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Design Guide for Safe and Secure Entrances

Introduction

The purpose of this document is to provide direction to designers and project staff involved in the design of safe and secure entrance projects at Minneapolis Public Schools (MPS). This document will provide guidance for new and existing entrances that are being constructed or upgraded to increase security.

Having a safe, secure and welcoming entrance is critical to the safety and security of MPS students, families, staff and guests. A key element to understanding building use and security is that the end of the school day is often not the end of the building use for the day. Programs such as Minneapolis Kids, Community Education, community groups, and other programs, utilize MPS buildings as well. Their use of the buildings may occur before, during and after typical school hours and may occur on days when school is not in session.

Use of the building outside of school hours must be understood by the design team during the design process in order to ensure the final design maintains a safe and secure building during all use cases. Special attention is needed at schools where after school events such as concerts, sporting events, theatre productions and community events are held. Coordination with on-site staff and the EMS Director of Safety and Security is required to understand device placement needed for building access needs.

Scope

It is the goal of MPS to provide a welcoming, safe and secure entrance for all schools in the District. Every project that impacts school entrance facilities should be considered an opportunity to achieve this goal. To ensure that a project can meet safety and security requirements, a thorough scoping of the project is required, and a thorough walk through of the site by the design team shall be conducted. Throughout the design phases of a project, the focus of the project should remain on the safe and secure entrance portion of the project. If during the design phase, other elements are recommended by the Project Steering Team that are not part of the original scope, MPS will attempt to take the opportunity to increase the scope and budget for the project, considering that any unmet needs or substandard installations must be addressed by a future project.

If the District determines that either the project scope or schedule is insufficient to design and construct safe and secure entrances, a phased approach may be considered as long as future funding can be obtained.

Pre-Design

Pre-design includes the preliminary design concepts for a safe and secure entrance. Two types of projects are addressed; existing entrances which are being retrofit; and new entrances. Both project types require pre-design

activities to ensure adequate design components are part of the overall design of the entrances. However, existing entrances require consideration of various entrance scenarios and require consultation with the Associate Superintendent, Director of EMSS and the Chief Operations Officer. MPS entrances are categorized to allow for consistency of design across MPS. For this design guidance, each of the entrance types provided assumes that card access is installed (or will be installed) to limit the variations in design. Beyond the main entrance, video door intercoms are often installed at additional doors to meet various site needs. Those additional doors will need to be determined in consultation with the Director of EMSS. This design guidance attempts to address common entrance types but is not all inclusive and may require innovative solutions to be developed for unique cases.

Entrance Design Types

There are five basic types of common entrances at MPS. Each of the types are described below and safety and security considerations provided. Note, the considerations provided are the minimum requirements. Additional requirements may be needed after consultation with site staff, the Director of EMSS. Where modern main doors have been constructed it should be assumed that this is the best, most safe entrance to utilize as a main entry for students, staff and visitors. Use of other doors as a main door should be discussed with the Director of EMSS. There are specialty doors at some buildings where deliveries or other building access may occur. These specialty doors are also discussed below as part of the overall secure entrance design guide.

Type 1- Simple Vestibule with Welcome Desk Check-In Flow

This type of entrance is a simple vestibule. The office is not collocated with the entrance and the ADA entrance is a separate door from the main entrance. This type of entrance is common for schools that have not received a capital improvement to collocate the office with the entrance. Typically, there is a Welcome Desk at the entrance to direct incoming visitors to the office. This type of entrance may also support other programs such as Minneapolis Kids, Community Education and summer programming.

In a Type 1 scenario, video door intercoms should be located on the exterior door of the vestibule. The device should be physically positioned to allow for ease of visitor use. Outside doors are typically locked during the time when the facility is being used. Interior and exterior vestibule doors are open only when students are entering the building. At other times, the doors are locked, and access is granted using the video door intercom to all the main office. Visitors are visually and verbally screened via the video door intercom and granted or denied access to the vestibule. Once inside the vestibule, staff can remotely release the second set of vestibule doors or they can send a staff member to meet the visitor in the vestibule.

The video door intercom devices in a Type 1 scenario should have a minimum of two buttons. A four-button model may be needed depending on door use case and other building activities. These devices should ring the Welcome Desk first. The additional video door intercom buttons can be assigned to additional programs within the building such as Minneapolis Kids, and Community Education. Consultation with school staff, the office of EMSS, Minneapolis Kids, and Community Education is required during initial design. Additional devices may be needed to support other programs such as Minneapolis Kids, who may use a separate designated door as their main entrance. This may require an additional video door intercom. However, MPS goal is to have access from the single location rather than multiple locations. Consultation with the Director of EMSS if required to have multiple access video door intercoms.

Security camera placement in a Type 1 scenario should ensure coverage of the exterior of the vestibule, the interior of the vestibule, the Welcome Desk area (not the work area of the staff at the Welcome Desk) along with coverage of the route to the office.

Signage from the Welcome Desk must mark the route to the office. Signage should be included as part of the overall design of the entrance project.

For staff, card readers should be placed on the exterior door to the vestibule and the interior door into the building proper. If an auxiliary entrance door is approved by the Director of EMSS, a card reader should also be placed at the auxiliary entrance. Designs may also require card readers at the recess access door for staff to use during recess activities. Coordination with MPS is needed to establish parameters when doors and card access is needed for staff and for other MPS employees. A card reader may also be placed on the school side of the office access door. This will allow staff to enter the office using the card reader.

Type 1 ADA - Simple Vestibule with ADA and Welcome Desk Check-In Flow

This type of entrance is a simple vestibule with ADA openers at the main entrance. The office is not collocated with the entrance. The flow follows the same as Type 1 above with the addition of ADA openers on the exterior door and the vestibule door. The ADA openers must be interlocked with the release of the door. That is, the door must be released before the opener will function. If this is also an entrance with card access, then the ADA opener must be integrated with the card access. That is, the card access will unlock the door, then the ADA operator will function when the button is pushed. Note the designer must also allow for egress using the ADA pad. This will require the interior ADA pad when pushed to release both the vestibule and exit door to allow egress. Care should be used in locating the ADA pad and the card access pad to ensure ADA access height requirements are met.

Type 2- Vestibule with Direct Office Entry Check-In Flow

This type of entrance is a simple vestibule with direct entry into the main office from the vestibule. The office is collocated with the entrance and the ADA entrance is a separate door from the main entrance. This type of entrance may also support other programs such as Minneapolis Kids, Community Education and summer programming.

In a Type 2 Entrance scenario, video door intercoms shall be located on the exterior door of the vestibule. The device should be physically positioned to allow for ease of visitor use. Exterior doors are typically locked during the time when the facility is being used. Exterior and interior vestibule doors, and the door from the vestibule to the main office are open only when students are entering the building. At other times, the doors are locked, and access is granted using the video door intercom by calling the main office. Visitors are visually and verbally screened via the video door intercom and granted or denied access into the vestibule. Once inside the vestibule, staff can remotely release the door from the vestibule into the office, or they can send a staff member to meet the visitor in the vestibule. Once the visitor is checked in at the main office, staff can press the manual release button to open the door from the main office into the school. Designers should consider door release button locations by consulting office staff on potential locations. Designs may require multiple release button locations to support staffing inside the office area.

Security camera placement in a Type 2 scenario shall ensure coverage of the exterior of the vestibule,

the interior of the vestibule, and the exit from the main office into the building. Consideration should be given to camera placement inside the main office, to exclude work areas, to cover the entry from the vestibule and the exit into the building. Consultation with the Director of EMSS is required for camera placement inside the main office area.

In this entrance, the ADA entrance is at a door that is not the main entrance. This will require the designer to consider adding cameras and video door intercoms at the ADA entrance. Consultation with site staff is required to understand after-hours use of the building and the need for ADA entrance access when the main office is not staffed. At a minimum the door video intercom must be a two-button model to allow for office and a secondary access point to release the door. As with the Type 1 entrance the ADA access pad must be integral to the door release. The exterior pad will not function unless the door lock is released. The interior ADA pad must be functional for egress. The interior pad, when activated, must release the door and activate the opener. Designers also need to consider if card access is needed for staff at the ADA door. This will require additional programming to ensure appropriate security. Consult with the Director of EMSS for card reader functions at an ADA door that is remote from the office.

Consideration may also be needed for card access for other doors to allow for recess, deliveries, and other activities. Consult with site staff and the Director of EMSS for specific applications.

Type 2- ADA Vestibule with Direct Office Entry Check-In Flow

This type of entrance is a simple vestibule with direct entry into the main office. The office is collocated with the entrance and the ADA entrance is the same as the main entrance. The flow follows the same as Type 2 above with the addition of ADA openers.

Similar to the Type 1 ADA entrance, the video door intercoms should be located on the exterior door of the vestibule. The device should be physically positioned to allow for ease of visitor use and considerations for ADA use. Outside doors are typically locked during the time when the facility is being used. Interior and exterior vestibule doors are open only when students are entering the building. At other times, the doors are locked, and access is granted using the video door intercom to call the main office. Visitors are visually and verbally screened via the video door intercom and granted or denied access to the vestibule. Once inside the vestibule, staff can remotely release office access door. Once in the office, a second release on the door from the office to the school is required. This release will be activated by staff to allow visitors inside the school.

The video door intercom devices in a Type 2 scenario should have a minimum of two buttons. A four-button model may be needed depending on door use case and other building activities. These devices should ring the office first. The additional video door intercom buttons can be assigned to additional programs within the building such as Minneapolis Kids, and Community Education. Consultation with school staff, the office of EMSS, Minneapolis Kids, and Community Education is required during initial design. Additional devices may be needed to support other programs such as Minneapolis Kids who may use a separate designated door as their main entrance. This may require an additional video door intercom. However, MPS goal is to have access from the single location rather than multiple locations. Consultation with the Director of EMSS if required to have multiple access video door intercoms.

Security camera placement in a Type 2 scenario should ensure coverage of the exterior of the vestibule, the interior of the vestibule, and potentially the office area if approved by the Director of EMSS.

For staff, card readers should be placed on the exterior door to the vestibule and the interior door into the building proper. If an auxiliary entrance door is approved by the Director of EMSS, a card reader should also be placed at the auxiliary entrance. Designs may also require card readers at the recess access door for staff to use during recess activities. Coordination with MPS is needed to establish parameters when doors and card access is needed for staff and for other MPS employees. A card reader should also be included on the school side of the office entrance door. This will allow staff to enter the office using the card reader.

ADA openers must be placed on the exterior door, the office door and the vestibule door. The ADA openers must be interlocked with the release of the door. That is, the door must be released by staff or a card reader before the opener will function. If this is also an entrance with card access, then the ADA opener must be integrated with the card access. That is, the card access will unlock the door, then the ADA operator will function when the button is pushed. Note the designer must also allow for egress using the ADA pad. This will require the interior ADA pad when pushed to release both the vestibule and exit door to allow egress. Care should be used in locating the ADA pad and the card access pad to ensure ADA access height requirements are met.

Type 3- Direct Entry with Remote Main Office Check-In Flow

This type of entrance is a direct entrance into the building. This type of entrance is typical at a kitchen or dock door. The office is not collocated with this entrance and the ADA entrance is a separate door.

In a Type 3 entrance scenario, video door intercoms shall be located on the exterior of the building. The device should be physically positioned to allow for ease of visitor use. Exterior doors are typically locked, and visitors must be screened visually and verbally via the video door intercom. The video door intercom devices in a Type 3 scenario typically have a minimum of two buttons. A four-button model may be needed depending on the exact door use case.

Signage from the door must mark the route to the office and should be included as part of the overall design of the entrance project.

Security camera placement in a Type 3 scenario should ensure coverage of the exterior of the door, the interior of the door, and the route from the door to the main office.

This type of entrance must be reviewed by the Director of EMSS. This entrance does not provide a safe entrance for the school and will require special considerations from EMSS for approval.

Type 3 ADA- Direct Entry with ADA Opener and Remote Main Office Check-In Flow

This type of entrance is a direct entrance into the building with ADA Openers. This type of entrance is often found at ADA entrances which have not received capital upgrades. The flow follows the same as Type 3 above with the addition of ADA openers. The ADA openers must be interlocked with the exterior door release, so the exterior ADA opener only works if the door is released. The designer must consider after hours use of the ADA door as part of the design. A minimum two button video door intercom is required in this type of access. Interior ADA release button must work to allow for egress. Consideration shall be given to building security and access using the interior ADA release.

Type 4- Vestibule with Teller Window Check-In Flow

This type of entrance is a simple vestibule with check-in at a teller window between the main office to the vestibule. The office is collocated with the entrance and the ADA entrance is a separate door from the main entrance. This type of entrance may also support other programs such as Minneapolis Kids, Community Education and summer programming.

In a Type 4 entrance scenario, video door intercoms should be located on the exterior door of the vestibule. The device should be physically positioned to allow for ease of visitor use. Exterior doors are typically locked during the time when the facility is being used. Exterior and interior vestibule doors, and the teller window from the vestibule to the main office are open only when students are entering the building. At other times, the doors and teller window are locked, and access is granted using the video door intercom to call the main office. Visitors are visually and verbally screened via the video door intercom and granted or denied access to the vestibule. Once inside the vestibule, staff can visually and verbally screen the visitor from the teller window. Staff can remotely release the door from the vestibule into the building, or they can send a staff member to meet the visitor in the teller window.

Security camera placement in a Type 4 scenario should ensure coverage of the exterior of the vestibule, the interior of the vestibule, and the area where guests enter the building from the vestibule.

Type 4- ADA Vestibule with Teller Window Check-In Flow

This type of entrance is a simple vestibule with check-in at a teller window between the main office to the vestibule. The office is collocated with the entrance and the ADA entrance is a separate door from the main entrance. The flow follows the same as Type 4 with the addition of ADA openers. The ADA openers must be interlocked with the exterior door release, so the exterior ADA opener only works if the door is released. The designer must consider after hours use of the ADA door as part of the design. A minimum two button video door intercom is required in this type of access. Interior ADA release button must work to allow for egress. Consideration shall be given to building security and access using the interior ADA release.

Type 5- ADA Vestibule with Remote Office Check-In

This type of entrance is a simple vestibule with check-in at the main office which is remote from the ADA doors. In a Type 5 entrance scenario, video door intercoms shall be located on the exterior door of the vestibule and the interior door of the vestibule. The devices should be physically positioned to allow for ease of visitor use. Exterior doors are typically locked during the time when the facility is being used. Doors can be scheduled to be unlocked during the time when students arrive via door programming. Visitors are visually and verbally screened via the video door intercom and granted or denied access to the vestibule. Once inside the vestibule, staff can call to release the door from the vestibule into the office, or they can send a staff member to meet the visitor in the vestibule.

The video door intercom devices in a Type 5 scenario should have a minimum of two buttons. A four-button model may be needed depending on the exact door use case.

Signage in the vestibule must mark the route to the office and should be included as part of the overall design of the entrance project

Security camera placement in a Type 5 scenario should ensure coverage of the exterior of the vestibule,

the interior of the vestibule, and the route from the vestibule to the main office.

Additional Entrance Types- Special Use Doors

Many schools have specialty doors that are access points to specific areas like the kitchen or janitorial areas. These special access doors may require a video intercom and card reader. A video door intercom is required for doors used for deliveries. Kitchen areas which receive food deliveries frequently are a good example of a special use door. These doors require a one button door buzzer which rings to the kitchen office, and then rolls to the main office-depending on the door use case. Staff can release the door for deliveries and supervise the people coming into the building. The door may also require a card reader to allow employee access through the door. Access through special use doors should be limited to specific staff. For example, teachers should not gain access to the building through the kitchen or janitorial areas. Additional camera coverage is needed to monitor special use doors. Consultation with the Director of EMSS is required for special use doors.

References

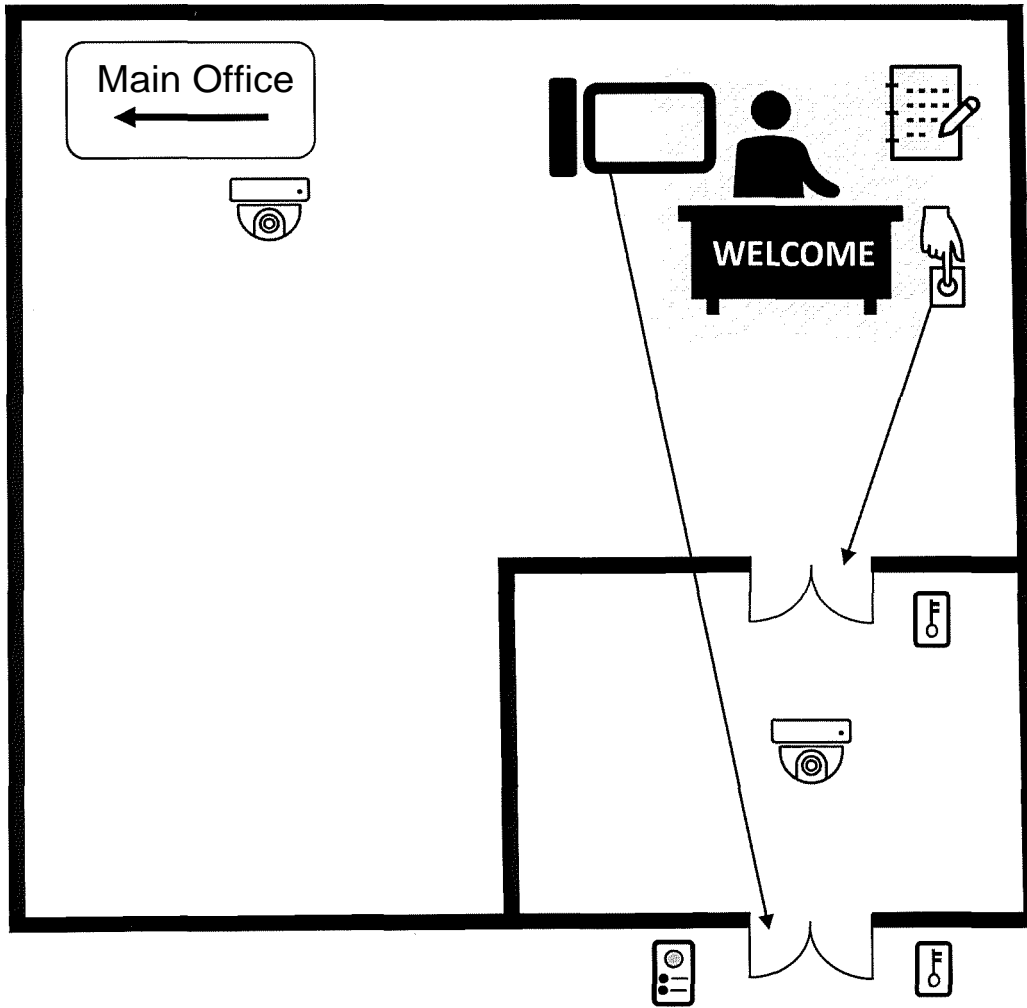
The Handbook for School Safety and Security: Best Practices and Procedures, Lawrence J. Fennelly and Marianna A. Perry

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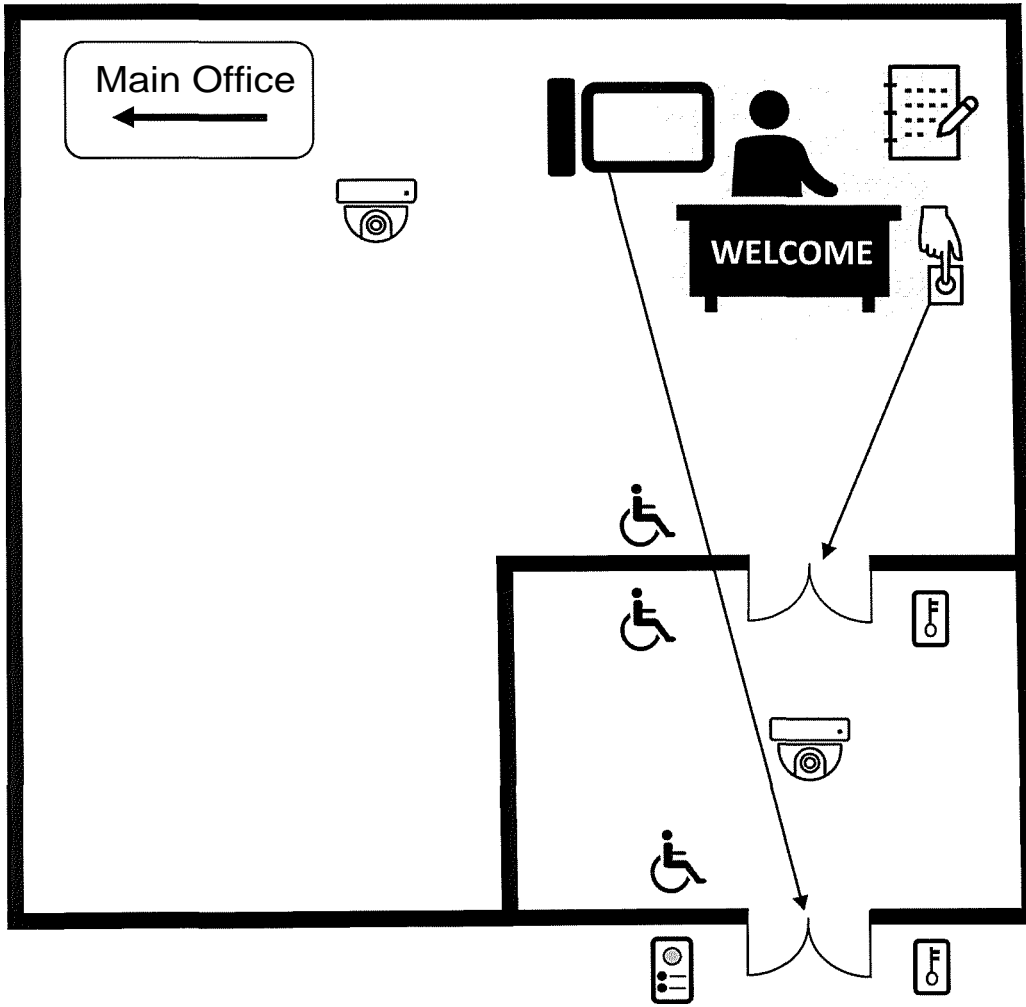
Best Practices: Perimeter door security and access management in schools, Allegion How to

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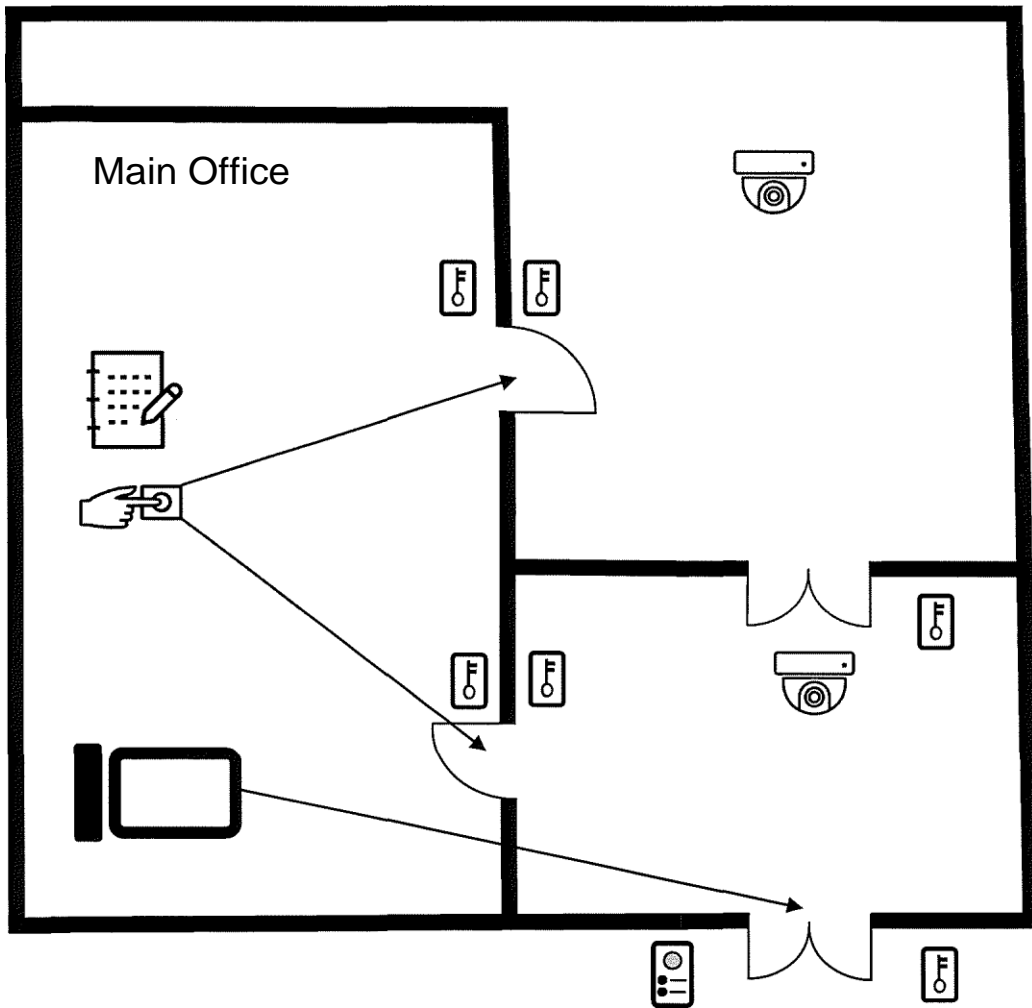


Type 1- Welcome Desk Check-In Flow
Simple Vestibule with
Welcome Desk Check-In Flow

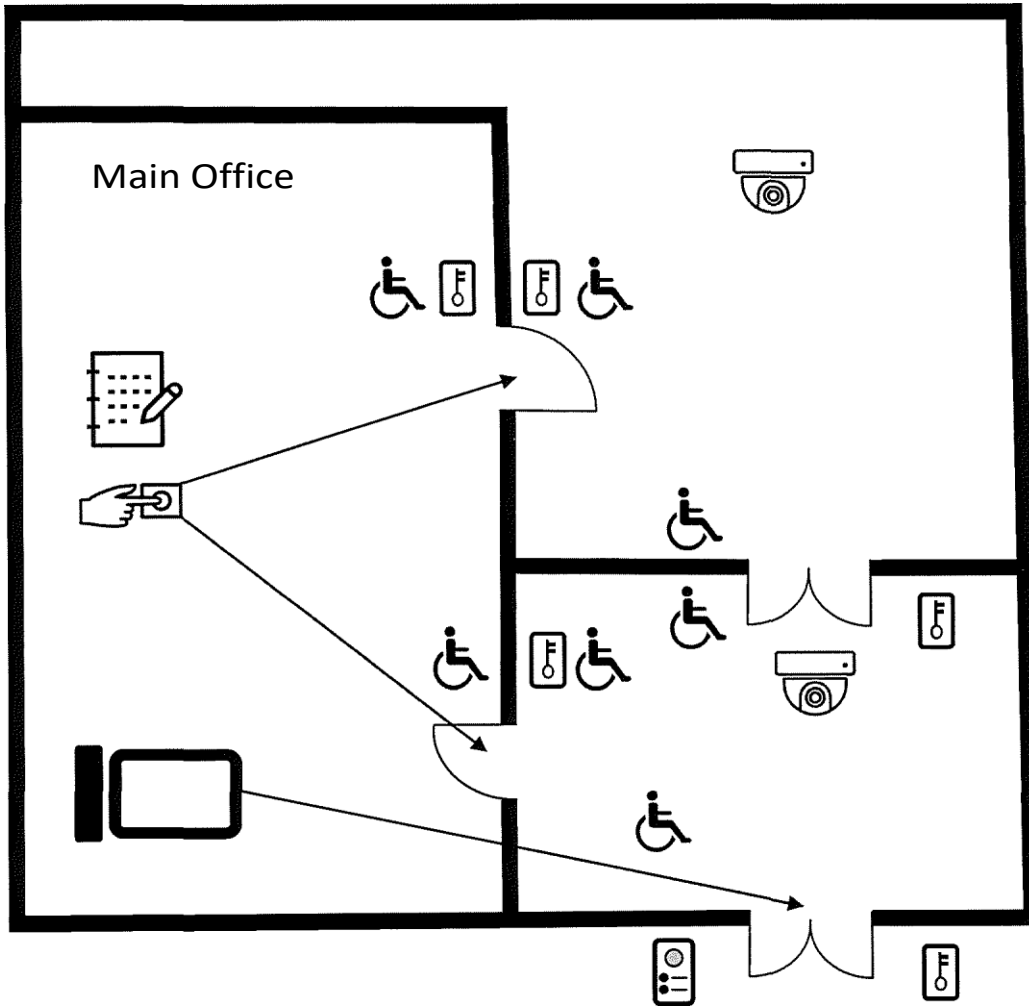


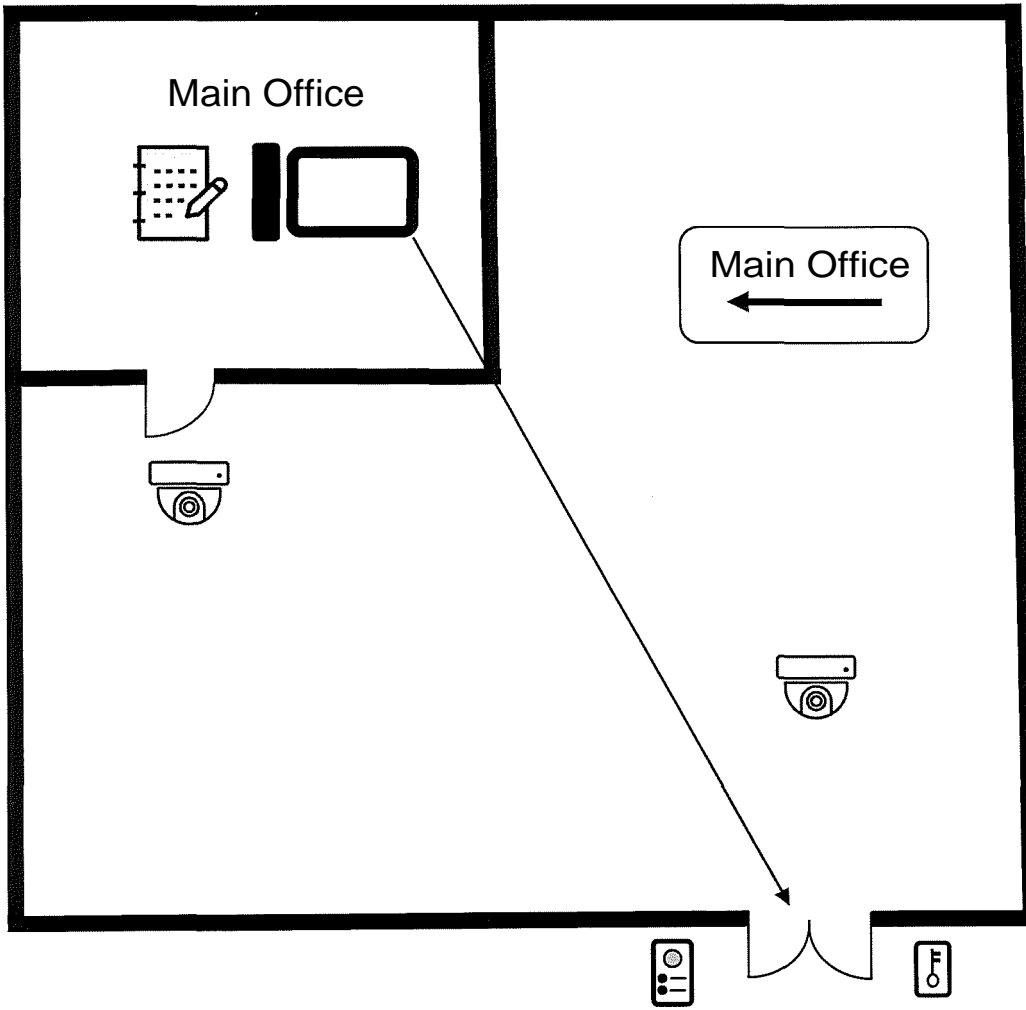
Type 1- ADA with Welcome Desk
Simple Vestibule with Welcome Desk
Check-In Flow and ADA Openers

Type 2- Vestibule with Direct Office Entry Check-In Flow

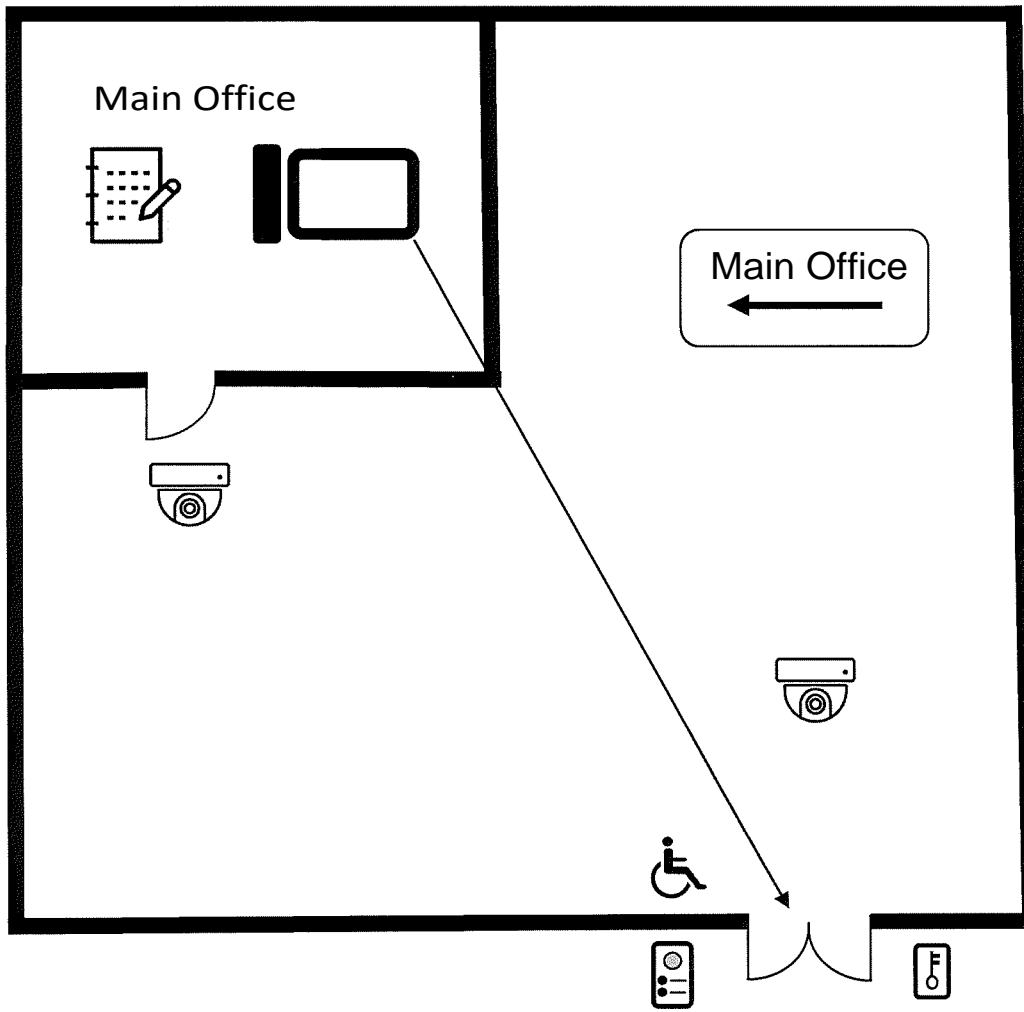


Type 2- ADA Vestibule with Direct Office Entry Check-In Flow





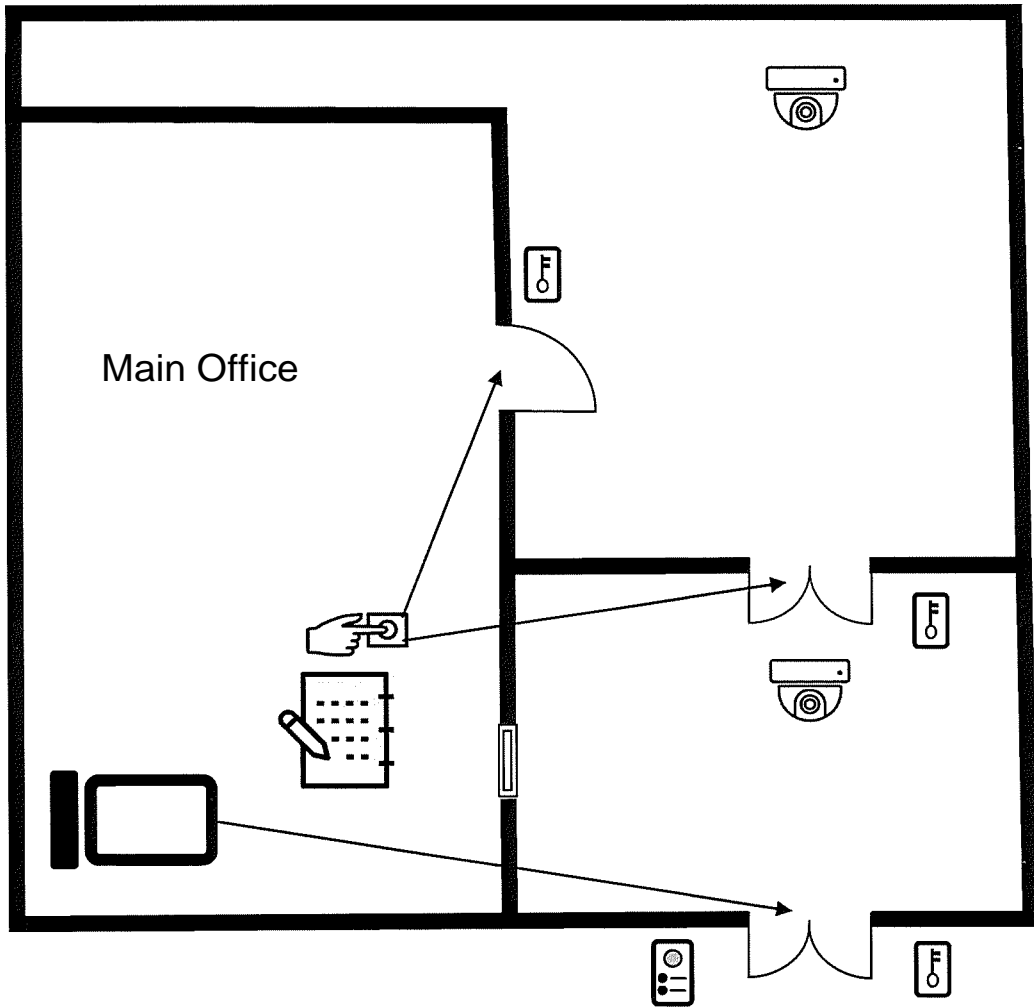
Type 3- Direct Entry with Remote
Main Office Check-In Flow



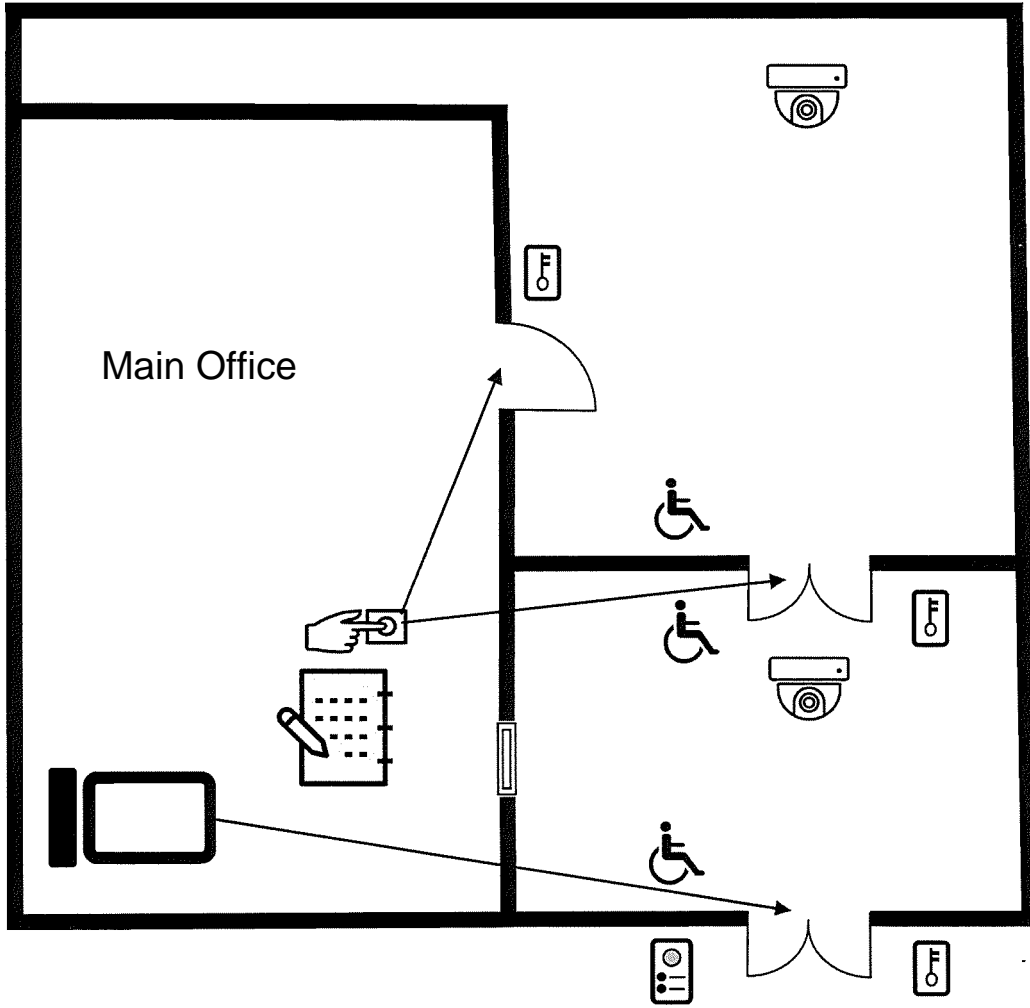
Type 3- Direct Entry with ADA Opener and Remote Main Office Check-In Flow

Example: Lyndale ADA Door

No Vestibule

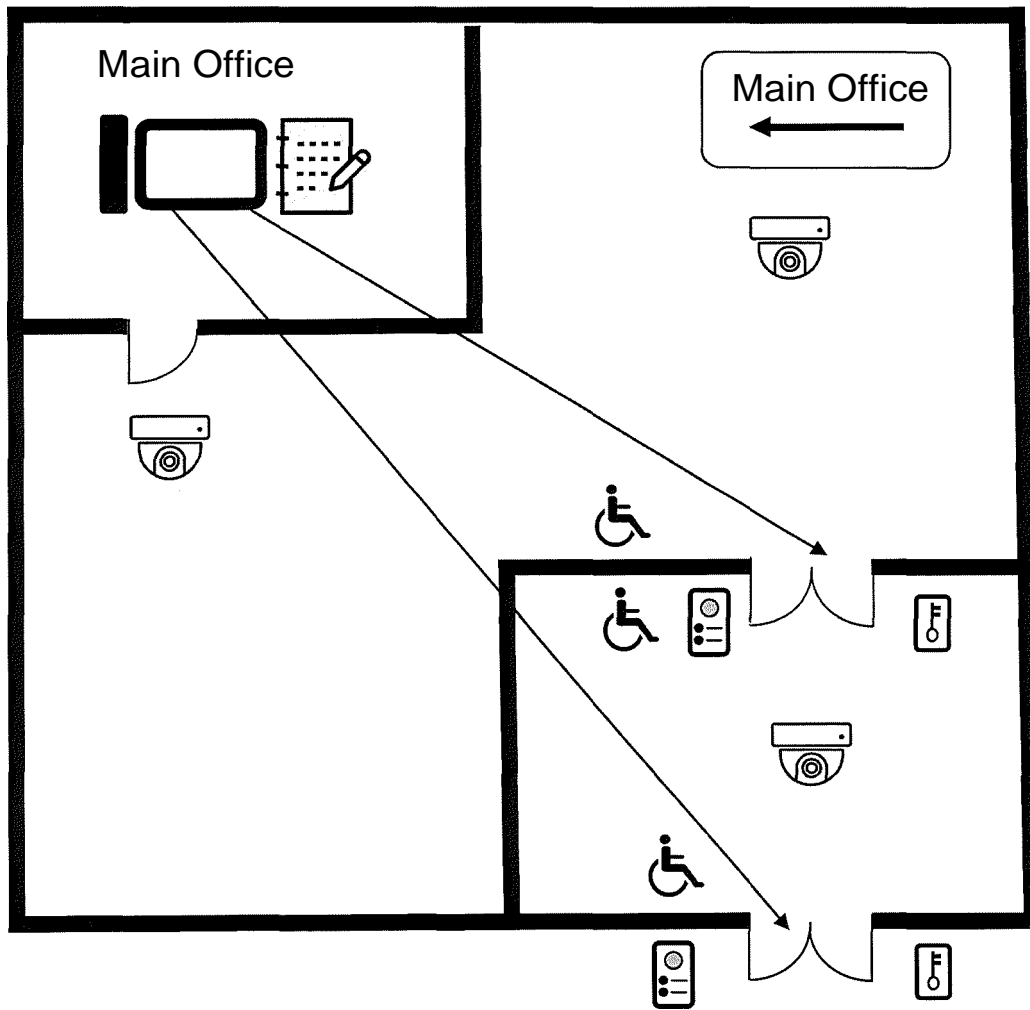


Type 4- Vestibule with Teller Window
Check-In Flow
Example: Kenny



Type 4- ADA Vestibule with Teller Window Check-In Flow

Example: Kenny



Type 5 ADA Vestibule, Remote Office Check-In

Simple Vestibule with Remote Main Office Check-In Flow and ADA Openers

Entrance Type Symbol Legend



Video Door Intercom



Security Camera



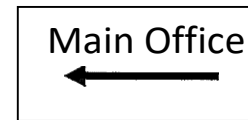
ADA Door Opener



Check-In



RFID Reader



Signage



Door Push Button Release



Welcome Desk



Video Intercom Master Station