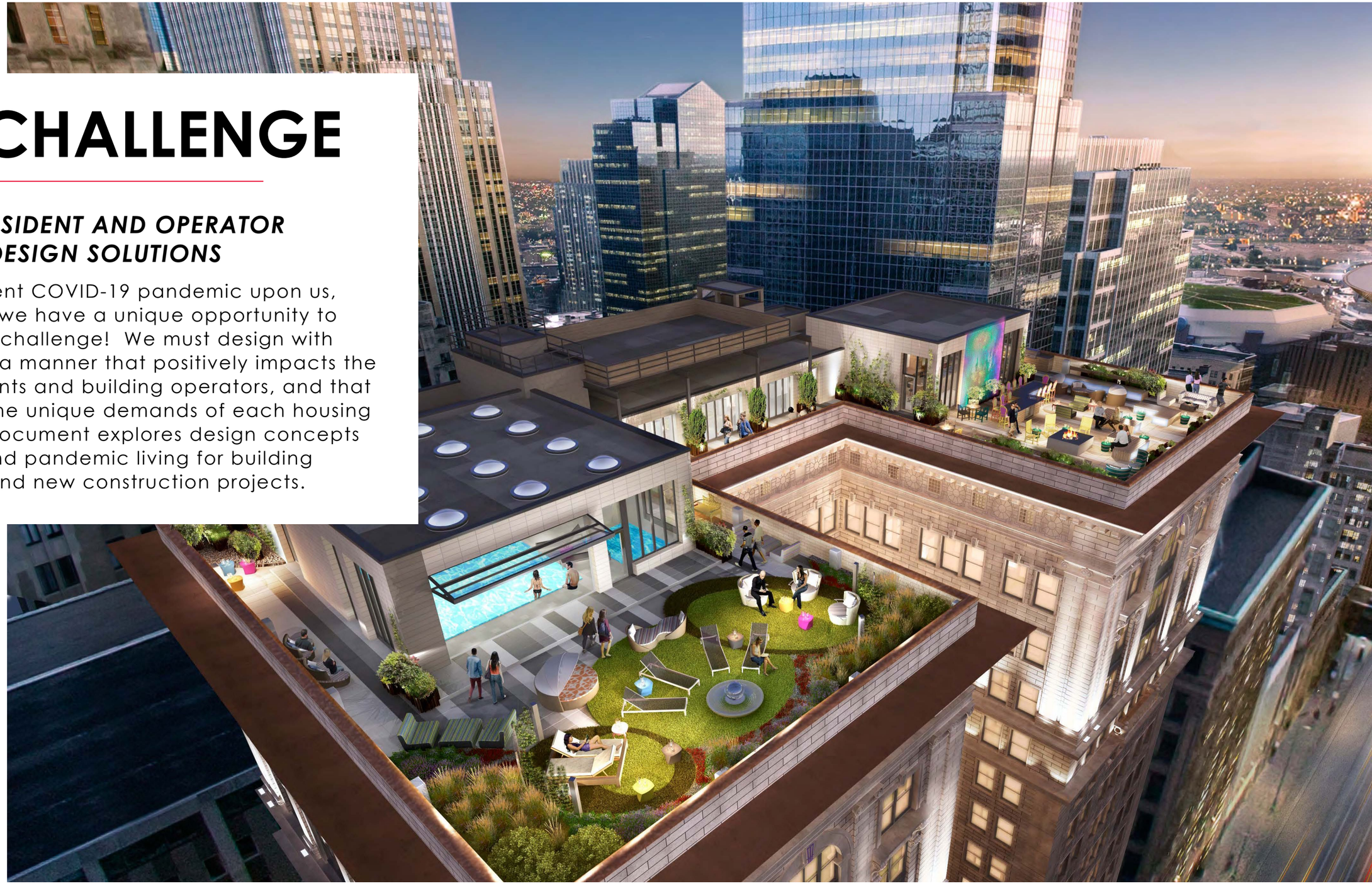
BKV GROUP

MAKING MULTI-FAMILY LIVING SAFER AND MORE HABITABLE

THE CHALLENGE

FINDING RESIDENT AND OPERATOR ORIENTED DESIGN SOLUTIONS

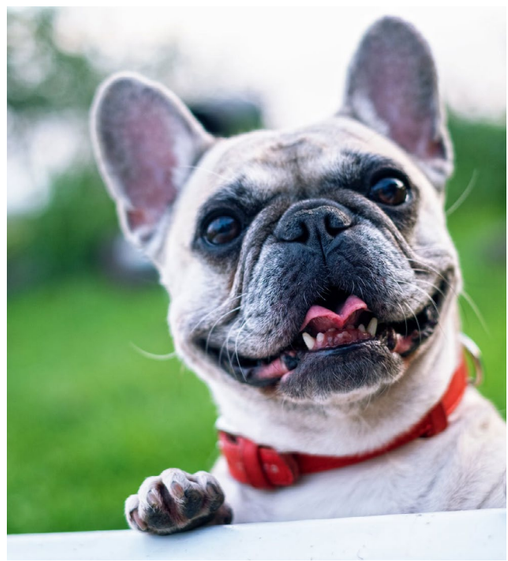
With the current COVID-19 pandemic upon us, as designers, we have a unique opportunity to embrace the challenge! We must design with innovation in a manner that positively impacts the lives of residents and building operators, and that responds to the unique demands of each housing sector. This document explores design concepts for healthy and pandemic living for building renovations and new construction projects.



CONCERNS

MARKET-RATE MULTI FAMILY RESIDENT'S CURRENT CONCERNS

1. Reduce touch points – minimize potential for surface contamination.
2. Visitors & guests – how to allow access in safe manner.
3. Elevators – high traffic areas reduce potential for virus transmission.
4. Ventilation - Proper ventilation and filtration to mitigate airborne risk in public spaces.
5. Packages – access and distribution to minimize risk.
6. Building maintenance – only allow emergency maintenance and manage access.
7. Parking garage – gaining safe building access for parking and deliveries.
8. Pets – avoiding dog park walk dogs instead to maintain social distancing.
9. Administrative – provide resident support including rent credit for lost amenities.



CONCERNS

MULTIFAMILY OPERATORS CURRENT CONCERNS

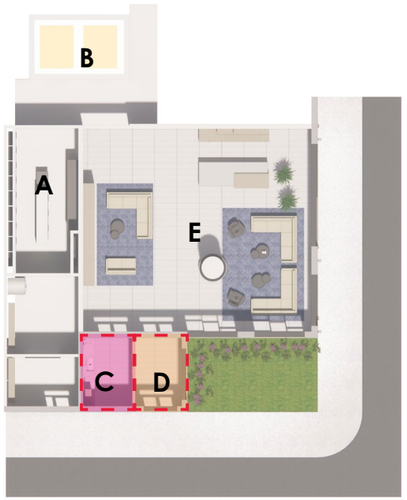
1. Having an outbreak in the building!
2. New cleaning protocols – cleaning high use areas multiple times a day.
3. Closed common spaces – poor effect upon resident experience.
4. Airborne risk mitigation - adaptability of HVAC systems to accommodate higher ventilation rates and enhanced filtration.
5. Rent reductions due to no amenities – some groups are using this to incentivize residents to stay.
6. Keeping staff safe – reduced interaction with residents, digital payment.
7. Impact on staff – employee work experience & retention.
8. Future leasing – how to attract future residents primarily through digital means.
9. Ability of current residents to pay – economic & employment concerns.
10. Reduced unit maintenance – emergency situations and deferred maintenance.
11. Outside guests – what level of limitations should be in place?
12. Packages – access and distribution to minimize risk.

DESIGN SOLUTIONS

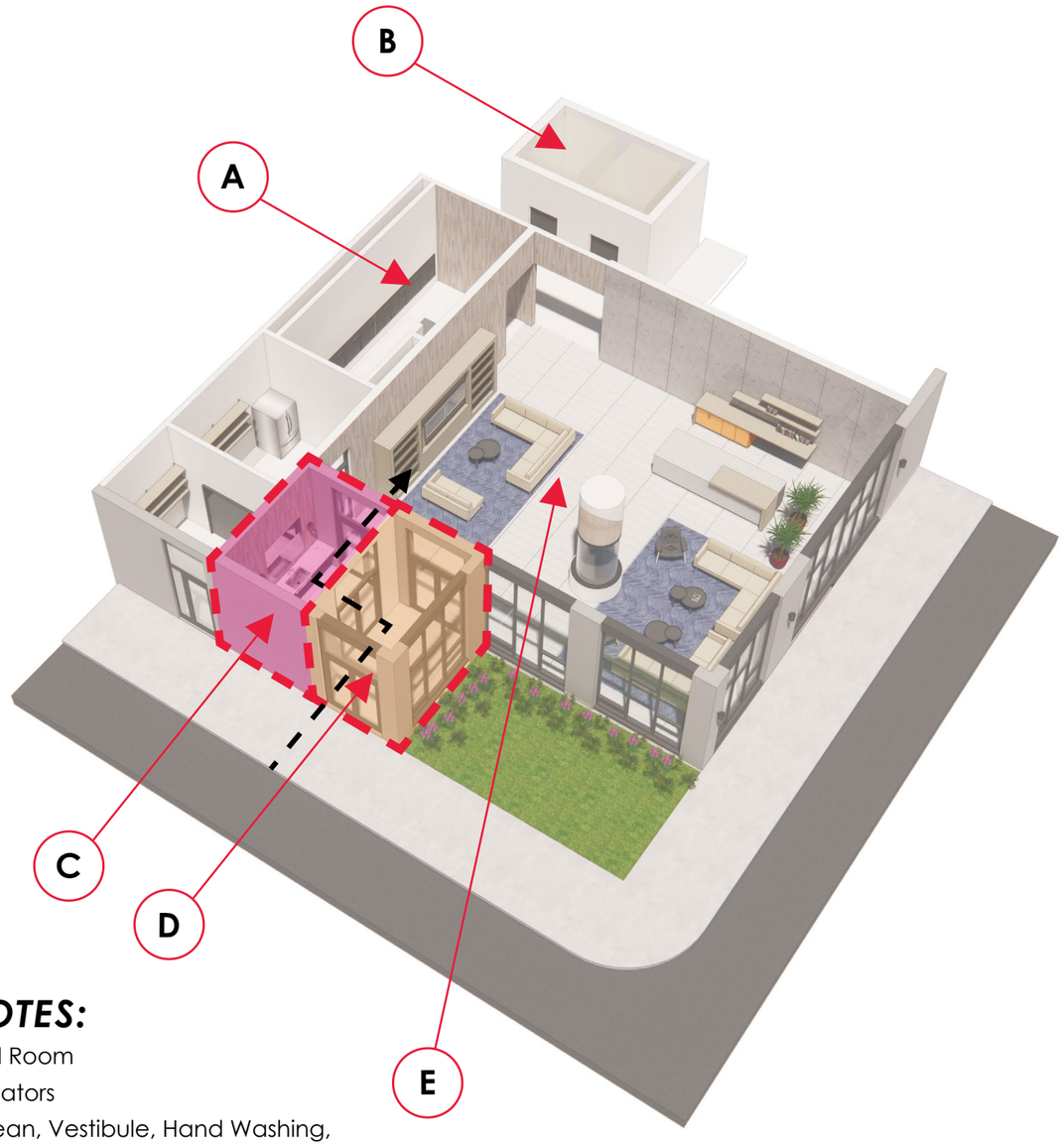
CONSIDER THE FOLLOWING SOLUTIONS FOR RENOVATIONS AND NEW BUILDINGS:

BUILDING ENTRY

1. Reduce building entry points, controlled health screening of staff and visitors.
2. Create a “clean vestibule” with sink for hand washing, ppe gloves and masks, and equipment for temperature checks. (During pandemic periods, force entry through this vestibule)
3. Utilize automatic sliding doors at high traffic areas.
4. Consider social distancing for reception desk design. In tight spaces, add pocketed sliding or temporary glass partitions.
5. Temporary partitions or barriers, testing areas in existing buildings.
6. Voice operated call out boxes.
7. Temporary sanitization stations.



LOBBY FLOOR PLAN



KEYNOTES:

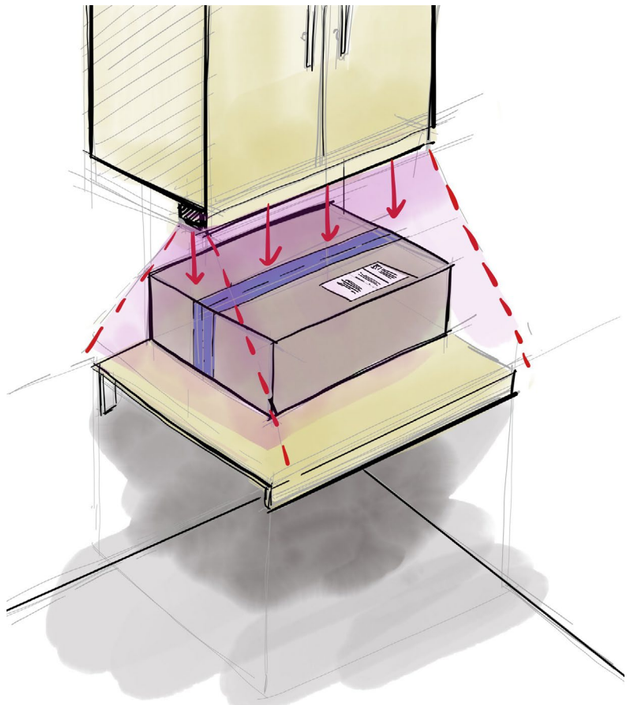
A. Mail Room
B. Elevators
C. “Clean, Vestibule, Hand Washing, Mask, etc”
D. Main Entrance Vestibule, No Touch
E. Lobby

LOBBY AXONOMETRIC VIEW

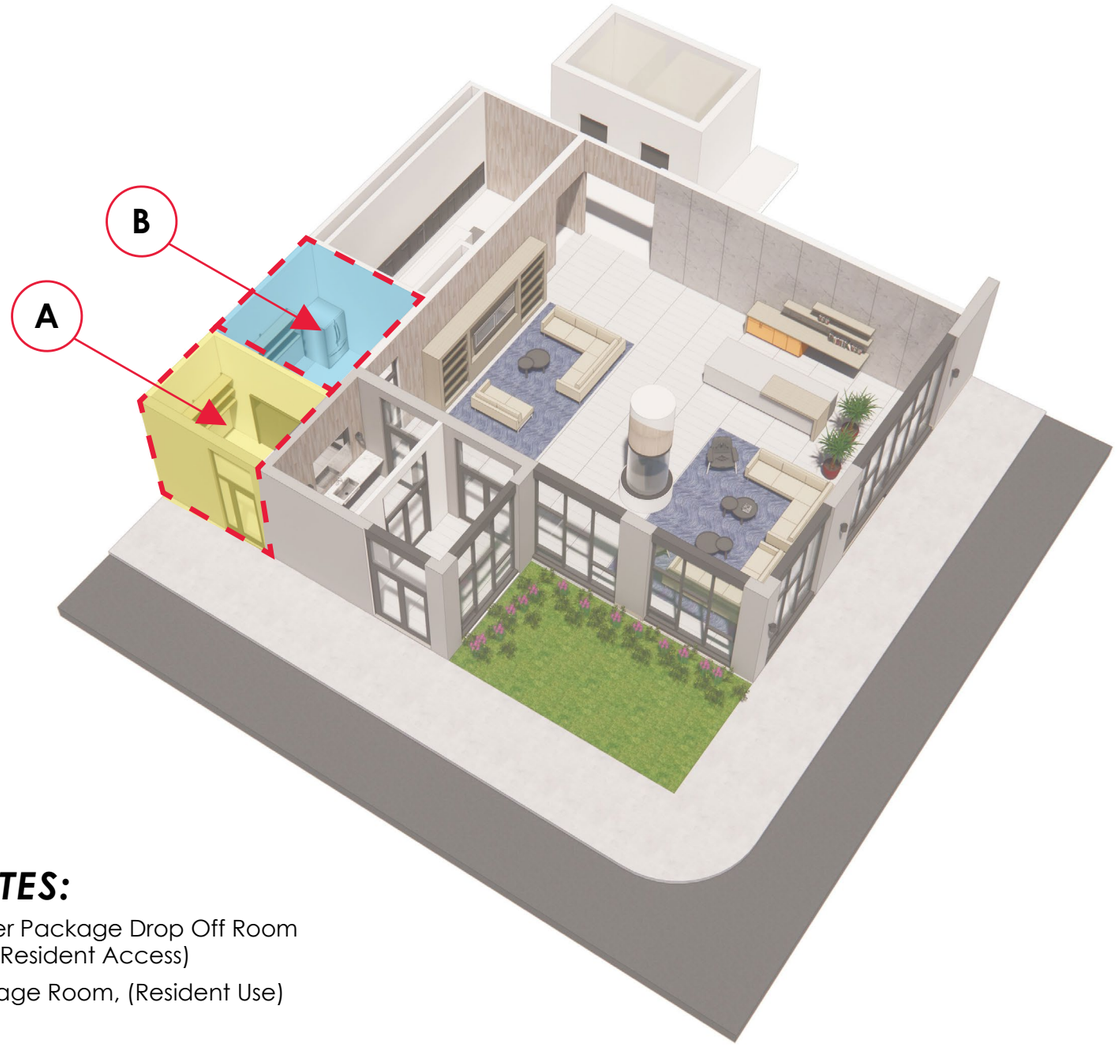
DESIGN SOLUTIONS

PACKAGES/RECEIVABLES

1. Design a package vestibule to manage potential for outside contamination.
2. Provide cleaning system upon arrival of new packages, (UV light).
3. Design spacious package pick-up area to allow for social distancing.
4. In future look at potential for drone package delivery to the separate units – balcony or drone door.



PACKAGE SANITATION



KEYNOTES:

A. Carrier Package Drop Off Room (Non Resident Access)

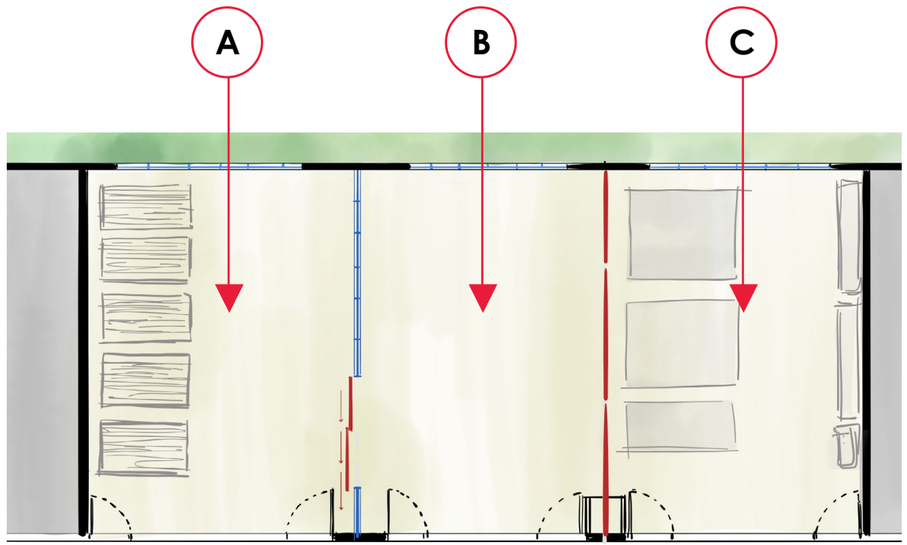
B. Package Room, (Resident Use)

LOBBY AXONOMETRIC VIEW

DESIGN SOLUTIONS

INTERIOR AMENITY SPACES

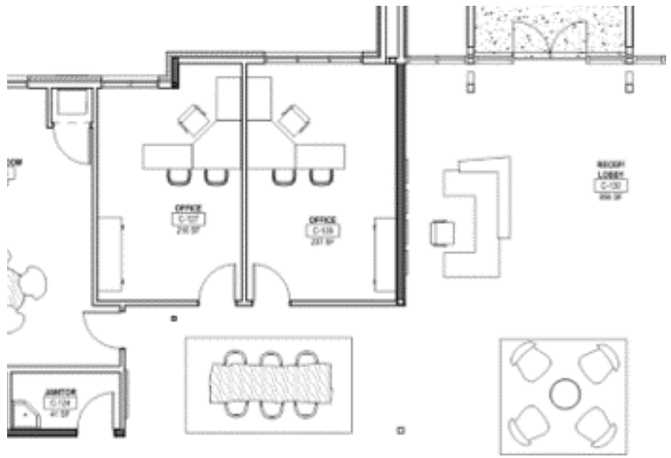
1. Design flexibility into amenity spaces with movable/operable walls or demountable partitions.
2. Design spaces that are flexible and redundant so they allow for down time for decontamination and maintenance.
3. Provide multiple and wider doorways that allow residents and staff to maintain social distancing.
4. Evenly distributed seating layouts so residents can social distance.
5. Adding more office amenity spaces to existing or new projects. Spaces could be rentable for longer periods of time to give residents the opportunity to leave their unit and work with minimal additional risk.
6. Serve individual program areas from separate HVAC air systems & utilize MERV 13 filtration.



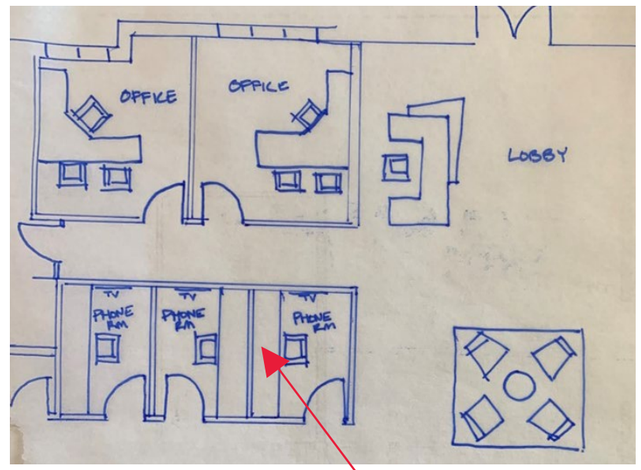
FITNESS SPACE - WITH OPERABLE WALLS

KEYNOTES:

A. Amenity, Studio
B. Amenity, Cardio
C. Amenity, Weights
D. Additional Phone Rooms / Study Rooms



INITIAL DESIGN

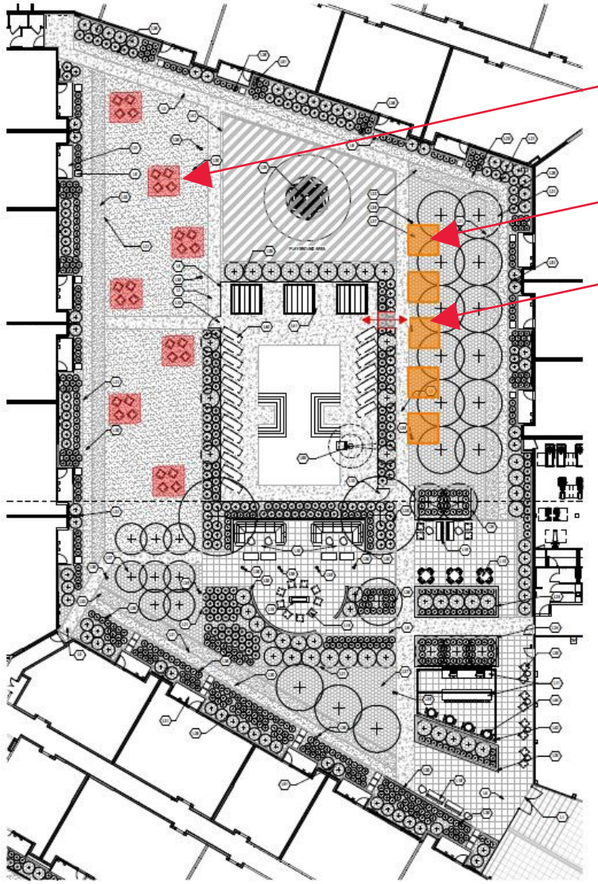


MODIFIED DESIGN

DESIGN SOLUTIONS

EXTERIOR AMENITY SPACES

1. More outdoor seating areas and more covered seating.
2. Add integrated heating to outdoor spaces to extend seasonal usage.
3. Creating reservation lists for outdoor amenities.
4. Adding more cabanas near the swimming pool.
5. Larger courtyards with more outdoor amenities.
6. Increasing/ Updating existing outdoor amenities.
7. Adding gardening boxes.
8. Modify outdoor lounges to operate as an outdoor school.
9. Additional outdoor gaming equipment and cleaning stations.
10. Outdoor theater space.



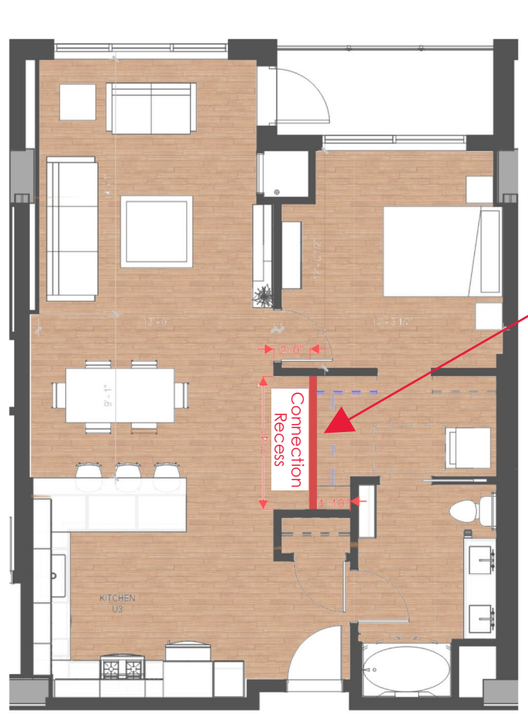
KEYNOTES:

A. Added removeable seating
B. Additional cabanas
C. Additional pool access

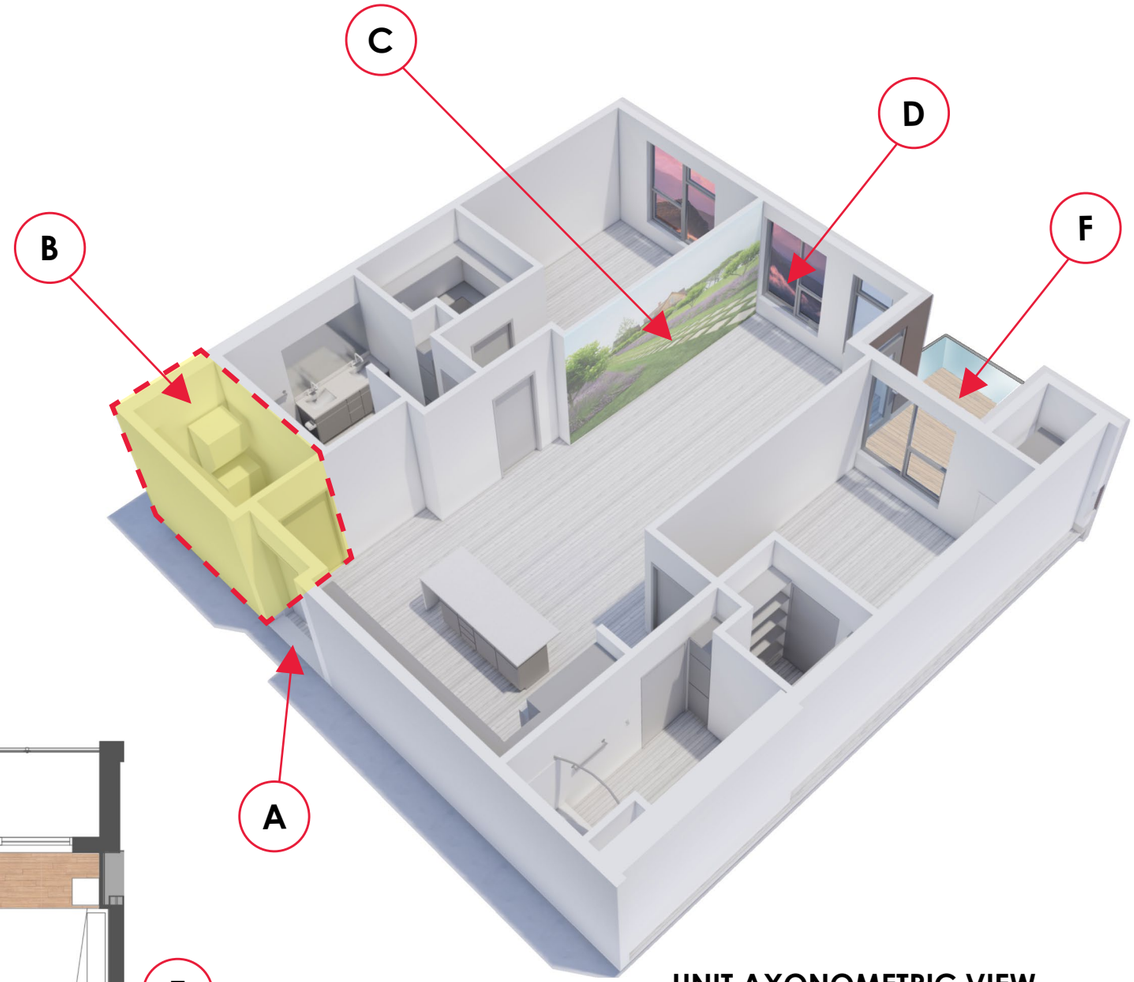
DESIGN SOLUTIONS

UNITS

1. Integrate automatic door opener with no touch fobs or latch system.
2. Provide a “quarantine closet” to temporarily house outside items for cleaning/isolation.
3. Provide balconies at all units in case of extreme lockdown for outdoor access and interaction.
4. Adjust unit lighting to ceridian rhythms, to promote better health.
5. Integrate more systems to allow for all units to easily have virtual reality (VR) systems.
6. Ability to modify exterior view with programmable video screen film on the window that depicts virtual destinations (such as Champs Elysees, Paris, etc.).
7. Provide continuous balanced ventilation.



INTEGRATION OF OFFICE NOOK



UNIT AXONOMETRIC VIEW

KEYNOTES:

A. Automatic Doors
B. “Quarantine Closet, Storage, Pandemic Control Room
C. Media Wall
D. Video Screen Window
E. Connection Recess - Area for Study and Virtual Social Conneciton
F. Enlarged Balcony For Pets

DESIGN SOLUTIONS

ADDITIONAL DESIGN ITEMS

1. Wider corridors with mirrors at intersections and corridors.
2. Automatic doors openers with motion sensor or no touch fob activation.
3. Utilization of foot operated sensors.
4. Occupancy controlled lighting.
5. Sensor and voice activated elevators.
6. Closed-circuit TV to monitor staff and guests.
7. Thoughtful material selection, antimicrobial/bleach cleanable fabrics, high traffic materials for FF&E and doorways.
8. Isolate service and back-of-house areas to isolate maintenance staff from residents.
9. Provide continuous balanced ventilation, 100% exhaust in corridors.

PETS

1. Design multiple pet runs and longer/wider balconies
2. Provide in-house grooming for convenience, limit exposure of owner.
3. Robots take pets to the pet area, then to pet wash. Future idea.

*Schindler CleanMobility Solutions

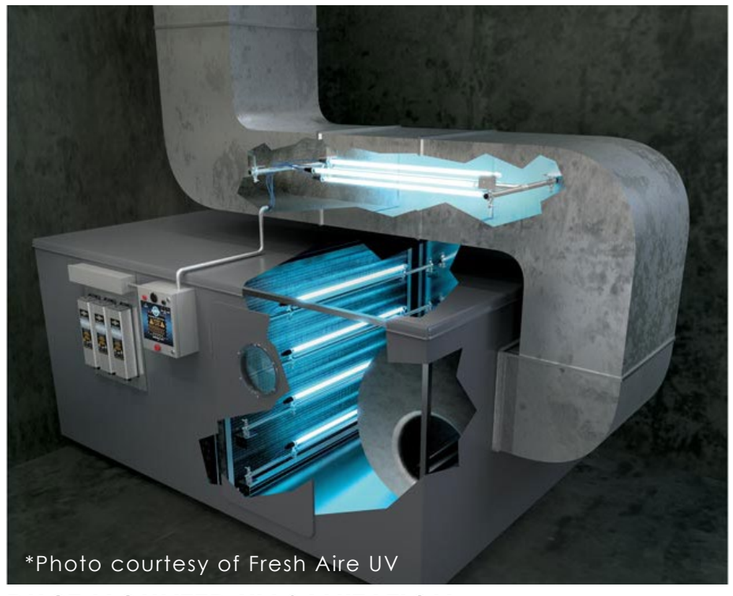
*Hyundai Elevator Touch Button

TOUCH-LESS CALL AND SERVICE BUTTONS

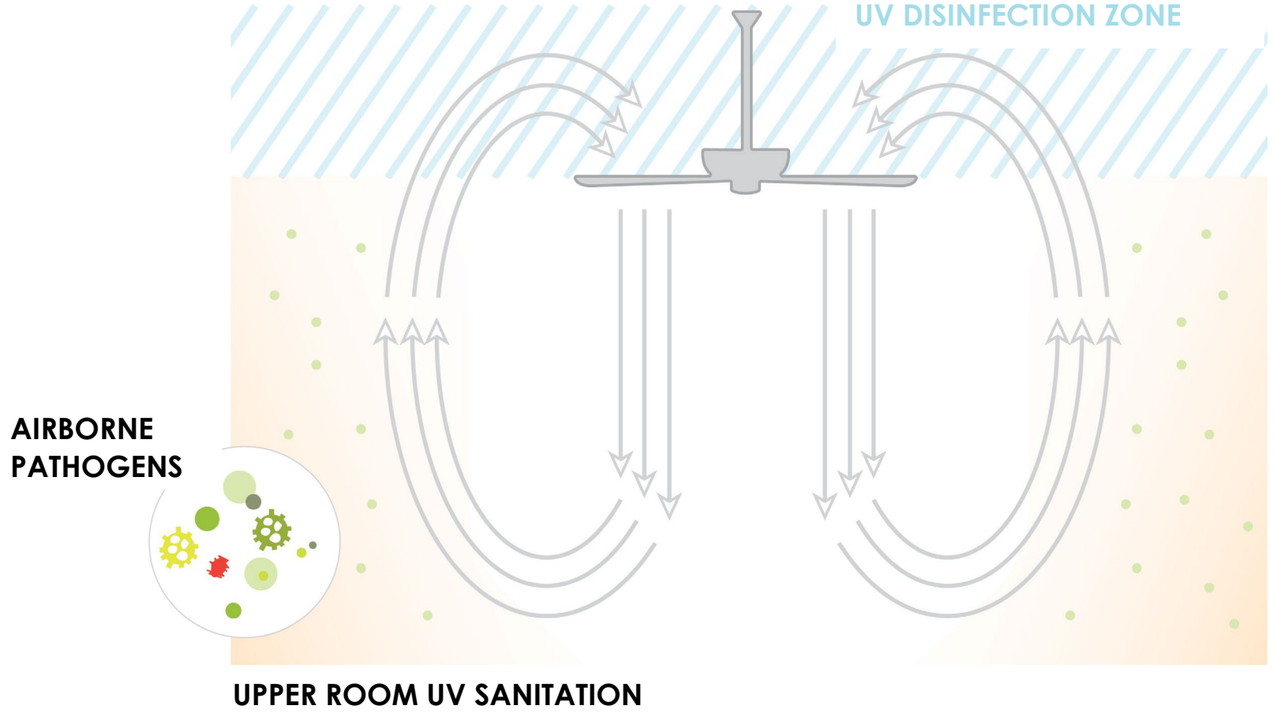
DESIGN SOLUTIONS

BUILDING MECHANICAL SYSTEM

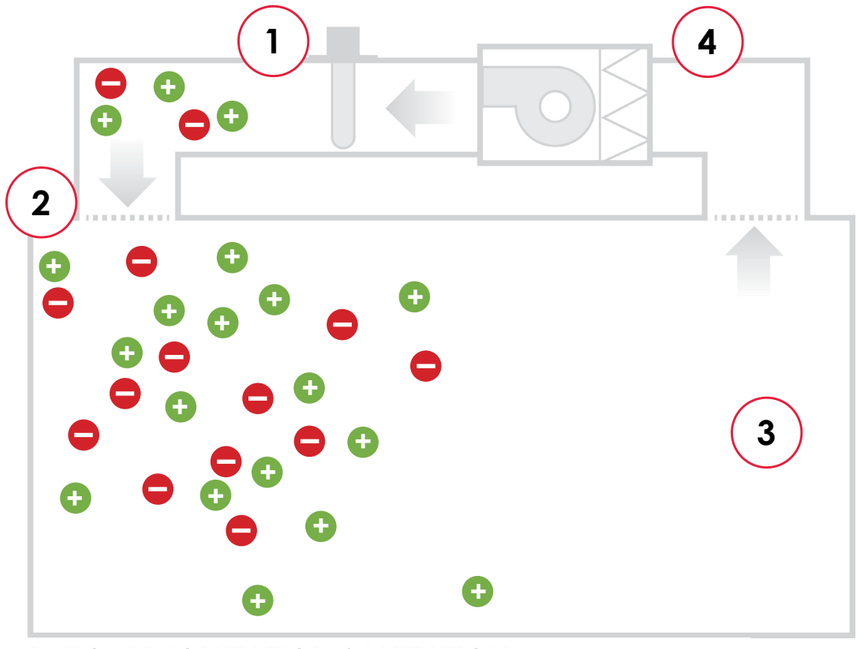
1. Adhere to CDC/ASHRAE guidelines.
2. Emplement latest ventilation rates (ASHRAE 62.1 & 62.2)
3. Utilize MERV 13 Filtration minimum.
4. Integrated sanitation options:
   - Bi-polar ionization
   - UV (duct mounted & upper room)
   - Photocatalytic oxidization
5. Space specific design strategies:
   - Apartments: continuous balanced ventilation
   - Public spaces: separate air handling systems, MERV 13, purge cycles



DUCT MOUNTED UV SANITATION



UPPER ROOM UV SANITATION
Fan moves air across UV disinfection zone



BI-POLAR IONIZATION SANITATION

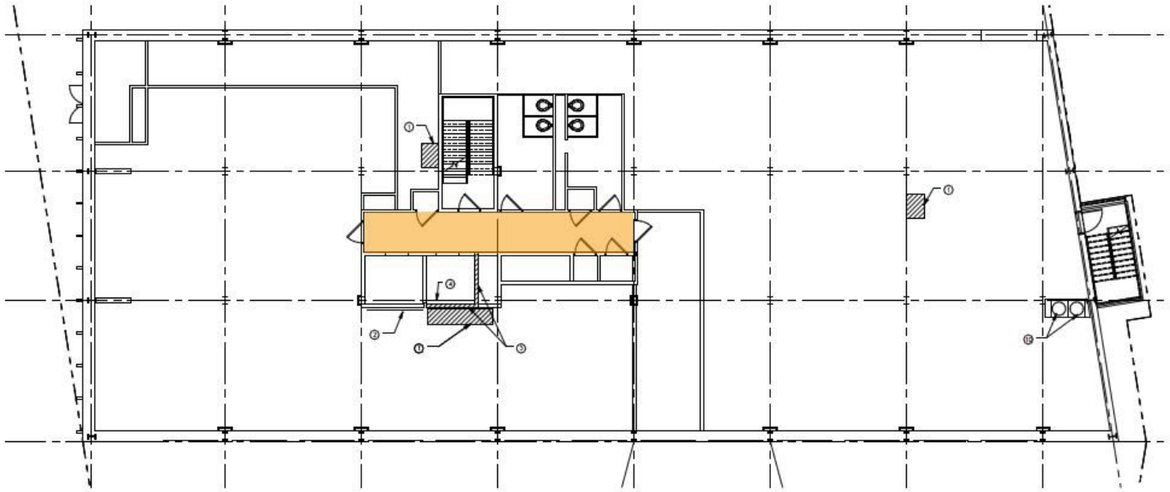
KEYNOTES:

1. Ionizer produces millions of positive and negatively charged oxygen icons.
2. Ions travel through duct system and into the room where they interact with airborne particles, germs, gaseous contaminants.
3. Charged ions trigger cell oxidation, reducing airborne mold, bacteria and virus cells.
4. Particles are charged oppositely, causing them to cluster into large particles, which can now be caught by the filter and removed from the airflow.

DESIGN SOLUTIONS

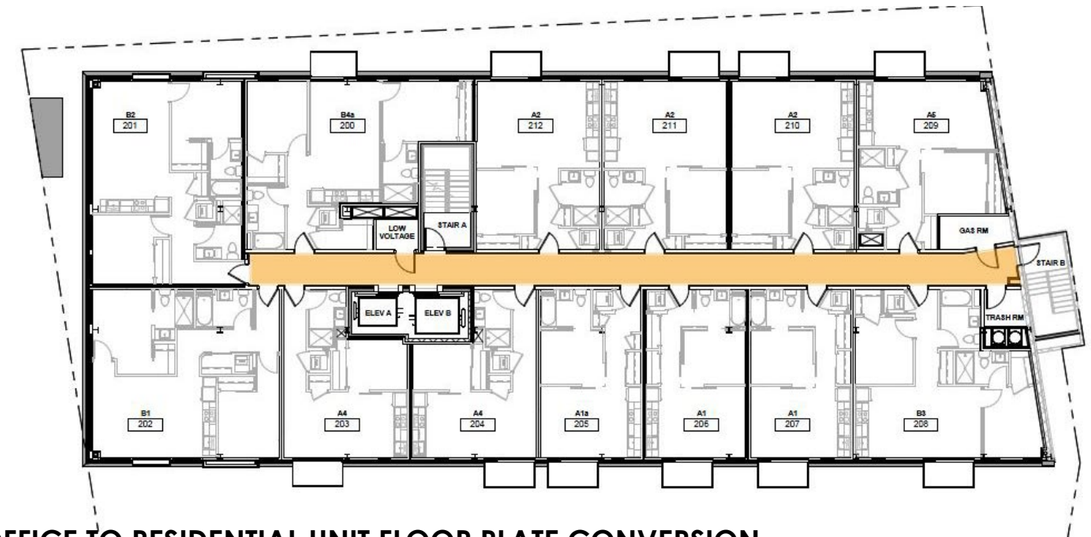
EXISTING OFFICE BUILDING CONVERSION

1. Shifting work from office to home/remote locations will increase the vacancies of existing office buildings.
2. Many office buildings are in high density locations, which are ideal for housing demand.
3. Analysis of office building dimensions to accommodate dwelling units efficiently (60'-75' width) with a double-loaded corridor and bedrooms with exterior wall exposure or inboard bedrooms as the configuration requires.
4. Larger office building floor plates can be be used with strategic demolition of the plates to create courts or longer and narrower unit floor plans that feature inside inboard bedrooms.
5. Most older buildings have good "bones" - frame and floor structure can remain and skin/fenestration can be improved.
6. Vertical circulation elements are typically in place and can be modified.
7. Amenity spaces can be added to rooftop or within the building.



TYPICAL OFFICE FLOOR PLATE CONFIGURATION

OCTAVE 1320 IN SILVER SPRING, MD - BEFORE AND AFTER



OFFICE TO RESIDENTIAL UNIT FLOOR PLATE CONVERSION

ENRICHING LIVES AND STRENGTHENING COMMUNITIES

CHICAGO
209 South LaSalle Street
The Rookery, Suite 920
Chicago, IL 60604
P 312.279.0470

DALLAS
1412 Main Street
Adolphus Tower, Suite 700
Dallas, TX 75202
P 469.405.1196

HANOI, VIETNAM
No 1 Dao Duy Anh Street
Ocean Park Building,
Suite 15, Room 1508
Phuong Mai Ward, Dong Da District
Hanoi, Vietnam
P 469.405.1240

MINNEAPOLIS
222 North Second Street
Long & Kees Building, Suite 101
Minneapolis, MN 55401
P 612.339.3752

WASHINGTON, DC
1054 31st Street NW
Canal Square, Suite 410
Washington, DC 20007
P 202.595.3173

WWW.BKVGROUP.COM