



RETURNING TO SCHOOL

BRAINTREE EAST MIDDLE SCHOOL COVID-19 STRATEGY • JUNE 2020



MDS
ARCHITECTS



RETURNING TO SCHOOL

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In anticipation of Massachusetts phased reopening of schools during the COVID-19 pandemic, MDS/Miller Dyer Spears Architects developed this study to explore how classrooms, corridors, and the various environments of a school could be adapted to support social distancing and increased safety practices. This study uses the Town of Braintree's East Middle School as a case study, building upon our intimate understanding of the building and Braintree Public School's mission and educational goals. Our strategy is informed by the guidelines and directives of the Massachusetts Department of Public Health (DPH), Massachusetts Department of Elementary and Secondary Education (DESE), Centers for Disease Control and Prevention (CDC) and Occupational Safety and Health Administration (OSHA), as well as infection control best practices, and our firm's health care design experience.

GUIDING PRINCIPLES

- Prioritize the health and safety of students, faculty and staff without compromising learning and engagement
- Follow evolving local public health guidelines and government mandates for remote teaching and learning and returning to school
- Foster an ongoing dialogue among administration, teachers, and parents to facilitate a shared understanding of everyone's unique concerns and health needs – for both individuals and their families
- Maintain flexibility in accommodating teacher, staff and student needs as communities return to school
- Apply CDC, DPH, and DESE guidelines and infection control best practices in establishing new protocols for teaching in classrooms and returning to school
- Embrace innovation in modifying classroom practices to maintain collaboration, communication, creativity and engagement

COVID-19 RETURN TO SCHOOL STRATEGY

initial questions to consider



QUESTIONS + CONCERNS

- What is needed in the school district's feasibility study for the state's required in-person learning, remote learning, and hybrid plans?
- How will the school building be adapted to adhere to social distancing guidelines and smaller class sizes?
- How can underutilized rooms dedicated to temporarily suspended high risk programs, like music and maker spaces, be repurposed?
- What safety materials are required to minimize exposure and who is providing them?
- How are students and faculty going to learn about the new policies? What kind of training needs to be required?
- What checks and balances need to be put in place to confirm these new policies are followed and enforced? What happens if a student or their parents do not comply?

MDS can provide a broad scope of services to assist the school and district to answer these questions and develop a comprehensive strategy.

COVID-19 RETURN TO SCHOOL STRATEGY

assistance + services



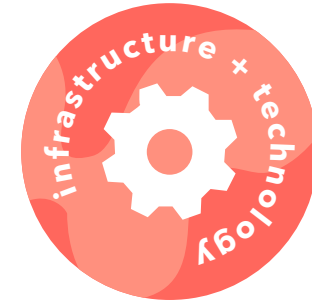
STRATEGIC PLANNING

- Develop revised classroom layouts with reduced class sizes, new seating arrangements, and circulation paths.
- Identify strategies to mitigate exposure and enable social distancing – including identifying high-touch surfaces.
- Assist school administration in establishing new school procedures and guidelines.
- Prepare online surveys and analysis.



SIGNAGE + INFOGRAPHICS

- Identify signage strategy and locations.
- Develop informative signs and graphics to assist with new safety protocols.
- Create informational graphics and pamphlets to share with the school community regarding solutions.

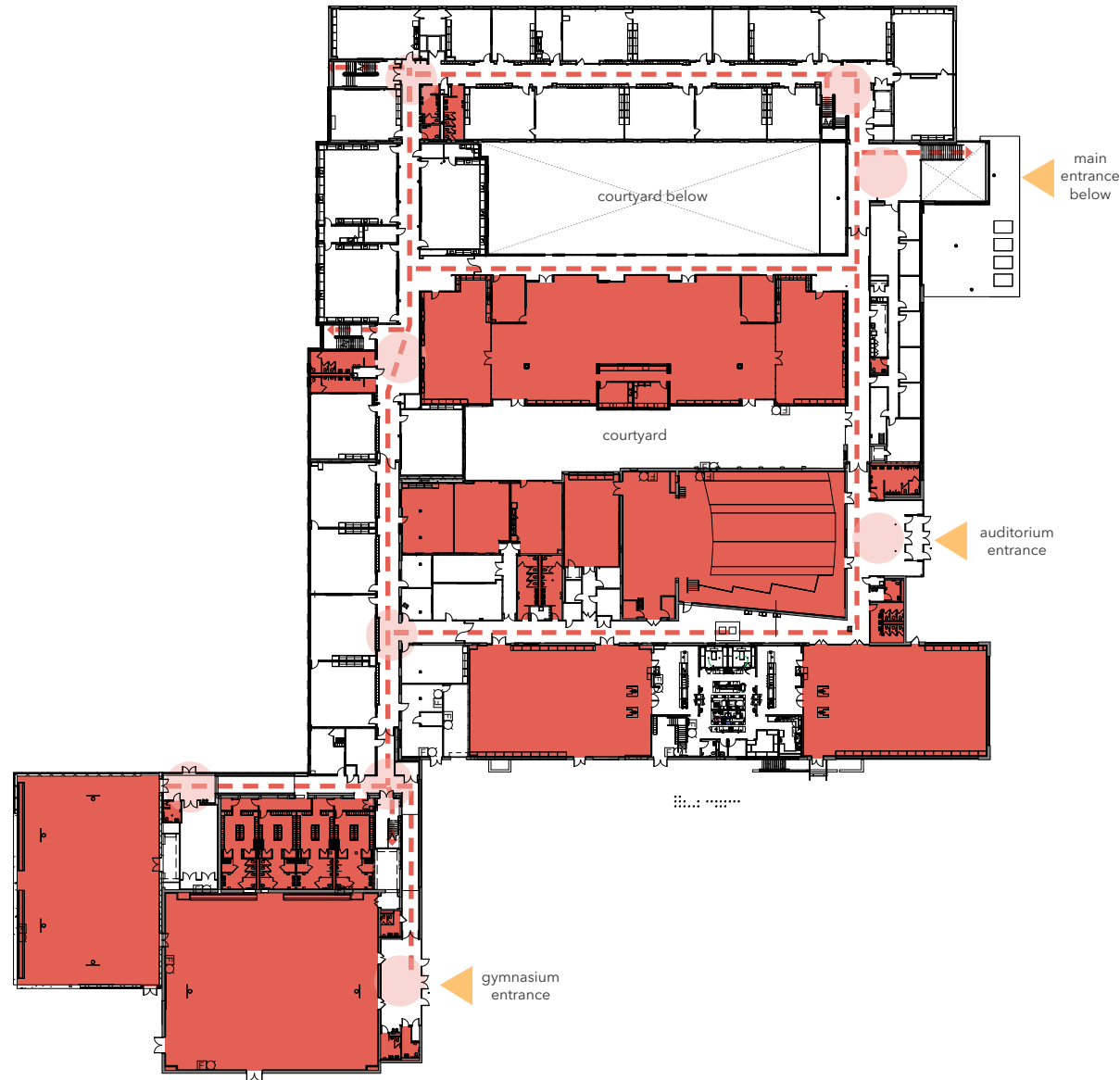


INFRASTRUCTURE + TECHNOLOGY

- Evaluate existing HVAC systems for air flow, circulation, and filtration and provide recommendations.
- Research and identify possible disinfection technologies and strategies to mitigate virus spread.
- Assist with classroom technology for remote learning and lecture capture.

SCHOOL ANALYSIS

high risk areas



HIGH OCCUPANCY SPACES





- gymnasiums
- cafeterias
- media commons
- auditorium

HIGH RISK PROGRAMS

- music classroom
- band classroom
- science classrooms
- maker spaces
- gymnasiums
- cafeterias

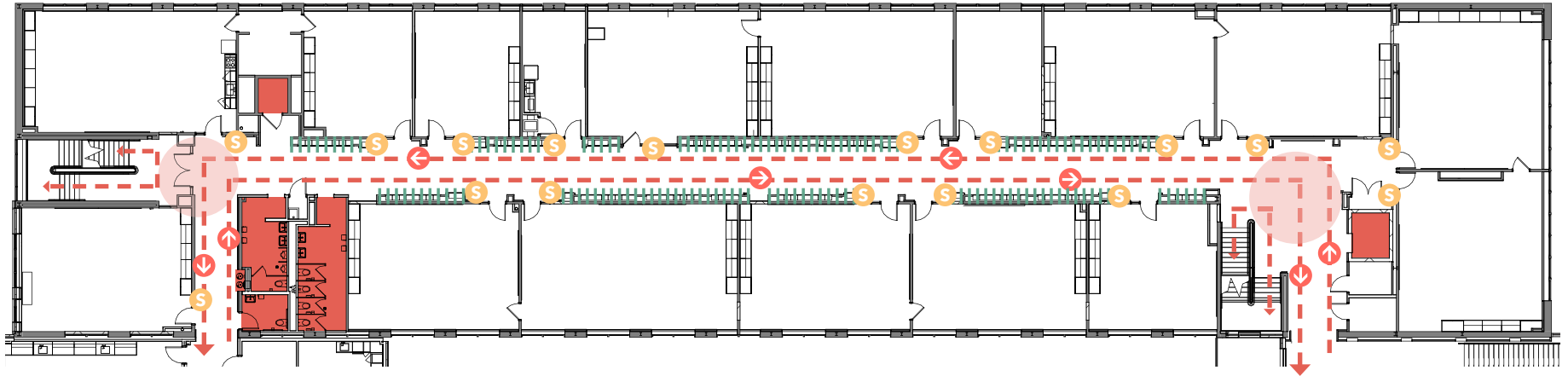
HIGH RISK INTERACTIONS

- corridors + lockers
- lobbies + entrances
- bathrooms + locker rooms
- cafeterias

-  high risk program space
-  high risk intersections
-  building entrance
-  high risk circulation

SCHOOL ANALYSIS

high risk areas



BATHROOMS + DRINKING FOUNTAINS

- Minimize proximity to other people by restricting the use of every other fixture.
- Provide paper towels and trash cans in lieu of electric hand dryers to reduce the recirculation air.
- Install hold opens on doors to reduce contact with high touch areas where required.
- Restrict use of drinking fountains to the bottle filler function only.

CORRIDORS + STAIRS

- Provide graphics on the floors to direct traffic. Any altered circulation paths should not conflict with path of egress in case of emergency.
- Identify potential collision areas at intersections and reduce the amount of foot traffic in those zones.
- Restrict the use of lockers to reduce crowding in the corridors and the frequency of surface touches.

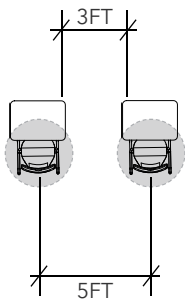
SANITIZING STATIONS

- Provide sanitizing stations at the entrance of each classrooms for students and teachers to use every time they exit and enter.
- Locate additional hand sanitizing stations within classrooms and teacher prep rooms.



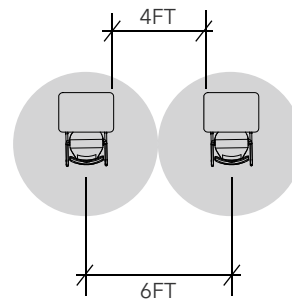
CLASSROOM ANALYSIS

student desk spacing + circulation



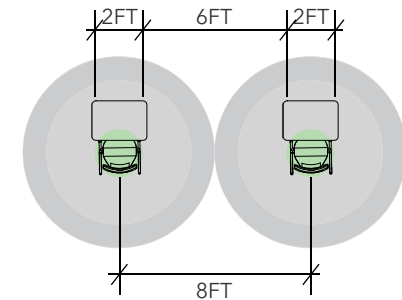
DESE MINIMUM

The DESE guidelines state the World Health Organization (WHO) has found that providing 3ft between student balances the risk of transmission and benefits of in-person instruction; however, other safety measures will have to be used to provide adequate protection. Additional guidance from the DESE recommends 3 ft between student chairs.



DESE RECOMMENDATION

Following guidelines from the CDC, the DESE recommends maintaining a 6ft separation between adjacent students whenever possible and is the DESE preferred distance of separation.



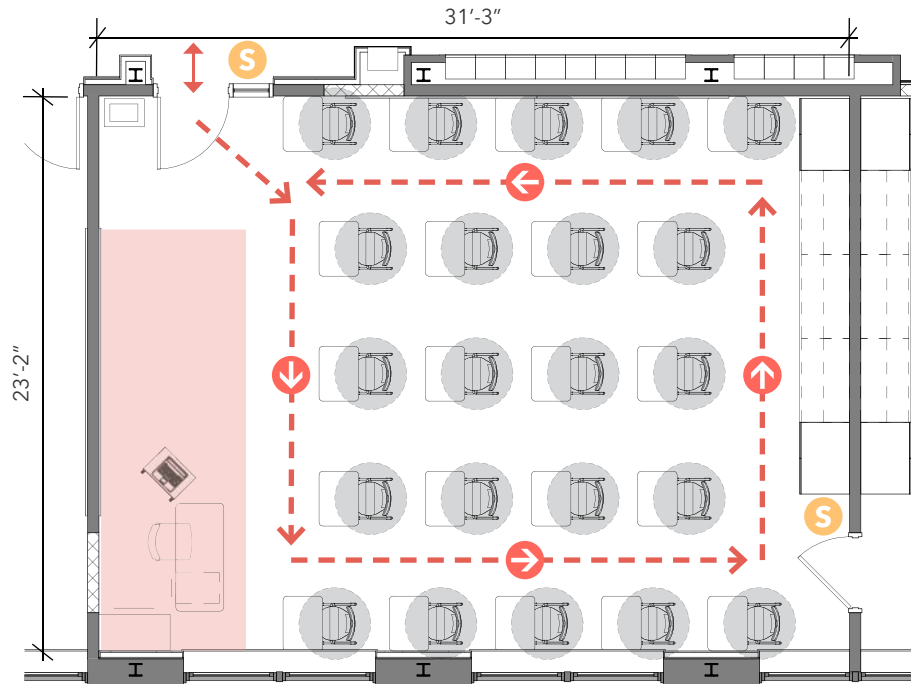
PREFERRED SEPARATION

To account for student movement at their desks provide an additional 2ft to the 6ft separation between adjacent students. This will allow students to shift freely in their seats without compromising the DESE recommendation.

CLASSROOM ANALYSIS

capacity + travel patterns – guidelines

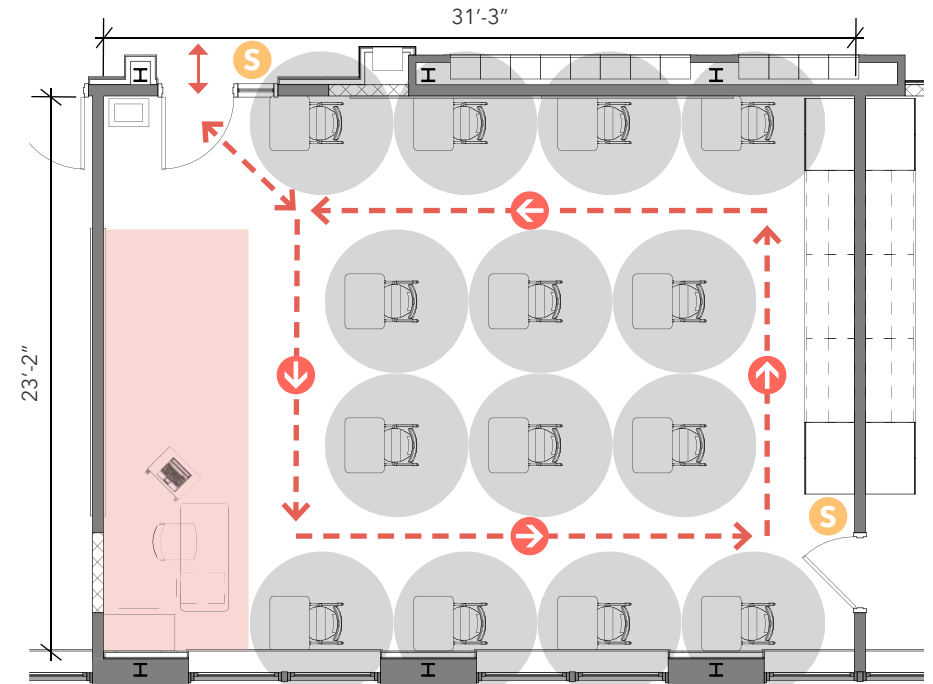
DESE MINIMUM



CAPACITY SUMMARY

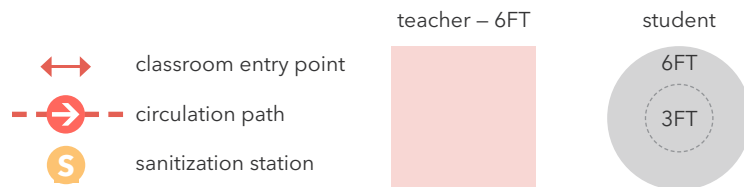
- spacing strategy = minimum spacing
- occupied student desks before = 24 / after = 22
- desks in storage = 0

DESE RECOMMENDATION



CAPACITY SUMMARY

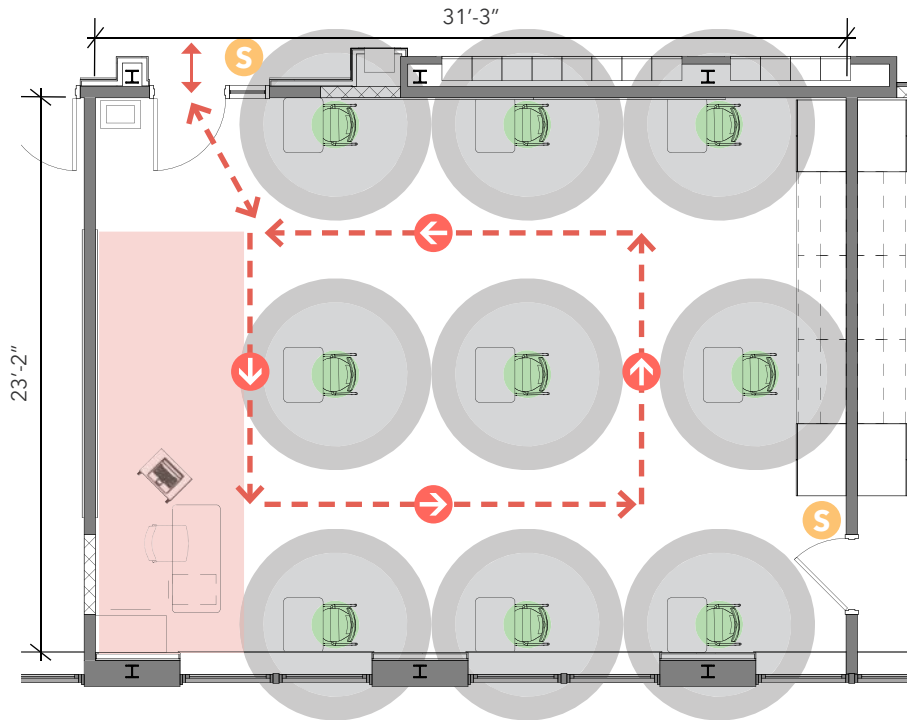
- spacing strategy = recommended spacing
- occupied student desks before = 24 / after = 14
- desks in storage = 10



CLASSROOM ANALYSIS

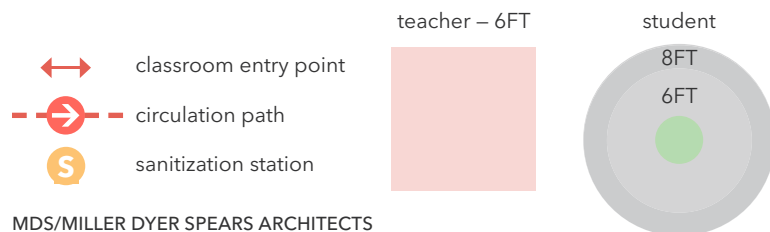
capacity + travel patterns – preferred

Providing 8ft zones around each desk, the classroom size fits 9 students at one time. Either configurations of 9 or 18 desks can be arranged, with additional desks stored or utilized elsewhere. The benefit of providing 18 desks is the potential to have two shifts of 9 students without cross contaminating surfaces.

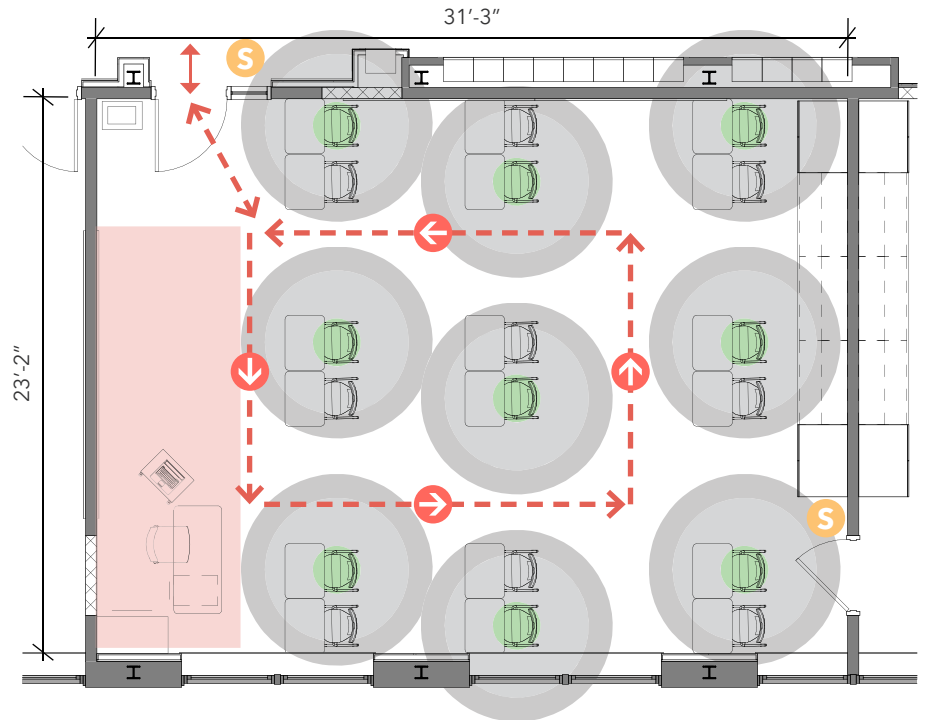


CAPACITY SUMMARY

- spacing strategy = preferred spacing
- occupied student desks before = 24 / after = 9
- desks in storage = 15



MDS/MILLER DYER SPEARS ARCHITECTS



CAPACITY SUMMARY

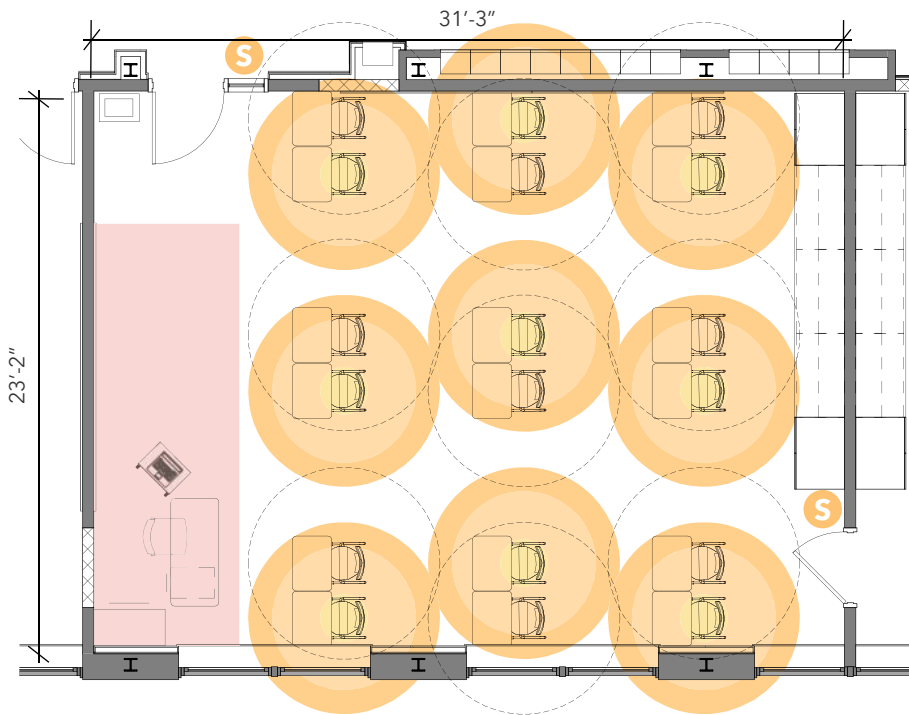
- spacing strategy = preferred spacing
- occupied student desks before = 24 / after = 9
- desks in storage = 6

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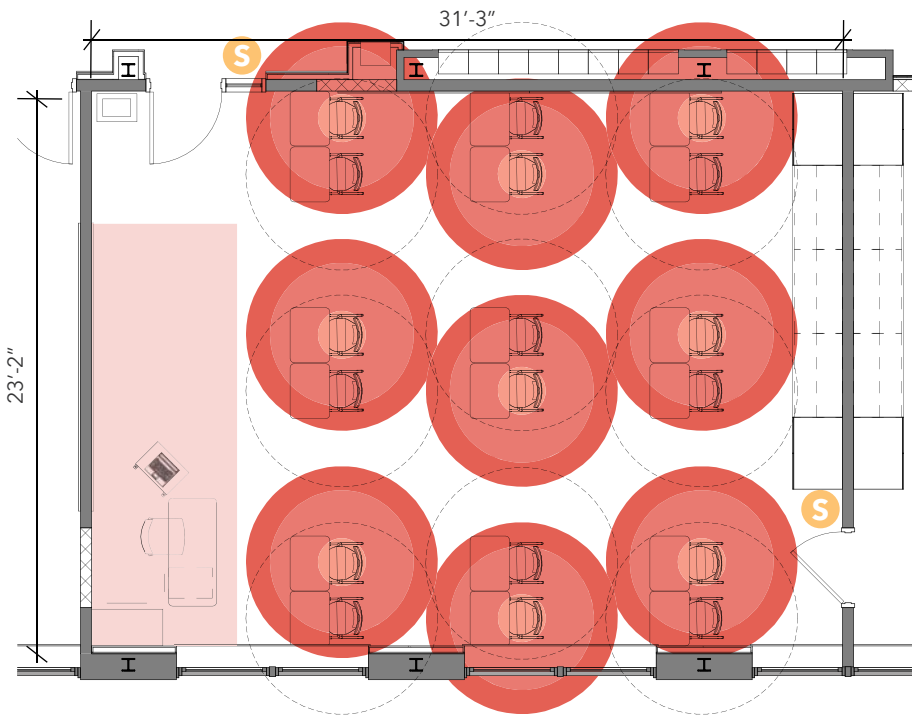
CLASSROOM ANALYSIS

50% occupancy – alternating weeks

strategy: Students will alternate weeks attending school with 50% of the class working remotely and 50% in the classroom. The teacher's lessons will be recorded and live streamed to remote students.



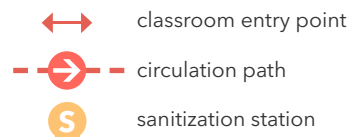
CLASSROOM OCCUPANCY WEEK ONE



CLASSROOM OCCUPANCY WEEK TWO

CAPACITY SUMMARY

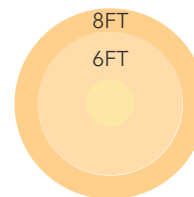
- spacing strategy = preferred spacing
- occupied student desks before = 24 / after = 12
- desks in storage = 0



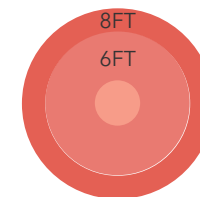
teacher – 6FT



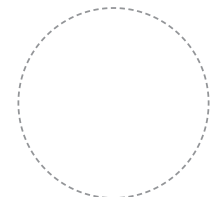
student



student



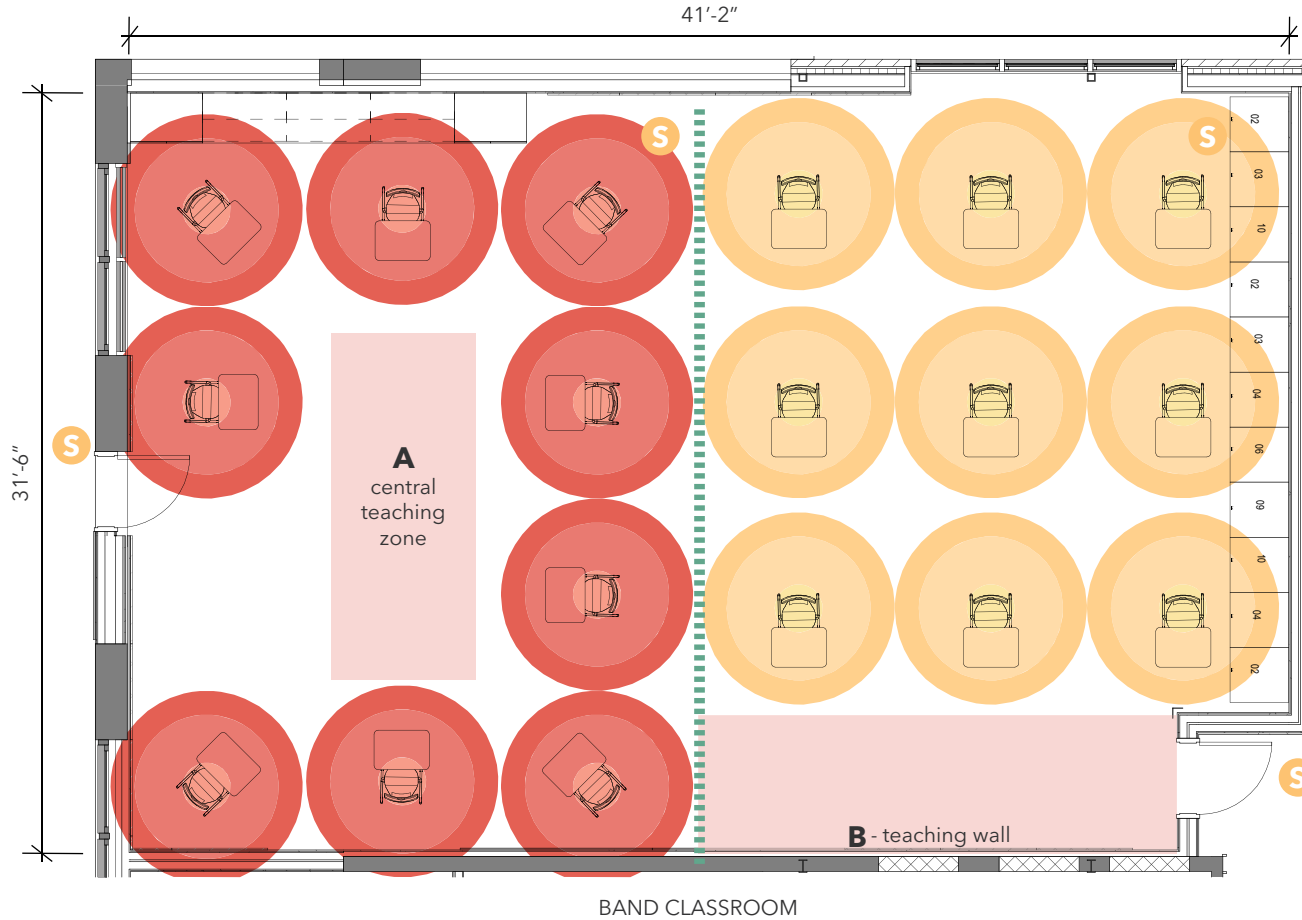
empty desk



CLASSROOM ANALYSIS

repurpose + reuse

strategy: Repurpose rooms no longer in use – add a temporary wall in the band room to create two classrooms



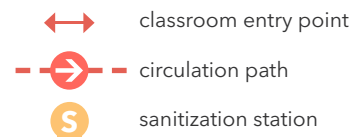
LEARNING APART TOGETHER

Many school programs may be temporarily discontinued due to Covid-19, leaving large spaces unused. These spaces can be utilized for overflow from the traditional classroom for remote learning or additional instructional space. In some cases, the room can be subdivided into smaller spaces for greater flexibility and allowing more students to attend school at the same time. This strategy can be applied, but not limited to, the following spaces:

- gymnasiums
- cafeterias
- media commons
- maker spaces
- music classroom
- band classroom
- auditorium

CAPACITY SUMMARY

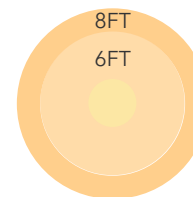
- spacing strategy = preferred spacing
- occupied student desks room a = 9 / room b = 9



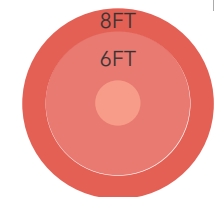
teacher – 6FT



student



student

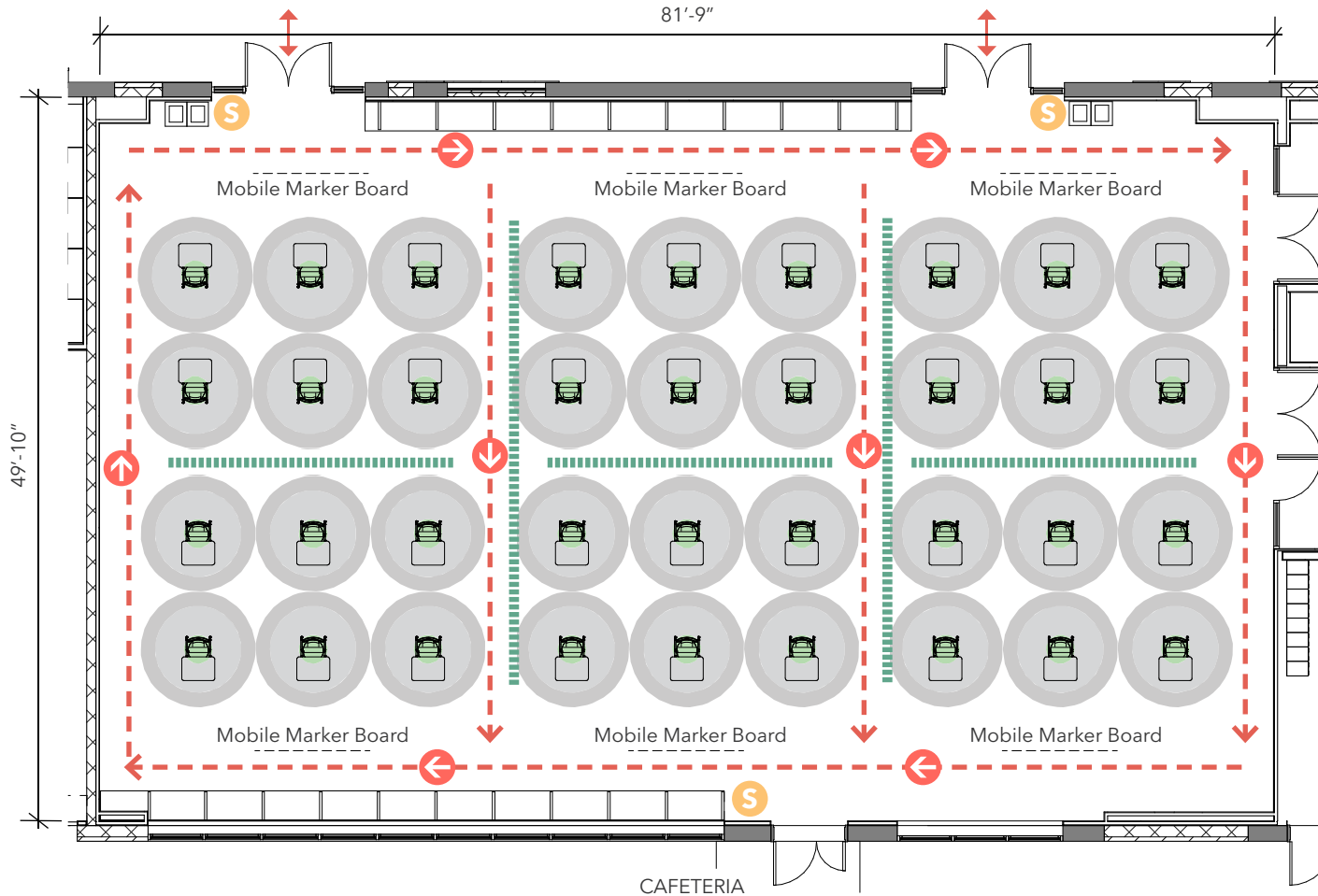


temporary full height wall



CLASSROOM ANALYSIS

repurpose + reuse



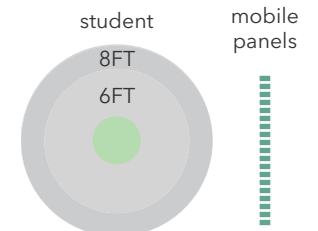
LEARNING APART TOGETHER

The cafeteria is a large space that can be subdivided into multiple learning zones allowing multiple small groups of students to learn remotely from their desks with laptops and head phones. Mobile marker boards can be used to aid the student learning experience. Mobile acoustic panel boards can be used to both demarcate the learning zones and help dampen sound between the different groups of students. The acoustic panels can also be used as a tackable surface to post learning materials.

CAPACITY SUMMARY

- spacing strategy = preferred spacing
- occupied student desks = 36

- ↔ classroom entry point
- circulation path
- S sanitization station





Does your school, institution or community need assistance planning for a return to operations with increased safety protocols?

MDS is available to optimize the process of returning to schools, campuses and workplaces with increased safety measures. We are closely monitoring the evolving state and local guidelines and regulations and are available to assist clients in planning and designing modifications to environments that support appropriate physical distancing and sanitization practices.

Contact Amy MacKrell, Principal
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ABOUT MDS ARCHITECTS

MDS/Miller Dyer Spears is an architecture, planning and interior design firm based in Boston. Working with institutions, schools, public agencies, developers, and communities, we specialize in a range of project types that foster innovation, learning, creativity and wellness. We were founded in 1993 and are proud of the many long-standing relationships we have developed with our clients, many of whom we have served for decades.

Our talented team includes accredited professionals in LEED, WELL and Evidence-Based Design, in addition to Specifications Writers, Certified Documents Technologists, and a range of technical architects who bring third-party oversight and quality assurance to our projects.