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1. SCOPE

This document will provide guidance on working safely based on all COVID related Health and Safety sector-specific and Public Health guidelines. This procedure applies to all faculty and staff, students, and visitors performing work or participating in the CAWT activities on or off campus, including field research activities. At this time, no community members are permitted to be in the CAWT facilities, including labs, greenhouse, courtyard, and staff office. Students and visitors will only be permitted to enter the college and facilities of the CAWT when the College is at a later stage of openness, under preapproval by Vice President of Applied Research and Innovation, and with direct supervision by an authorized member of the CAWT. All staff are required to complete COVID-19 Employee Training before returning to the workplace, and to submit an online Campus Access Request prior to building access using the following links, respectively.

<https://department.flemingcollege.ca/safety/campus-access-request/>

<https://department.flemingcollege.ca/safety/covid-19-training/>

2. PURPOSE

The intent of this procedure is to ensure all health and safety protocols are well planned with clearly outlined procedures in response to the Covid-19 pandemic and SARS-CoV-2 virus for the protection of all members of and visitors to the CAWT.

3. DEFINITIONS/ACRONYMS

Fleming College – The Sir Sandford Fleming College of Applied Arts and Technology

CAWT: Centre for Advancement of Water and Wastewater Technologies. It includes the following facilities:


Analytical Lab – The area labeled as 350A containing most analytical equipment (smart chem, TOC, ICP etc.), dishwashing station, ovens and fume hoods.

Micro Lab – The area labeled as 350B containing most microbial testing equipment (smart chem, TOC, ICP etc.), computer work station, incubators and flow hoods.

Greenhouse – The area labeled as 350D located adjacent to the laboratory spaces available for project work and containing the NSF cage, walk in fridge, environmental chamber and indoor septic vaults

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Courtyard – The outdoor area located adjacent to the greenhouse containing the wetland cells and outdoor septic vaults

Offices – The Room 284 occupied by the CAWT staff, containing personal computer workstations for all CAWT workers.

Cleaning: refers to the physical removal of germs (bacteria, viruses, etc.), dirt, dust and impurities from surfaces through scrubbing, washing, and rinsing.

Disinfecting: refers to using chemicals to kill or inactivate germs (bacteria & viruses) on hard, nonporous surfaces. Disinfecting a surface after cleaning can further lower the risk of spreading infection.

PPE: refers to personal protective equipment, is used as temporary (until more effective hazard control techniques can be used) or last line of protection for workers against hazards. Non-medical masks are not included as PPE.

Hand washing: also known as hand hygiene, is the act of cleaning one's hands to remove soil, grease, microorganisms, or other unwanted substances.

Hand sanitizing: refer to using an alcohol-based liquid, gel, or foam to decrease infectious agents on the hands.


4. PROCEDURES

4.1 General

Reminder for all personnel:

- All personnel must work from home whenever possible. Only required lab analyses, bench top experiments, and project work will be performed within the CAWT labs. All other work (e.g., data entry and reporting) will be done at home.
- Prior to returning to work, approved CAWT personnel shall complete Fleming College COVID-19 Employee training at the following link: <https://department.flemingcollege.ca/safety/covid-19-training/>.
- The number of individuals in the workplace will be limited and pre-approved. Table 1 below summarizes space occupancy requirement for CAWT facilities. All efforts will be made to stagger work schedules to reduce the number of staff working in the laboratory and office spaces at a time. All work schedules will be approved by the CAWT Manager, and any required deviation (e.g., due to experiment running longer than expected, etc.) will be reported to the Manager as soon as possible and in advance. A record of laboratory and office space use shall be maintained

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using QT 1091 CAWT Facilities Use Log. While working in the labs and the office, the guidelines in Sections 4.2 and 4.3 should be followed.

Table 1 Room Occupancy for CAWT


Room Number	Room Name	Social Distancing Capacity
350A	Analytical Lab	5
350B	Micro Lab	2
350D	Greenhouse	6
350D	Outside Yard	4
284	Staff Office	7

- If you become sick while at work, STOP working, follow the College protocol (contact x4444 and notify the CAWT Manager immediately).
- Before returning to the CAWT lab and offices or coming on site to any Fleming facility, completion of the Safety training module is required. This can be found on the [Health and Safety COVID-19 portal](#).
- In addition, the CAWT employees must read this document and become familiar with the COVID-ready laboratories for the courses they are supporting.
- To enter the campus each day, you must complete a COVID-19 screening, which can be accessed through the Fleming Safe app, available in the App Store for iOS or in the Google Play Store for Android. After completing your COVID-19 screening, you may check in at the Information Desk or swipe your One Card to enter the building.
- If staff are experiencing increased anxiety or mental health issues related to COVID-19, they are encouraged to seek help and utilize College resources such as the Employee Family Assistance Program, located here: <https://department.flemingcollege.ca/hr/benefitspension/employee-family-assistance-program-efap/>. For further information on what services the College offers employees can contact Human Resources.

If staff are concerned about exposure to COVID-19 or have symptoms, they should take the [Public Health Ontario COVID-19 self-assessment](#) for guidance on next steps **OR** [visit an assessment Centre nearby](#) to get tested. For a complete list of COVID-19 related symptoms, refer to the Ministry of Health's [COVID-19 Reference Document for Symptoms](#).

Please refer to the Public Health Agency of Canada (PHAC) and Public Health Ontario websites for the latest updates related to COVID-19.

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4.2 Working in the Labs, Greenhouse and Courtyard

4.2.1 Hand Hygiene Practice

Proper hand washing will help prevent the transfer of infectious material from the hands to other parts of the body-particularly the eyes, nose, and mouth-or to other surfaces that are touched. At all times, staff should avoid touching your eyes, nose or mouth with contaminated gloves or unwashed hands.

Staff must wash hands at a minimum:

- Before leaving the work area;
- Before eating, drinking;
- When returning to your work area from other areas;
- After handling materials that may be contaminated;
- After visiting the washroom;
- When you get home from work.

When hand washing, hands must be washed for at least 20 seconds with soap and water. If handwashing is not possible, apply an alcohol-based hand sanitizer.

4.2.2 Disinfection Procedures


While personal hygiene is of top priority, cleaning and disinfection within the labs should take place as a secondary measure to control the spread of viruses and is the responsibility of CAWT staff.

Equipment and common surfaces should be cleaned and then wiped using an appropriate disinfectant at the beginning of day (prior to use), at the end of the day (after final use), or before it is used by another individual. For samples, coolers, ice packs and sample containers should be cleaned/disinfected immediately after receiving. Surfaces requiring regular disinfection include, but are not limited to:

- All highly-contacted surfaces such as chairs, desktops, computer keyboards, computer displays, light switches, doorknobs, doors, door push plates, refrigerator/freezer handles and their doors;
- Equipment surfaces (Smart chem, TOC, ICP etc.);
- Bench tops or other work surfaces (carts and tables);
- Biosafety cabinet and fume hood sashes and their working surfaces;
- Solution bottles (reagents, sample bottles, hazardous waste containers);
- Project equipment surfaces (pumps, aerators, stirrers);
- Project instrumentation as supplied by 3rd party/partner;

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- Commonly used tools and small objects (pipettes, balance, thermometers, tongs, etc.);
- Commonly used construction hand tools (screw drivers, pliers, measuring tapes, etc.);
- Commonly used power equipment (drills, sawzall, lawnmower);
- Phones;
- PPE will be assigned to each individual strictly for their own personal use and are not to be shared (lab coats, goggles). Project specific PPE, including face shields, hard hats, etc. will be assigned for individual use on a per project basis and are not to be shared. Shared PPE, including oven mitts and high-visibility jackets are to be used by one individual only each day and are not shared. Before and after use the individual using these items must spray the items with disinfecting spray and leave them for disinfection as outlined on the manufacturers label before wearing / use.

Note:


- No disinfection will be performed on running lab instruments (such as ICP-OES, ICP-MS, TOC analyzer, Smartchem and CNS analyzer etc.) to avoid electrical shock. Before disinfecting, the instruments should be powered off. Take extra precautions and disinfect in a gentle manner so as not to damage, break or cause disruption to that equipment.
- No disinfection will be performed on running project equipment or instrumentation (such as pumps, aerators, stirrers, and partner supplied equipment) to avoid electrical shock. Before disinfecting, the instruments should be powered off, if this is not possible, always wear gloves when handling these items when disinfection cannot occur. Take extra precautions and disinfect in a gentle manner so as not to damage, break or cause disruption to that equipment. With respect to partner supplied items, confirm the best method and disinfecting products to be used with their equipment before proceeding with disinfection

Approved disinfectants for hard surfaces can be found on the [Health Canada website](#). Always follow the manufacturer's instructions for use. Read labels for direction on dilution and mixing, personal protective equipment (PPE) needed (e.g., gloves, goggles), surfaces appropriate for use, contact time, and rinsing requirements. When possible use a prepared solution instead of diluting a concentrate on-site.

Precautions for Disinfection

- Wear PPE including nitrile gloves and safety glasses while using disinfectants. After cleaning, remove and dispose of gloves and immediately wash hands with soap and water and/or apply hand sanitizer. Discard paper towels and disinfecting wipes into the regular trash.
- Protecting Sensitive Equipment. Certain equipment may be damaged by spraying disinfectants directly onto components (computer keyboards and mice, key-style equipment touchpads, on/off switches, power tools, etc.) and by harsher disinfectants such as bleach. Instead, these items can

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be disinfected by placing a paper towel or clean soft cloth in the alcohol or disinfectant until it is soaked but not quite dripping, and then using it to wipe the keyboard/switch/etc. The surface should be visibly wet after you wipe it, and the disinfectant should be left to evaporate from the surface. Always refer to equipment manual to verify safe cleaning agent first.

A disinfection log (QT 1092) should be updated each time disinfection is completed.

4.2.3 Physical Distancing


Physical distancing (2m) should apply at all times between staff members working in the same vicinity.

- Visual markings have been added to the floor to indicate appropriate physical distancing and one-way flow through work spaces.
- As needed, relocate equipment and reconfigure workstations to support physical distancing. When possible bench-top experiments should be relocated to areas that are less commonly occupied (for example away from fume hoods) to allow for physical distancing from other lab members.
- Floor plans of the lab space, greenhouse and office area are shown in Appendix. During pandemic, only designated workstations can be used in the lab. The general rule is that there shall be a limit of one person per workstation or per project area.
- Working in close proximity (within 2m) to others for specific tasks should be avoided as much as possible. If this situation cannot be avoided, wear a non-medical mask, gloves, and eye protection. Minimize the time spent in close proximity to less than 15 minutes. Review and follow the Public Health's instruction video on "[How to wear a non-medical mask or face covering properly](#)".
- Moveable plexiglass shields will be used for situations where hands on training is required and close proximity cannot be avoided. These shields will provide a barrier between staff.

4.2.4 Work Schedule

Individuals will be spaced out in the CAWT facilities (including labs, greenhouse, courtyard and office) to create physical distancing, as well as having staggered work schedules to limit the number of individuals in each room (as listed in Table 1) at a time. Weekly virtual team meetings will be scheduled to discuss the upcoming schedule, following this a timetable will be emailed to the group. Further, the Microsoft Outlook CAWT calendar will be updated so that all group members know who will be in each location, and when they are scheduled to be in. All CAWT staff members should check in regularly with their Manager while working. If working alone, staff must follow the procedures outlined in WI 105 Working Alone Guideline.

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4.2.5 PPE

Regular PPE necessary for the lab environment should be used as usual. Refer to QL 1001 CAWT PPE Guide for PPE requirements for various lab activities. The following considerations should be taken during the pandemic and reopening of CAWT facilities.

- Perform lab inventory check biweekly for the supply of PPE and cleaning/disinfection products. Ensure that the lab has an adequate supply of required items to support laboratory activities.
- Each staff member will have their own dedicated lab coats, safety glasses, and goggles. Project specific PPE, such as face shields, ear protection muffs, and rubber boots, will be assigned to individuals and not shared. Individual PPE must be stored in a bag (e.g., a plastic kitchen garbage bag) that is labelled with the wearer's name and placed in the users assigned locker. Common coat hooks will not be used for lab coats and other PPE.
- Lab coats must be washed on a regular basis (once a week) by a commercial laundry service. Lab coats are to be used on a daily basis, with a new lab coat used each day. Used and soiled lab coats are to go into the laundry hamper located in the support space for pick up and cleaning by an external party.
- Shared PPE, such as oven mitts, should be disinfected before and after each use following disinfection procedures in Section 4.2.1.

4.2.6 Handling Wastewater


According to the Centers for Disease Control and Prevention (CDC), "Recently, ribonucleic acid (RNA) from the virus that causes COVID-19 has been found in untreated wastewater. While data are limited, there is little evidence of infectious virus in wastewater, and no information to date that anyone has become sick with COVID-19 because of exposure to wastewater." Coronaviruses are expected to be susceptible to current disinfection conditions in wastewater treatment facilities.

The handling of raw wastewater should be avoided if possible. If workers must be exposed to wastewater, they should adhere to all safety protocols listed in work instruction WI 556 Waste/Sludge Hauling, Pumping, Sampling and Biohazardous Awareness. There is no evidence to suggest that additional, COVID-19-specific protections are needed for employees involved in wastewater management operations, including those at wastewater treatment facilities (Ontario Association of Sewage Industry Services).

4.3 Working in the Offices

- Staff must minimize the amount of time they work in the offices. All work that can be done from home (e.g., data entry/reporting, communication with clients) should not be performed in the offices.

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- If working in the offices cannot be avoided, physical distancing (2m) is required. Desks will be relocated as necessary to ensure physical distancing. The established one-way paths for movement in the office must be followed (Appendix, CAWT Office Floor Plan). Non-medical masks are to be worn when walking through the office space to an individual's desk and when leaving the office space.
- Facial coverings or non-medical masks will be required to be worn while seated in office areas if 2m physical distancing can be maintained.
- Shared workstations in the office, including computers, keyboards, and all computer mice, must be cleaned with sanitizing wipes at a minimum before and at the end of the work day. Unless otherwise approved by the CAWT Manager individuals must only use their assigned workstation. Office door handles should be cleaned frequently, especially by those just returning from the lab, using sanitary wipes. Refer to Section 4.2.1 for disinfection procedures.
- The CAWT staff members are encouraged to bring their own lunches and beverages using individual coolers. Shared appliances such as fridges, microwaves and coffee makers can be used with proper hand hygiene. Follow hand hygiene practice to wash hands before and after using these appliances, and prior to eating. Note, food and drink may only be consumed in the staff office (Room 284) or in campus designed eating area. Physical distancing of 2m must be applied from another person as removal of face coverings during eating is permitted.

5. REFERENCES AND ASSOCIATED DOCUMENTS

Public Health of Ontario <https://www.publichealthontario.ca>

Develop your COVID-19 Workplace Safety Plan. <https://www.ontario.ca/page/develop-your-covid-19-workplace-safety-plan>

COVID-19 – Disinfecting with Bleach. <https://www.canr.msu.edu/news/covid-19-disinfecting-with-bleach>

QT1091 CAWT Facilities Use Log

QT1092 CAWT Facilities Disinfection Log


WI 556 Waste/Sludge Hauling, Pumping, Sampling and Biohazardous Awareness

Centers for Disease Control and Prevention. Information for Sanitation and Wastewater Workers on COVID-19. Retrieved Sept 8, 2020, from <https://www.cdc.gov/coronavirus/2019-ncov/community/sanitation-wastewater-workers.htm>

Ontario Association of Sewage Industry Services. COVID-19 control and prevention procedures. Retrieved Sept 8, 2020, from <https://oasisontario.on.ca/covid-19-control-and-prevention-procedures/>.


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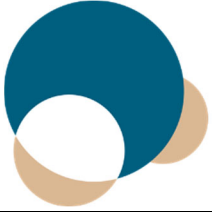
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6. HISTORY OF REVISIONS

REVISION HISTORY				
Date	Revision	Description of Change	Author	Authorized By

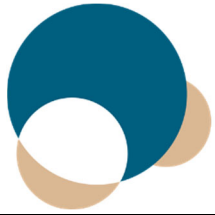
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APPENDIX

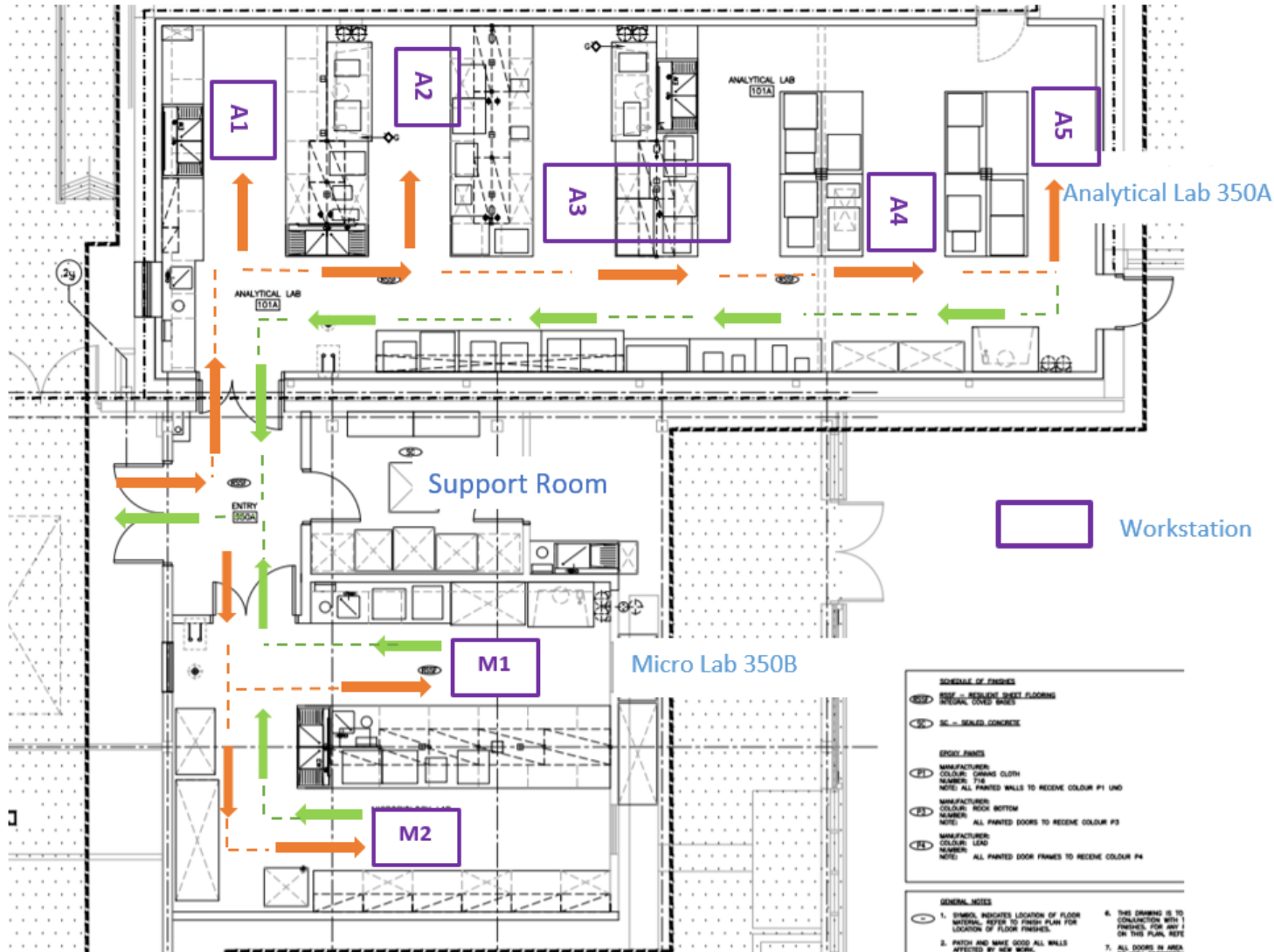
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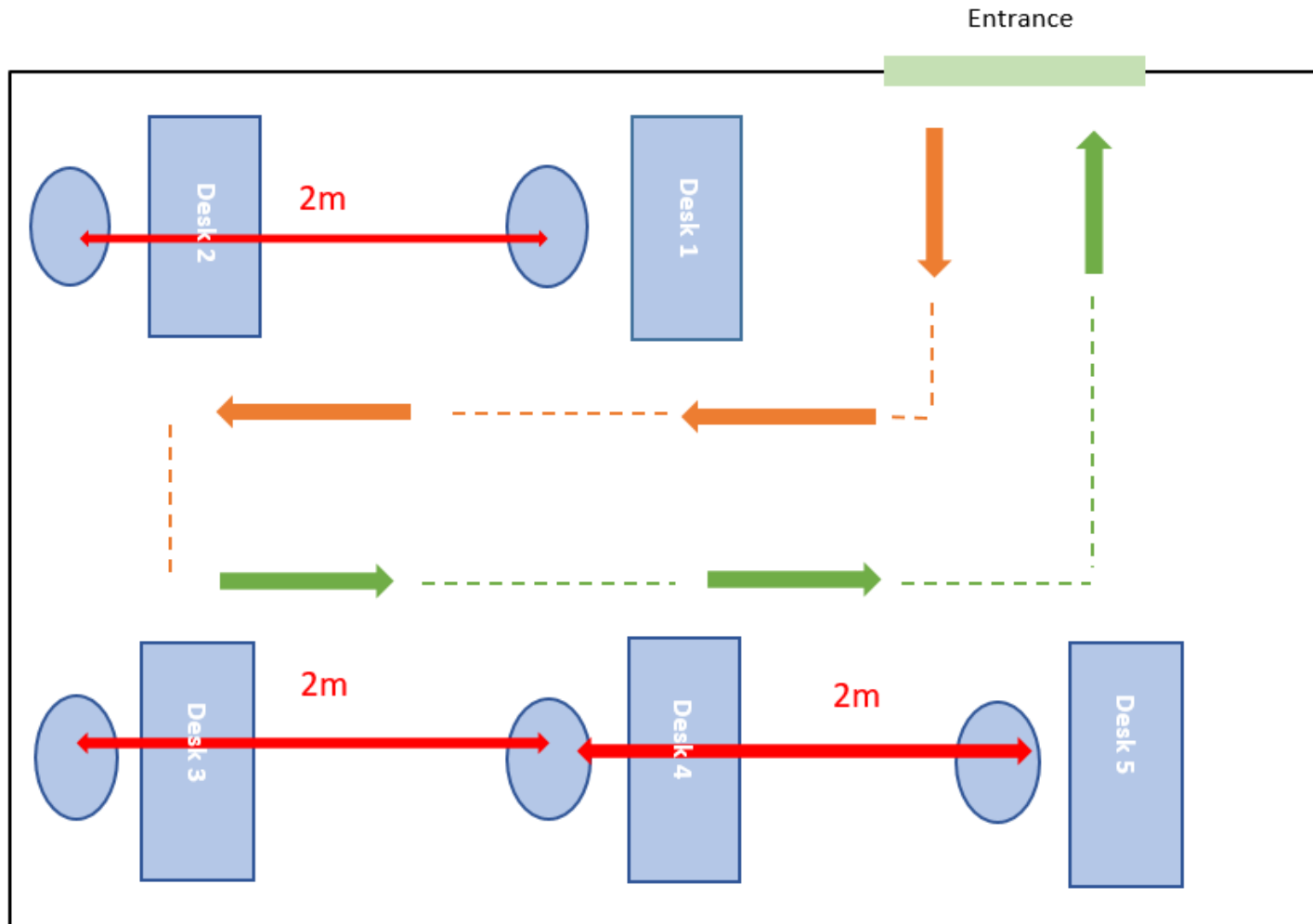
CAWT Lab Floor Plan



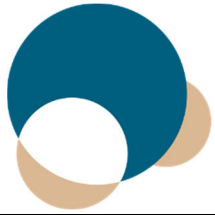
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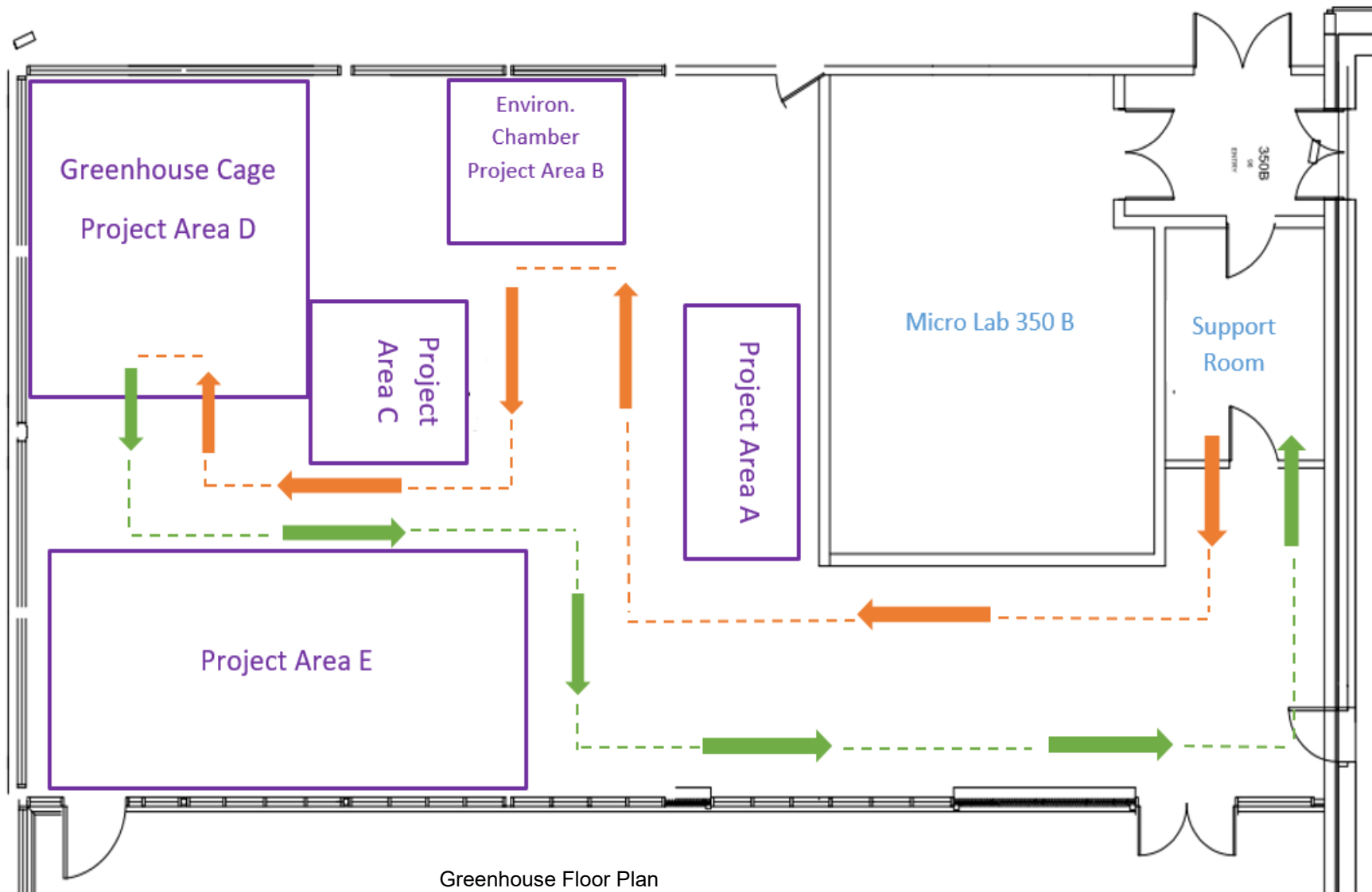
CAWT Office Floor Plan



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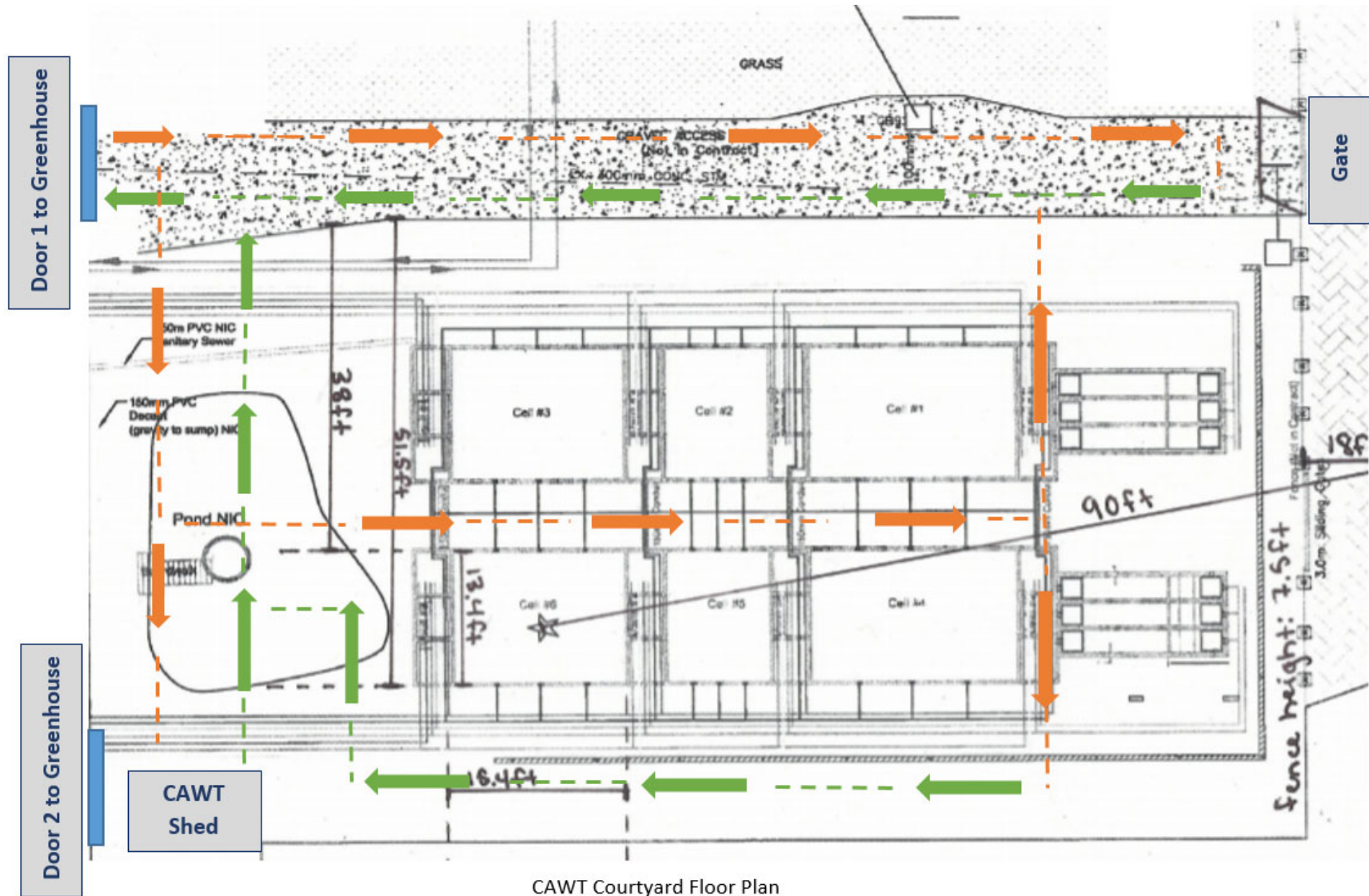


Greenhouse Floor Plan



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CAWT Courtyard Floor Plan