



Construction Project Guide

Subject: Project Handover Demonstrations

CPG #: 01

Last revised: June 8, 2021

Pertinence: All construction projects at UBC

Audience for this guide: UBC Project Mangers (Project Services, Properties Trust, Construction Office)

Written by: UBC B-Ops Transition Team - Kayna Merchant, Jeff Cheong, Andrew Porritt

Re: Process for Completing Project Handover Demonstrations to Building Ops at UBC Vancouver

The purpose of this guide is to provide guidance on when and how to organize demonstrations to UBC Building Operations at UBC Vancouver Campus. Demonstrations should take place after the consultant deficiency walkthroughs have been completed and major deficiencies have been completed. The project demonstrations are one piece of the handover checklist which needs to be completed prior to building ops assuming operation of the building. If you don't have the checklist, please request it from Kayna Merchant, the Architectural member of the Transition Team.

All construction projects should have at least one demonstration. Please consider which trades groups are impacted by your project - if an impact exists, a demonstration should be scheduled. For example, if a plumber is needed for part of the project then a plumbing demonstration is probably required. Some demonstrations may be very short and there is nothing wrong with scheduling a 30 minute demonstration if that is warranted. If in doubt, reach out to the applicable person on the Transition Team, and we will be happy to assist you.

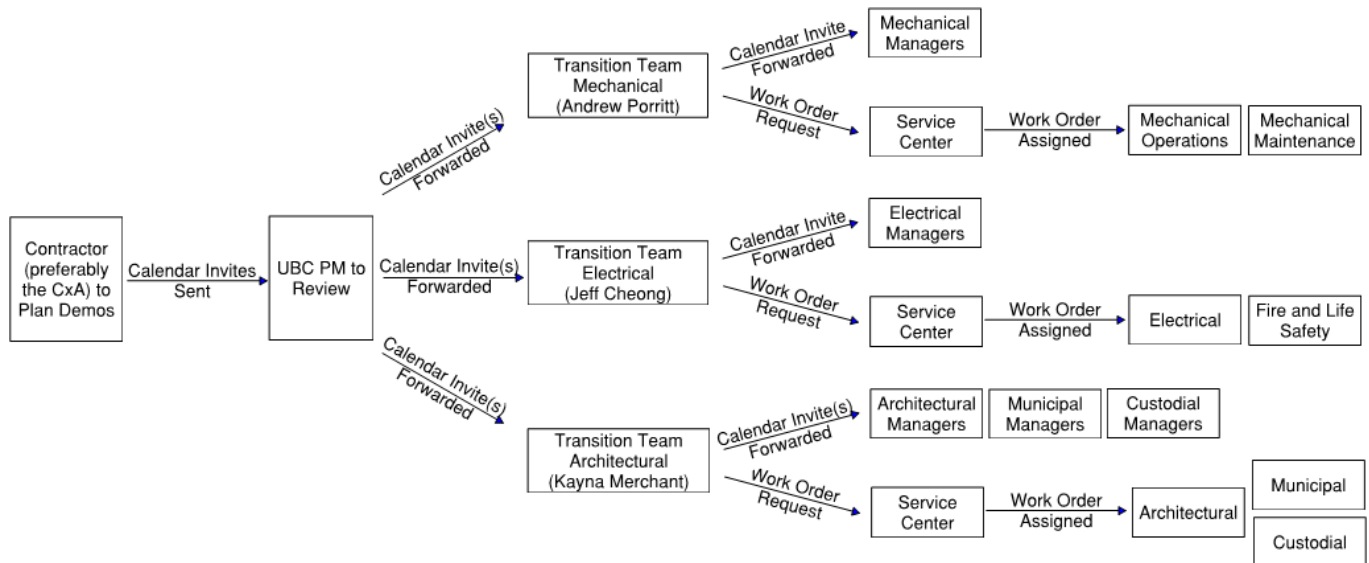
At a minimum, demonstrations should serve to orient UBC trades to the project so that they are familiar with the new equipment, any new operational requirements and are engaged with the change. Depending on the project, it may be necessary to have equipment-specific manufacturers present (for example metering equipment, lighting controls, chillers, etc.). These need to be determined on a project by project basis. If you are unsure that a manufacturer demonstration is required, again, please reach out to the Transition Team.

In addition to the demonstrations, it is anticipated that many of UBC's trades will be engaged in the final months of a project to assist with shutdowns or other coordination items and that this will help develop their familiarity. This is particularly true for the Fire and Life Safety Systems where we expect the contractors to engage with the UBC FLS crews through commissioning. In addition to being a necessary step to onboard these systems, it is also anticipated that this process is used to satisfy the BCBC requirements for training ongoing testing and troubleshooting – so please reach out to the Electrical member of the Transition Team, Jeff Cheong, to further coordinate these items.

Trades attendees may identify items which they view as project deficiencies. Their instructions are to forward these items to the Transition Team via their manager. The Transition Team will then review them and forward to the project team.

- If items are identified directly to the project team at the demonstrations, please instruct the trades to forward their concerns to the transition team via their manager.

The process for organizing a demonstration is as follows:



More details on each step from the above flow chart are below.

Project Team Steps:

- Identify which trades groups require a demonstration (see below appendices 1, 2, 3 for a list of UBC trades) and work with the transition team to determine logical divisions for multiple demonstrations. Typically, electrical won't attend mechanical demonstrations, etc.
 - Large projects such as new full building renews may have six or more separate demonstrations.
 - Small projects may just have a single demonstration, such as a simple walk through for all disciplines.
 - It is recommended to review your proposed attendee lists with the Transition Team, so as not to inadvertently miss any trades.
- Create an agenda for the demonstration (frequently done by the commissioning authority or commissioning agent but could be done by others within the construction team at the discretion of the UBC PM/PC). The agenda should include a:
 - Brief description of the project. Please keep in mind that many people who receive the invitation may not even be aware of your project.
 - List of trades which should attend

- Location to meet
- PPE requirement (if any)
- Sequence of events and approximate times
- Schedule the demonstration **for 9:30am or 12:30pm** on a **Tuesday, Wednesday or Thursday** that is **at least two weeks** from the day the invite is sent out.
 - Note that UBC trades do not work M-F schedules, so availability is much better mid-week.
 - Tradespeople's morning breaks are typically from 8:45am-9:00am, 11:30am-12:00pm and 1:45pm-2:00pm so please do not schedule during these times (with 10 min on either side to mobilize).
- Create a calendar event for the demonstration that includes all pertinent information.
 - Specify the specific location to meet. (ex. Main, East door of the ESB building off of Main Mall)
 - In the body include a brief description of the project (can be the same as the one that's in the agenda).
 - The agenda can be attached as a PDF or included in the body of the calendar event.
 - Send the calendar event from a UBC Project Manager/Project Coordinator to the discipline appropriate member(s) of the transition team and copy Kayna Merchant on all demonstration invites.

Transition Team and Building Operations Steps:

- The Transition Team will review the calendar invite and confirm that it meets UBC Building Operations requirements as outlined above.
- Depending on the audience the Transition Team will:
 - Forward the calendar invite directly to attendees. Including
 - Managers
 - Facility Managers (respective FM should be invited to all demonstrations – attendance is at their discretion)
 - Other attendees who don't manage their schedule in Planon
 - Request a work order from the Service Center.
 - In this case, the Transition Team will also need to inform the Service Center which exact trades are attending, so please ensure you let us know.
 - The Service Center will create a work order in Planon and a sub-work order for each trade and then assign to the respective heads. The heads will then assign their respective trades using the Planon Work Planner.

Due to the number of moving pieces in this process, scheduling requirements noted above will be enforced to ensure successful attendance.

Sincerely,

Building Operations Transition Team

Attached: Appendices for discipline-specific information
Appendix 1 - Mechanical Specific Items

Invites for this group should be sent to the mechanical member of the transition team (Andrew Porritt). They will then forward it to the mechanical managers and to the service center to create a work order for the trades.

Managers who may attend at their discretion are:

- Jason White – Mechanical Technical Specialist
- Stephen Li – Mechanical Technical Specialist
- Bryan Archibald – Manager of Maintenance Planning
- Zach Danyluk – Building Management System Manager

The mechanical trades that UBC B-Ops has are as follows:

- Mechanical Trades – Trades Manager: Jason Wright
 - o Steamfitters (hydronic piping, steam piping, cleaning strainers, servicing valves, flushing lines, filling systems, bleeding air, etc.)
 - o Plumbers (domestic cold and hot water, sanitary and storm drains, lab gases, compressed air, etc.)
 - o Sheet metal (ductwork, louvers, etc.)
 - o Millwrights (service pumps, fans, bearing, belts, miscellaneous motors, etc.)
 - o Mech assistants (change filters in all air handling equipment)
- Operations Trades – Trades Manager: Lee McCormick
 - o Operating Engineers (boiler and pressure vessel regulatory, first point of response for many items across multiple disciplines)
 - o BMS Operators (constant monitoring from operations center, need to understand what's on site so they can correlate it to what they see on their screen, often called on to adjust setpoints or address customer complaints)
 - o Refrigeration Mechanics (respond to many heating/cooling issues, fix problems related to refrigeration such as chillers, air conditioners or sometimes client equipment such as growth chambers)
- Controls Electricians – Head: Dariusz Jaworski (controlshop.buildingops@ubc.ca)
 - o Controls electricians (all control wiring, controllers, actuators, sensors, etc.)
 - Not actually part of the mechanical team but they will often attend mechanical demonstrations.

Appendix 2 - Electrical Specific Items

Invites for this group should be sent to the electrical member of the transition team (Jeff Cheong). They will then forward it to the service center to create a work order for the trades.

The electrical trades that will be involved in demonstrations are indicated below with the type of equipment covered under their purview:

- Maintenance Electricians – John Lampietro (Head), Neil Ram (Subhead)
 - o Contact: electricalshop.buildingops@ubc.ca
 - o Power Distribution:
 - Metering
 - Switchgear/Switchboards
 - Motor Control Centres (MCC)
 - Panelboards
 - Transformers
 - Disconnects
 - Receptacles
 - o Lighting
 - Lighting Fixtures
 - Lighting Controls
 - o Emergency Power:
 - Automatic Transfer Switch (ATS)
 - Generator
 - Uninterruptible Power Supply (UPS)/Inverter
- Fire Life Safety Electricians – Naval Aery (Head), Scott Kerr (Subhead)
 - o Contact: fls.buildingops@ubc.ca
 - o Fire Alarm Systems
 - o Emergency Lighting and Exit Signs
 - o Elevator
 - o Emergency Power:
 - Automatic Transfer Switch (ATS)
 - Generator
 - Uninterruptible Power Supply (UPS)/Inverter
 - o Fire suppression systems (sprinklers, dry systems, pre-action, chemical, etc)
- Controls Electricians – Dariusz Jaworski (Head)
 - o Contact: controlshop.buildingops@ubc.ca
 - o Variable Frequency Drives (VFD)
 - o Motor Control Centres (MCC)
 - o BMS related items as covered in the mechanical section

Appendix 3 – Architectural, Municipal and Custodial Specific Items

Invites for this group should be sent to the architectural member of the transition team (Kayna Merchant). They will then forward it to architectural managers and the service center to create a work order for the trades.

Architectural Items

The architectural technical specialist at UBC B-Ops should be invited to all demonstrations, they will decide to attend or not based off the project scope:

- Michael Cunningham – Architectural Technical Specialist

The following architectural items will need to be included when system demos are being planned for a project and depend on project scope of work.

- Overhead and rolling doors
- Motorized operable windows
- Over-sized sliding doors – wood or glass
- Raised flooring systems
- Manual or motorized operable partitions/room dividing systems
- Prefabricated awnings or sun control devices
- Expansion joint covers
- Any other specialty architectural items If unsure, please contact Kayna Merchant to see if demonstrations are needed.

Municipal Specific Items

The Municipal group at UBC B-Ops should be invited to all demonstrations, they will decide to attend or not based off the project scope:

- Jeff Nulty (or TBD as Jeff retires end of May 2021) – Landscape Architectural Technical Specialist
- Dale Low, Manager, Soft-Landscape
- Calvin Cheung, Manager, Street and Operational Support
- Tamas Weidner, Manager, Waste Management

The following municipal items will need to be included when system demos are being planned for a project and depend on project scope of work.

- Irrigation Systems
- Ponds, Fountains and Water Features
- Waste Management Systems when a compactor, dust extractor, animal bedding extractor and/or dock leveler systems are in place for a particular building. These systems would all be located at the loading dock of a building.
- Any other specialty municipal items. If unsure, please contact Kayna Merchant to see if demonstrations are needed

(see next page)

Custodial Specific Items

Depending on scope, the Custodial Services group at UBC B-Ops may require their own demonstration or they may attend architectural demonstrations for smaller jobs. As per the handover checklist provided, flooring specifications to maintain floors should be submitted in advance of the O&M submission:

- Sean Lynch – Operations Manager, Custodial Services