

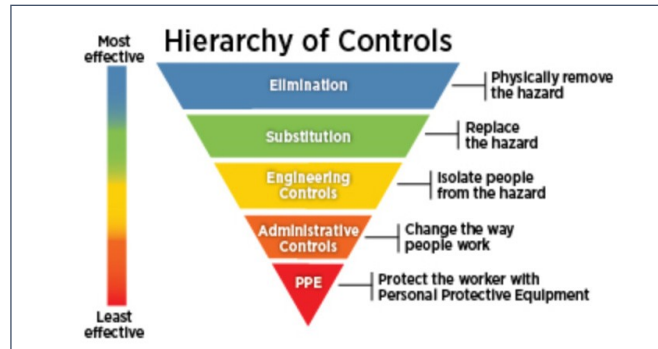
Guidelines for COVID-19 (Plexiglass) Barriers

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Introduction

Plexiglass barriers are **Engineered Controls** that offer the ability to separate individuals that may need to be in close proximity to others.

This document reviews the details about the purpose, design, implementation, and use of barriers for NAIT spaces



IMPORTANT NOTE:

THE OVERALL GOAL, IN USING BARRIERS, IS TO **PREVENT RESPIRATORY DROPLETS** FROM ONE INDIVIDUAL TRAVELLING THROUGH THE AIR AND LANDING ON ANOTHER INDIVIDUAL AND POTENTIALLY CAUSING INFECTION.

Although there are no standardized guidelines for barriers (and especially “plexiglass barriers”), the document reviews and summarizes information from several sources for our needs at NAIT.

Purpose of the Plexiglass Barriers

- When properly designed, installed, and used, plexiglass barriers can block respiratory droplets produced by a person who is in close proximity to another.
- Plexiglass barriers can provide a physical separation between people to support social and physical distancing efforts.
- Plexiglass barriers are appropriate in a variety of settings, including public areas, retail settings, shops, labs, and spaces where it is difficult to maintain 2 metres of separation between people.
- Plexiglass barriers can provide a level of protection from surface contamination in the personal workspace.
- Use of barriers are consistent with recommendations from GoA and AHS.
- Plexiglass barriers may cause minimal disruption to work and business practices.
- Plexiglass barriers can serve as a component of a long-term strategy to reduce risk for other viruses that spread by similar modes of transmission (e.g., influenza).
- Plexiglass barriers are non-porous and can be easily disinfected.
- Plexiglass barriers can provide a sense of safety assurance for staff, students, and visitors.

Understanding the Limitations to the Plexiglass Barriers

- Plexiglass barriers do not provide a **zero-risk solution**. They do not address all possible modes of transmission, such as aerosol transmission, or fully protect anyone from COVID-19.
- Plexiglass barriers do not replace the need to maintain 2 metres of separation between individuals when possible.
- Plexiglass barriers do not replace the need to follow other public health requirements such as practicing good hygiene (e.g., washing hands, not touching your face, staying home if you are ill), the need to wear face coverings and PPE, or other requirements and recommendations from the GoA and AHS.
- There may be constraints in the physical/structural environment that prevent installation of appropriately sized barriers.
- Plexiglass barriers may not be feasible or appropriate in all workspaces or for all work activities.
- If not designed or installed properly for the specific work environment, plexiglass barriers may obstruct or interfere with the ventilation system airflow, and fire and life safety protection systems (e.g., fire alarm notification devices, fire sprinklers, fire pull stations).
- Barriers may break if individuals lean against the material which may expose sharp edges. Consider polycarbonate if the barrier may be subjected to individuals leaning or pushing against it.

Plexiglass Barrier Design Considerations

When considering the design and implementation of plexiglass barrier, it is important to determine the risk level, frequency, and volume of contact with the public and coworkers, and whether-or-not other controls are implementable. Priority should be given to those with higher risk levels.

Risk Levels	
High	Areas of high frequency and high volume of contact with members of the general public, and lack of other controls. Examples include: <ul style="list-style-type: none"> • Food service – cashiers, serving counters • Higher volume retail cashier lanes • Higher volume check-in areas (e.g., clinics, check-in for events) • Higher volume reception areas, front desks, or information desks
Medium	Areas of frequent contact with members of the general public or coworkers, and lack of other controls. Examples include: <ul style="list-style-type: none"> • Lower volume reception, information, and administrative desks • Open work areas with close proximity workstations that lack barriers and other controls • Lower volume retail locations
Low	Areas that do not require contact with people and/or areas with minimal occupational contact with members of the general public or coworkers. Examples include:

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| | <ul style="list-style-type: none"> • Lower volume and density offices where social/physical distancing is strictly adhered to and minimal contact with others. • Areas with other installed engineering controls that are as effective, or more effective, than plexiglass barriers. |
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Assessing your requirements

Standard service counter/temporary barriers

1. Description of shape and use.

Provide a general description of the type of barrier and its purpose. A few sentences are adequate. Below are a few examples of the variety of barriers.



Screen
From ULINE
Useful for shops and labs
(an example of a non-plexiglass material)



Image Shown With Masking
Portable Desktop Shield
From Plastics Plus Ltd.
Useful for eating areas
(plexiglass)



Image Shown With Masking
Collapsible Barrier
From Plastics Plus Ltd.
Useful for client/service
areas (plexiglass)



Image Shown With Masking
TRI-Fold Barrier
From Plastics Plus Ltd.
Useful for client/service
areas (plexiglass)

If you require something more customized, then please obtain an image of a barrier from the internet and include it within the email. It should be noted that custom barriers may take a long time to receive and may not necessarily meet your timelines.

Most of the barriers noted within this document are not permanently affixed to a specific location. They can be installed and moved easily.

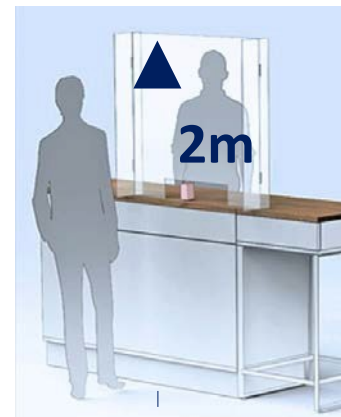
A barrier may need to be permanently affixed (mostly due to safety and/or use requirements).

2. Measure the area for the appropriate size of the barrier

General width and height of the barrier needs to be clearly known.

If the barrier will be situated on top of counter or table, the width and length of the surface also needs to be provided.

Additionally, if someone is working behind the barrier (standing or sitting), then you should assume that a general tipping hazard may exist with the barrier (if it is not permanently affixed to the surface). The barrier may need to be taped to the counter or table for long term use.



3. Take a photo of the area

Most people at NAIT don't spend their days designing plexiglass barriers for work. As such, when communicating your requests to maintenance@nait.ca you need to provide photo(s) to inform others what you're hoping to achieve.

Take a photo (or several) of the area where the plexiglass barrier should be installed. Include the photo(s) in the email request.

Additional consideration should include (but not limited to):

- General ergonomics of the barrier and its ongoing use.
- Communication considerations through the barrier.
- Ventilation of the area and the potential airflow interference of large barriers.

Material used for the barrier. This document has focused on the use of "plexiglass" as the material for the barrier. In some areas other materials may need to be considered for physical safety considerations. For instance, lead-lined material for barriers from radiation sources, or non-flammable barriers due to heat sources or open flames.

Special Considerations - Custom and fixed barrier planning for labs and shops

Departments/programs should engage and contact FMD - Planning and Architecture (P&A) who will coordinate an onsite barrier assessment/review with Health and Safety Services where labs and shops are involved. Lab/shop site conditions are reviewed and a recommendation is made by P&A / HSS to the program. P&A provides layout specifications for the requestor to review. The Department/Program approves the request and will submit the order.

Ordering Plexiglass Barriers

Upon completing your barrier assessment:

1. Submit your Work Order request for barriers by email to maintenance@nait.ca with subject line of "Barrier Request".
 - a. Location(s)
 - b. Provide details: general description, size/dimensions in inches, sketch, type, use
 - c. Fixed or floating
 - d. Provide photo(s) of where
 - e. Other information as necessary
2. M&O will coordinate the purchase and follow up installation with the business unit.

Please allow for time on ordering and shipping.

Acknowledgement

This document has referenced multiple sources from the Government of Alberta and Alberta Health Services. A special acknowledgement for the University of Washington's document entitled "*University of Washington Guidance for Plexiglass Barriers in Support of COVID-19 Prevention Efforts*" [June 15, 2020].