Ventilation Plan - 1774 Queen St E

The plan described below describes an alternative ventilation plan that provides less fresh air in exchange for better temperature control, less wind, less noise and less hassle.

Prepared by Jay Thiessen, Property Committee Chair, on November 30th, 2021

Guiding Principles that Informed our Air Quality Improvement Plans

1. Balance between Safety and adverse Noise/Wind/Temperature effects
No one knows how many air exchanges are needed to make a room safe, but everyone agrees that we want as much fresh air as possible. Unfortunately, more air exchanges also mean more wind, more noise, and more temperature change, which no one wants. These plans attempt to find the right balance between these discomforts and safety.

2. Workable Environment
A low air exchange system that's left on, is better than a high air exchange system turned off. We could invest in the best air improvement system, with excellent filtration & air exchange rates, but if the noise/ wind/temperature issues are unbearable, then the people working in those rooms will turn them off.

3. Minimal Effect on Others
Better to vent germs directly outside then passing them through an area that other people may be using. Better if the choices made to improve one room do not create adverse temperature/wind/noise affects, on another group in a different room. So, a room-by-room system, rather than a central exhaust system.

4. Cost, Flexibility & Ease
Costs should be kept low and installation should be reversable because: we don't yet know what the new government regulations will be nor our responses to them. Also because we will soon have to replace the 20+ year old HVAC systems that heat the basement and sanctuary. New HVAC systems provide some fresh air as part of their regular operation but our old systems simply filter and recirculate the same air.

5. Ease
Ease of installation, ease of acquiring materials, ease of restoring surfaces when an element is removed, and most importantly – every effort was made to keep implementation as simple as possible.

6. Effective Fan Use
Fans blowing air out of a room are more effective than fans blowing fresh air in, but only if they fight tightly to the window so air is drawn from the room, instead of simply circulation around the fan itself. Primarily, this fan is used: https://www.canadiantire.ca/en/pdp/for-living-box-5-blade-fan-20-in-0435218p.html

7. Window Openings
A full room should have a fully open window. How much to open it for a partially filled room is a judgement call. The more air the better, but there may be times when partially open is preferred.

8. Window Closing & Latching
When closing up the building all windows must be closed *and latched*. Check to make sure the latches have caught the window and are holding it closed.

3rd Floor

Air In: Open one of the small windows at the front of sanctuary
Open on of the windows in Meeting Room #307

Air Out: Turn on the kitchen fan and open the serving window between these two rooms.
Turn on bathroom fan and leave door open when not in use (light must be on for fan to work)

Nursery on 2nd floor Open the window part way.
Turn on the fan with the MERV 13 filter and place it in the play area or wherever the kids are

Meeting Room #200 on 2nd floor Air quality in this room is probably ok because it has the newest HVAC system but opening a window or two is always a good idea.

Main Stairwell Open one window per floor. Windows don't have to be open very far.

Sanctuary on 1st floor

Air Out: Box fans fitted into 3 windows, turn on low:

1. front window on east wall
2. back window on east wall
3. back window on west wall

Air In: Follow these steps

- Open door that leads to the fire escape
- Place box fan into the window in fire escape. (Use ladder as a stick to move the wood latch if needed)
- Be sure the fan is pushed snug against the window.
- Be sure the fan is positioned to blow air *into* the building.
- Close the door at the bottom of stairs, that leads to the Sunday school rooms.

Lobby on 1st floor

Air In: While people are arriving, the regular door opening is sufficient.
When the door remains closed, open a window on the east wall.

Air Out: Open window on west facing wall near the kitchenette. If many people are meeting in the lobby, fit the 2 stacked fans into this window, positioned to blow air out of the building.

Pastors' Offices If these rooms don't have many people in them, they are probably okay because the HVAC system is newer than the ones in the basement or sanctuary. This space is not recommended for group meetings however if a group does gather, open at least 2 windows and grab a fan from somewhere.

Basement Main Room

Air Out: Box fan with attachments fitted into black rubber trim in window, (not the smaller metal frame).
Or, turn on both of the fans over the ovens, close all kitchen doors except the one facing the main room.

Air In: Open door to south side fire escape stairs with a box fan blowing air into the building (this box fan is fitted with an attachment to hold the door open. (It is very light and easy to move so it doesn't block the fire exit, or it could simply be knocked over and stepped on if there isn't time to remove it.)
Open window at top of stairs and fit with a box fan blowing air into the hall.
Keep exterior door closed for security.

Important: Close door at top of stairs leading to sanctuary.

Basement Youth Room

Air Out: Built in exhaust fan. (This is noisy in sanctuary so turn off when sanctuary is occupied)

Air In: Same as described for the basement main room.

Basement Washrooms Prop open the doors.
Turn on fans with MERV 13 filters (as per https://www.youtube.com/watch?v=0uZKBlwLEFs).