



VANCOUVER
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Facility Permit Guidelines

Introduction

The Vancouver Airport Authority (YVR) operates its own building or construction permit process called the Facility Permit process. Facility Permits are required for all construction or alterations on property controlled by YVR. This includes most of Sea Island other than Burkeville and a few other locations that are either directly federally regulated or under provincial jurisdiction. This document should be considered a user's guide to the permitting process. For the complete requirements, see the "Land Development and Construction Bylaw" and the "Development Rules". If there are conflicts between the By-Laws or the Rules and this document, their requirements apply.

Before applying for a facility permit the applicant must have permission to construct from the necessary department of the Airport Authority, a complete design for the construction, and if necessary, an approved Development Permit.

For most construction projects, the design must be carried out by registered professionals who are responsible for the design and must perform field reviews to ensure that the construction meets the design.

The permit application documents must be submitted to YVR's Engineering Services for design review. This includes different departments of YVR as well as outside agencies and an "Independent Professional" (IP) who reviews the design to ensure that it meets the applicable codes and standards. Engineering Services will calculate the required fees, and these must be paid before the permit is issued. **No construction is permitted until the application has been reviewed and an approved Facility Permit has been issued.** The Facility Permit must be posted on the construction site and all conditions on the permit must be followed.

Construction at the airport has specific requirements due to site safety, environmental concerns, operational requirements and/or security. During construction, the registered professionals must do their field reviews and review shop drawings. The IP will also perform field reviews for code compliance.

When the project is finished, occupancy documentation must be completed. Additionally, both the registered professionals and our independent professional must do their final inspections. When all requirements have been met, YVR Engineering Services will recommend occupancy. **Only when an Occupancy Permit, or an Interim Occupancy Permit is issued is the facility permitted to be occupied or used.**

Development Permit

A Development Permit may be required for any new building; expansions to an existing building; change of use; or within the public areas of the terminal buildings, construction by a new leaseholder. See the Development Permit Guidelines..

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Pre-Application

Prior to applying for permit, it is recommended that the applicant contact the Engineering Services department. More details on the submission process can be obtained for each specific project.

Preliminary Design Review

For larger complex projects, or any projects with specific elements that could require an interpretation of Code application, preliminary drawings may be submitted for review to Engineering Services – Permits. The covering letter should indicate that the drawings are:

- **preliminary**
- **indicate what level of completion**
- **indicate what issues require preliminary review**

The preliminary drawings are not required to be signed and sealed and are permitted to be labeled “Not for Construction.”

Submission of drawings for review may require payment of a permit fee or partial payment of the permit fee to facilitate this preliminary review.

Engineering Services Contact Information

Location (courier address):
3011 Aylmer Road
Richmond, BC V7B 1A2

Mailing address:
PO Box 44638
YVR Domestic Terminal RPO
Richmond BC V7B 1W2

E-mail: permits@yvr.ca
Phone: 604-276-1410

Long lead time requirements

In some cases, there may be significant advantages to starting the review by others before the permit submission is ready. Typical projects where it may be advisable to start the review before permit submission include projects that occur within our restricted areas or requires NAV Canada to review (this includes projects where a crane needs to be approved for the start of construction).

Electrical Infrastructure Change Requests

All changes to the Airport Authority Electrical infrastructure (including adding a load to an existing circuit) are required to have an Electrical Infrastructure Change Approval. For projects with major changes, it is recommended that this be done during or prior to the start of electrical design for the project. For smaller projects it may be acceptable to submit the change request at the same time as the project is submitting for permit. This does not apply to third party projects that are fed directly from BC Hydro Power Supply.

Environmental Impact and Archaeology

All projects at YVR must undergo environmental review and some projects may trigger requirements of the Impact Assessment Act. One of the requirements of this Act is for project information to be posted for public comment on the Public Registry, a federal government website. For these projects the Development Permit application will initiate the process and YVR staff will take the information from the Development Permit and post on this website if there is no development permit this may occur at the Facility Permit stage. This will generally include the project name and a brief description of the project along with in some cases a simple rendering or layout and the project coordinates. YVR will receive any comments submitted and work with the applicant to develop a response (if necessary). This may include imposing conditions on the Permit.

All projects that may disturb the ground at the Vancouver International Airport (YVR) leased lands are required to notify YVR's Environment and Climate Department well in advance of ground disturbance regarding archaeological requirements at environment@yvr.ca. Any ground-disturbing activities have the potential to impact archaeological and cultural materials. Archaeological materials on Sea Island can be located on the ground surface or as buried deposits. Any development that requires trenching, augering, excavation, tree root removal, or ground levelling is considered ground disturbance, and requires consideration of archaeological potential.

The Vancouver Airport Authority is committed to working with the xʷməθkʷəy̓əm (Musqueam) people to manage archaeology resources on Sea Island. Personnel involved in ground disturbance activities are required to take the Archaeological Chance Find training available on the YVR training site, (MyLearning course 5600). Archaeological resources are protected in British Columbia and on YVR leased lands and may not be disturbed without prior authorization. It is the responsibility of development proponents to engage an archaeological consultant and ensure that archaeological resources are identified and managed prior to ground disturbance. Identification and protection of archaeological resources is part of the *Musqueam Indian Band—YVR Airport Sustainability & Friendship Agreement*.

For more information, visit <http://www.yvr.ca/en/about-yvr/who-we-are/musqueam-yvr-agreement>.

Development proponents are advised that if an archaeological assessment is required for their project First Nation Heritage Permits will need to be applied for from xʷməθkʷəy̓əm, Tsleil-Waututh Nation, and Stó:lō and can take up to 2 months to be obtained.

Permit Application

All permit submissions are to be completed through our online portal Cloudpermit:

ca.cloudpermit.com

A permit application's elements include electronic .pdf files of the application form, architectural drawing set in digitally signed .pdf format, Environmental/Operational, and Fire Protection checklists, an orientation drawing, drawing list (in excel format on our template), Project directory, and proof of liability insurance. If no registered professional(s) are used in design a modified process is available. **Incomplete submissions will not be accepted and will be turned away on application.**

Permit Submission

It is recommended that applicants contact the permits department (permits@yvr.ca) prior to submitting the permit. The applicant may book an appointment with a permit specialist to go over the application package and formally submit the application. To book an appointment email permits@yvr.ca.

The permit submission is done through Cloudpermit. See the attached Step-by-step Cloudpermit application process for details.

When received, the submission will be reviewed for completeness. The applicant will receive confirmation of application that will include the permit number and expected review timelines. **Incomplete applications will be rejected.**

Construction Safety

Contractor Safety is the responsibility of the Airport Authority's Human Resources department. Please contact Contractor Safety by email at contractor_safety@yvr.ca for more information

Application Form

An explanation of some item requirements on the application form:

Applicant

The applicant must be the person or company holding the lease with the Vancouver Airport Authority. In the case of a company, it must be a signing officer of the company. Alternatively, a letter from the company that holds the lease identifying an individual or company as a representative of theirs can be accepted.

Estimated Value of Work

The estimated value of the construction work must be provided. This must reflect the current monetary worth of the design, installation and materials provided. This includes any equipment fixed in place. Furniture or plug-in movable appliances are not included in the value of construction.

Area of Construction

This is the area in square meters that will be affected by the construction. For a project that involves a small amount of work over a large area, a "Not Applicable" can be entered here.

Approximate Length of Construction

The estimated completion date must be indicated; this can be a month/year or a length of construction from approval. This is an estimate only and used primarily for scheduling purposes. It will not limit the validity period of the permit unless specifically stated otherwise on the permit. If the start date is already established and confirmed this should be mentioned here.

Proposed Hours of Work

The hours of work proposed for the construction must be provided. This is primarily intended to indicate whether it is daytime or nighttime work. Minor work done outside of the proposed hours is acceptable unless otherwise indicated.

Description of Work

The description of the work should give a concise and complete description of the work being performed under this proposed permit.

Building Related Hazardous Materials – Request for Information (BRHM-RFI)

Indicate when a BRHM-RFI has been submitted. For more information on when this is required and the process, please contact Contractor Safety (contractor_safety@yvr.ca).

Safety pre-qualified Contractors

Contractors doing construction work for the Vancouver Airport Authority are required to meet the Airport Authorities' safety requirements. Further information can be found at the [Contractor Safety Management Program website](#). To ensure that contractors are familiar with the requirements and have been orientated to doing construction at the airport, it is recommended that contractors be pre-qualified by the Airport Authorities Safety Representatives. For information on the pre-qualification program or to find a list of pre-qualified contractors please contact Contractor Safety.

Design Drawings

All projects must submit a complete set of design drawings. Except as noted below, these must be prepared, signed and sealed by a registered professional. For most projects, there will be multiple registered professionals involved in the design, and one coordinating registered professional (CRP).

The design drawings must include all the documentation with sufficient detail to show compliance with the applicable codes and standards. It is important to note that as the airport is under Federal jurisdiction, the **National Building Code of Canada**, not the BC Building Code, is the applicable design code for building construction. The edition of the Building Code that the design is based on is required to be indicated on the drawings. **It is also important to note that YVR's policy is to provide access for the disabled community and traveling public, and it requires all tenants to meet requirements over and above the requirements in the National Building Code.** For more information see the Applicable Codes and Standards.

Drawings submitted for permit must be uploaded to Cloudpermit. These should be bundled by discipline/registered professional and should be electronically signed and sealed using a method approved by the relevant professional association. If electronically sealed documents are not available, separate transmission of wet sealed documents will be required. See below for more information.

For specific projects you may be asked to provide a zip file that includes all of the CAD files that are used to prepare these drawings (these should be provided to the permits group through a method outside of Cloudpermit). If the design documents are prepared using Revit or similar software, the full Revit model should also be provided for reference and visualization purposes.

Letters of Assurance

In addition to design drawings, the design professionals are required to sign letters of assurance giving assurance that they are taking responsibility for designing the project in accordance with the code requirements and providing field reviews during construction. The coordinating registered professional must sign an RP-A taking responsibility for coordinating the construction and each design professional must sign the appropriate RP-B document for their discipline. **It is important that the instructions on the letters of assurance are followed carefully (including requirements on initialing).** The project names and addresses must match all the letters of assurance for a project. It should be noted that the "Other" category on the letters of assurance is not intended to be used by specialist engineers. It is primarily intended to be used on projects that involve significant engineering that does not fall within any of the categories given for the letters of assurance. An example is a roadway project or installation of underground services. It can also be used for Alternative Solutions.

MFP Projects

Some small projects that do not require the use of Registered Professionals (engineers or architects) to be involved in the design may use the Modified Facility Permit (MFP) letter instead of the professional letters of assurance. **If a project is proposed under an MFP approach, this should be discussed with Engineering Services-Permits before the application is made.** A project using the MFP approach must provide design documentation and meet other aspects of the permitting procedure. However, the design documentation is not expected to be sealed by a registered professional

Digital Seal – Preferred Option

The use of a digital seal (electronic seals and signatures) over traditional wet stamped, dated, and signed document or drawings is our primary method to authenticate design document submissions by registered professionals. Wet sealed/signed/dated hard copies are not preferred but can be accepted. Contact Permits if intending to submit hard copy drawing sets and letters of assurance. Applicants should know that submission of wet stamped hard copies will significantly extend the review time.

The following provides an outline to registered professionals for the submission of electronically sealed documents to Vancouver Airport Authority for permit applications. For more detail information please refer to the documents published by EGBC and AIBC at the following links;

- EGBC Quality Management Guideline – Use of Seal: <https://www.egbc.ca/getmedia/bf1c2174-de3b-45b2-812f-cceb6958e1e8/EGBC-Authentication-of-Documents-V3-0.pdf>
- AIBC Bulletin 60 – Signature, Seal and Delivery of Electronic Documents: <http://aibc.ca/wp-content/uploads/files/2016/12/Bulletin-60-Signature-Seal-and-Delivery-of-Electronic-Documents.pdf>

Background:

Engineers and Geoscientists of British Columbia (EGBC) permits the use of electronic seals and signatures provided they are applied using some form of digital certificate technology service that has been endorsed by EGBC or independently confirmed to meet EGBC's requirements. A digitally sealed electronic file is considered as the original document and all other printed reproductions are copies. EGBC accepts a digital seal issued by Notarius Inc.

The Architectural Institute of British Columbia (AIBC) also permits electronic seals, and requires the seal to be issued by Notarius, Inc.

Options for Digital Certificate Technology:

Digital certificate technology is used for the application of electronic seals. Registered professionals may use electronic seals with digital certificate technology through the following options:

- For engineers and geoscientists, by creating or purchasing an electronic version of their seal from EGBC and using an EGBC-endorsed digital certificate service provider such as Notarius, Inc.;
- For architects, by creating or purchasing an electronic version of their seal from the AIBC endorsed digital certificate service provider Notarius, Inc.

All digitally sealed documents must be properly prepared to accept the application of an electronic Independent Professional review stamp by creating a signature zone on the digitally signed and sealed document or drawing.

Orientation Plan

All permit applications must include an orientation plan drawing on a separate 8.5in x 11in sheet showing the location and the extent of the proposed construction.

Supporting Documents

Environmental Checklists

All projects must submit the general environmental checklist (ENV-1). Projects with any exterior work must also submit an exterior environmental checklist (ENV-2). A contact name must be provided on the checklist. In general, this should be the same person who completes the checklist. In addition, the checklist must be signed by the applicant; this is primarily to serve as confirmation that this is part of the application package.

Operations Checklist

All projects must include the appropriate operations checklist(s) when working within Terminal Buildings, on Airside Lands, or Sea Island lands. These will assist the Operations Department in reviewing proposed projects.

Fire Protection Checklist

All projects that include construction in a building that will remain occupied must include the Fire Protection Checklist. It should be noted that in accordance with the National Fire Code of Canada all construction within an occupied building requires a 1h fire separation between the occupied areas and the construction or demolition area unless a review has indicated that it is not required, and this is agreed to by the Authority Having Jurisdiction. This checklist will facilitate the review and determination of the level of risk. If the fire protection checklist indicates a construction fire safety plan is required, it must be submitted prior to the start of construction and address the approach to providing an acceptable level of safety in the occupied areas. This must be developed in consultation with the IP.

Electrical Infrastructure Change Requests

All changes to the Airport Authority Electrical infrastructure (including adding a load to an existing circuit) are required to have an Electrical Infrastructure Change Approval (see below for additional information).

Roof Penetrations

Any time there is a penetration to an existing Airport Authority owned roof, this must be done under the review of a Airport Authority approved Building Envelope Specialist. A letter from the professional confirming that they have been engaged to review as appropriate the must be submitted with the permit.

Structural Concept Review

Projects with significant structural design are required to submit a copy of the “Checklist and Signoff for an Independent Review of Structural Designs” conducted by an independent reviewer (engineer). For more detailed information please refer to the documents published by EGBC at the following link;
EGBC-Documented-Indep-Rev-of-Structural-Designs-V2-0.pdf.aspx

NAV Canada Land Use Approval

Projects that could interfere with the Instrument Landing System (ILS) require NAV Canada Approval. NAV Canada approval process is called NAV Canada Land Use Proposal. Details of the process are detailed on NAV Canada website (www.navcanada.ca) and follow the link under services for [Land Use](#).

Projects near the runway ILS or Glidepath can have a time-consuming review process and in some cases where there is concern that the development will affect the navigation systems, mitigating measures may be required. Therefore, the Airport Authority recommends that this review process be started at as early a stage as possible.

Alternate Solutions

Alternate Solutions to Building Code requirements are regulated by Section 2.3 of Division C of the National Building Code of Canada. These are similar to what, under previous editions of the Building Code, were referred to as Equivalencies. These must be submitted and reviewed by the Engineering Services Department and the IP. The approval of Alternate Solutions can be time-consuming, so, where possible, they should be submitted for approval prior to final design. Acceptance of any alternate solutions is at the sole discretion of the Authority having Jurisdiction (YVR).

Electrical Infrastructure Change Request

Any electrical infrastructure change must have an approved Electrical Infrastructure Change Request (EICR) form. For small projects, this may be done in parallel with the permit process. For projects that have a significant change to the electrical infrastructure, a general approval in principle should be achieved as soon as possible by submitting a completed EICR form to Engineering Services. Attached to the drawing should be a load list in an Excel format using the template provided. Any Panels that are added or modified (including just adding a circuit) should have a panel schedule attached using the provided excel spreadsheet. This will reserve the load and a general block will be noted on the Planning Single Line Diagram (SLD). As the design progresses, equipment numbers may be requested and a more detailed requested change to the Planning SLD will be submitted. Before the permit is issued the “connection or change” must be approved and shown in the Planning SLD.

Review Period

After the permit application is received, it is sent to a number of reviewing bodies. This includes various departments within the Airport Authority, outside agencies and consultants that assist our review. At this point the applicant may be contacted directly to obtain more information from one of the reviewing bodies. **Any supplemental documentation sent to a reviewer must be copied to Engineering Services.**

When the review is complete and all the appropriate requirements are met, the Airport Authority will issue an approved Facility Permit. It may have conditions attached to the permit and the permit is only valid if those conditions are followed. Non-compliance of any permit conditions will result in a stop work order.

Design Changes After Permit Application

Any design changes after permit application that affect the approach to code compliance or that make significant changes to construction activities described in the supporting documents must be submitted to Engineering Services Permits. This includes but is not limited to any changes that affect answers given on the application form (checklist, hours of work, estimated value of work.) Prior to approval, updated electronic drawing files, including updated drawing list are required. If the original submission documents are signed and sealed, the revised documents must be signed and sealed as well. When resubmitting drawings, complete drawing packages per discipline are needed vs submitting individual sheets.

In some cases, it may be acceptable to submit copies of the change orders documenting the change rather than complete updated design documents. However, in these cases it is still required that the full design documents be updated to reflect the changes in the record drawings.

It should be noted that the design change has not been considered incorporated into the permit documents until the applicant receives confirmation that the design change has been reviewed. If the changes are not code compliant or not consistent with YVR requirements, it will be the applicant's responsibility to ensure that the construction is done in accordance with an acceptable design.

Minor changes to the design that do not have any effect on the approach to code compliance do not require to be submitted to the permits group, but they must be reflected in the record drawings that must be submitted at the end of the project. These changes should be recorded to the on-site drawings daily and discussed with the independent professional during inspection.

The design professionals are required to prepare a "final design drawing" prepared under the supervision of the design professionals, that include all of the design changes during construction. These final design drawings should then be used for the basis of the "record drawings" that includes as-built information provided by the contractors. These record drawings must be submitted to the Airport Authority permits group.

Fees and Deposits

All construction at the airport must pay a permit fee based on the value of the construction. In addition to the application fee all applicants must pay a refundable deposit. The refundable deposit will be held until the project is complete and all the requirements for use and occupancy are met. Any service charges for the project will be charged against the deposit before it is refunded.

Partial Permits

The Airport Authority may in some cases issue a partial permit. This usually occurs when it is important to start construction, but some portion of the design work is not complete, or more information is required for the review. In these cases, the overall design must be complete enough to demonstrate general code compliance and on the portions for which a partial permit is requested. **In all cases, any construction prior to the issuance of the full permit is at the risk of the applicant.**

Construction

The permit must be approved and issued prior to the start of any construction. Once approved it must be posted in a prominent location on the construction site. It is important that all the permit conditions are closely followed. Not following a condition of the permit could result in the issuance of a "Stop Work Order".

The contractor must always have a copy of the design drawings as submitted for permit on-site.

The design professionals must keep a record of their field reviews and any action taken as a result of them. These records must be available for review by the Authority Having Jurisdiction, on request.

Construction cranes

All cranes including small mobile cranes such as "HIAB" truck cranes, cherry pickers, manlifts and similar equipment must be reviewed by Airside Operations. Depending upon the location, the review time can be quite significant. For projects involving repeated uses of mobile cranes, the Airport Authority recommends that before construction starts an envelope be developed which the mobile cranes propose to operate. If approved, the contractor can then operate cranes in this envelope without requiring further approval.

Trades Inspections

The Gas and Electrical trades are required to go through the provincial Technical Safety BC permit and inspection process. At the end of the job, the electrician or gas fitter will be required to provide documentation to indicate that the appropriate inspection requests were sent to Technical Safety BC and provide a final declaration that the work is complete.

Elevator, escalator and moving walkway approvals are reviewed and approved through Interact Inspection Corp. The elevator installation companies should be familiar with the review process.

Electrical Changes

When the contractor makes any connection to the electrical system or any change to the electrical infrastructure on site, the contractor or the engineer is required to mark-up the posted single line diagram (SLD) in the applicable Electrical Room and send a request for field verification to YVR Engineering Services department. When the change is field verified, the Active SLD will be updated, and an updated version will be posted in the electrical room.

Occupancy/Use

In most cases record drawings are not available at the time when occupancy/use is needed. In these cases, an interim occupancy permit should be requested allowing temporary occupancy/use. This will be valid for 90 days before charges are laid against the deposit allowing for the completion of record drawings.

Two weeks prior to requiring occupancy, the estimated date must be submitted to Engineering Services Permits and to the independent professional (IP) reviewing the project. The applicant is responsible for ensuring that an occupancy inspection is scheduled with the IP. The IP will collect the occupancy documentation and do an occupancy inspection and will issue a final field review that will indicate all required documentation for occupancy.

The contractor should also ensure that all the conditions of permit including requirements to invite others for a field review, have been addressed.

In cases where the occupancies must be phased, or only partial occupancy will be achieved, all life safety items must be complete and fully functioning for the occupied area. In addition, the engineers and architects must be satisfied that the project is complete enough for unconditional letters of assurance to be signed. It may be acceptable to limit the area to which the letter of assurance applies when only a portion of the facility is occupied.

Record Drawings

Record drawings ("As-builts") must be submitted prior to the expiry of the interim occupancy. These drawings must be submitted in electronic format in both CAD (Microstation, AutoCAD, Revit or other approved format) and PDF. The PDF record drawing files must be submitted as a separate file for each sheet from all disciplines. There must be a record drawing list in excel format, representing the individual .pdf files provided (template available). The file names should be either the consultant drawing number or the YVR drawing number. The CAD files must include all reference files and be zipped into a single archive folder. The record drawings must be submitted as a complete package. If a complete occupancy package is not submitted prior to the expiry of the interim occupancy there is a monthly fee for renewal. These record drawing(s) must be based on the Final

design drawing(s) and include the contractor mark-up information. This should be clearly indicated in the drawings. For further information see the YVRAA-PRO-ES-001 “Drawing and CADD Standards” Section 11.