VANCOUVER AIRPORT AUTHORITY

Beyond, Every Day.

Facility Permit Guidelines

The Vancouver Airport Authority (YVRAA) operates its own building or construction permit process called the Facility Permit (FAP) process. Facility Permits are required for all construction or alterations on property that is controlled by YVRAA. 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 users guide to the permitting process. For the complete requirements, see the "Land Development and Construction Bylaw" and the "Development Rules". If there are any conflicts between the By-Laws or the Rules and this document the requirements of the By-Law and the Rules apply.

Before applying for a FAP, 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 FAP application documents must be submitted to Engineering Services, where they will be distributed to all those required to review the construction. This includes different departments of YVRAA 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 FAP will be 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.

Development Permit

A Development Permit may be required for any new building; expansion to an existing building; change of use; or within the public areas of the terminal buildings, construction by a new leaseholder. To determine whether a Development Permit is required for your construction, contact the Engineering Services Department of YVRAA. For more information and for application requirements see the document "Development Permit Guidelines".

Construction at the airport has a number of special requirements due to site safety, operations and security. For projects in one of the terminals or airside, contractors must be prequalified by the safety department and meet with the safety department to discuss safe work procedures for every project before the start of the project. 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, the required completion documentation must be complete, the Registered Professionals must do their final inspections and the IP must do his final inspection. When all occupancy requirements have been met, the IP will recommend occupancy. Only when Engineering Services has issued an Occupancy Permit or an Interim Occupancy Permit is the facility permitted to be used.

Pre-Application

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

Engineering Services Contact Information

Location (courier address):
3153 Templeton Street
Richmond, BC

Mailing address:
PO Box 23750 Airport Postal Outlet
Richmond, BC V7B 1Y7

E-mail: permits@yvr.ca
Phone: 604-276-6530

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. The covering letter should indicate that the drawings are preliminary, what level of completion they are at, and 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.

Long lead time requirements

In some cases there may be significant advantages to starting the review by others before the FAP submission is ready. Typical projects where it may be advisable to starting the review before FAP submission include projects that require NAV Canada review (this includes projects where a crane needs to be approved for the start of construction).

FAP Application

All FAP submissions must have a complete FAP application, including the appropriate number of copies of the required documents. The FAP application form must be filled in and signed by the applicant.

The elements of a FAP application include the application form, the list of supporting documents, and the sufficient copies of the required supporting documents (See Appendix A for the application form, and Appendix B for additional forms required at the time of submission). Incomplete submissions will not be accepted and will be turned away on application.

Application Form

An explanation of some items on the application form:

Applicant

The applicant is required to be the person or company that holds the lease with the Vancouver Airport Authority. In the case of a company, it must be a signing officer of the company.

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 that is 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 either be in the form of a month/year or a length of construction from approved FAP. This is an estimate only and used primarily for scheduling purposes. It will not limit the validity period of the FAP unless specifically stated otherwise on the FAP. If the start day 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 night time 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 FAP.

Safety Qualified Contractors

Contractors doing construction work at the airport are required to meet the Airport Authorities safety requirements. In order to ensure that contractors are familiar with the requirements and have been orientated to doing construction at the airport, it is recommend that contractors be pre-qualified by the safety department. For information on the pre-qualification program or to find a list of pre-qualified contractors please contact the safety department .

Construction Safety

Reviewing Construction safety is the responsibility of the YVRAA HRS department. Please contact Construction Safety by email at construction_safety@yvr.ca for more information

Design Documents and Letters of Assurance

All projects must submit complete and "issued for construction" design documents. 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.

The design documents are required to include all of the documentation with sufficient detail to demonstrate compliance with the Applicable Codes and Standards. The list of Applicable Codes and Standards is contained in Appendix C. 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 YVRAA'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 *YVRAA Barrier Free Construction Guidelines*.

The number of copies of the design documents is noted in the appropriate document submission checklist. The documents must also be submitted in electronic document format in Microstation, AutoCAD, or other approved format, along with a copy in PDF format. Included with the electronic drawings, there must be a spreadsheet with a list of the drawings. This should contain a column for the electronic document name, the drawing number, and the drawing title. The electronic copies should be submitted by CD-ROM unless the Airport Authority agrees to another method. We are unable to accept '.zip'ed copies of the drawings by email.

In addition to design documents, 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 a 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 on all of 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.

Electronic sealed documents are acceptable. The use of the electronic seals does not reduce the number of paper copies required. The electronic sealing must be done in accordance with the practices recommended by the respective professional association. The Airport Authority recommends that the electronically sealed documents be submitted on CD-ROM and are clearly marked as "CD contains electronically sealed documents for project …"

MFP Projects

Projects which are small and are not required to have Registered Professionals (engineers or architects) involved in the design, may use the Modified Facility Permit (MFP) letters instead of the professional letters of assurance. If it is proposed that a project will be done under a MFP approach this should be discussed with the Permit Section before the application is made. A project using the MFP approach will need to provide the same design documentation and is required to meet other aspects of the FAP procedure. However, the design documentation is not expected to be sealed by a registered professional

Orientation Plan

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

Environmental Checklists

All projects must submit the general environmental checklist (ENV-1). Projects with any exterior work must also submit an exterior project 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). These will assist the YVRAA 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 level of risk. If the fire protection checklist indicates that a construction fire safety plan is required, it must be submitted prior to the start of construction and it must address the approach to providing an acceptable level of safety in the occupied areas. This must be developed in consultation with the IP.

NAV Canada 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 as well as the IP. The approval of Alternate Solutions can be time consuming and therefore, where possible, it is recommended that they be submitted for approval prior to final design. Acceptance of any Acceptable solutions is at the sole discretion of the Authority Having Jurisdiction.

Review Period

After the FAP application is received it is sent to a number of reviewing bodies. This includes both different departments in the airport, 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 a Facility Permit. It may have conditions attached to the permit and the permit is only valid if those conditions are followed.

Fees and Deposits

All construction at the airport must pay a FAP fee based on the value of the construction of the project. The fee guide is attached as Appendix D 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.

As an alternative to submitting the full FAP fee at the time of application, applicants may submit a $1000 application deposit. This deposit will be applied against the FAP fee and refundable deposit which must be paid in full before the Facility Permit will be issued.

Phased Permits

The Airport Authority may in some cases issue a phased or partial permit. This usually occurs when it is very 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 sufficiently complete to demonstrate general code compliance and the design must be complete on the portions for which a partial permit is requested for. In general only one phased permit will be considered, and a condition of the phased permit will be submission of full documents within a reasonable period of time. Applicants must discuss any plan to request a phased permit well ahead of time. In all cases, where there is a phased permit any construction prior to the issuance of the full permit is at the risk of the applicant.

Construction

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

In addition to any conditions of the Facility Permit, all contractors must follow the requirements of the Construction Safety Manual and other requirements applying to construction at the airport. Inside the

terminal buildings this includes meeting the "YVRAA Indoor Air Quality Requirements". The standard requires full or partial containment of the work areas in most cases, and limits floor coring to companies that have been approved by the Airport Authority.

Prior to the start of construction the Airport Authority Safety representative requires that all contractors meet with personnel from the Airport Authority construction safety group to discuss safe work practices and how they will be applied to the project.

Typical requirements for environmental protection during construction include a waste management plan, sediment control plan, and a spill response plan. The Environment Department may request updates to these plans through construction and may visit the site to ensure these plans are properly set-up and being maintained.

The contractor is required to have a copy of the design drawings as submitted for a FAP on-site at all times.

Changes to design that have any effect on the design of the life safety items must be signed and sealed by the registered professional and submitted to Engineering Services for review and be reviewed and approved by the Authority Having Jurisdiction. If there are changes that effect any other aspect of the FAP application form or any supporting documents, these must be sent to Engineering Services in writing (this includes, but is not limited to any changes that effect answers given on a checklist, hours of work, estimated value of work.)

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

Minor changes to the design that do not have any effect on life safety must be reflected in the as-built drawings that must be submitted at the end of the project. It is recommended that these changes be recorded on the on-site drawings on a daily basis and discussed with the independent professional during inspection.

Construction cranes

All cranes including small mobile cranes such as "HIAB" truck cranes, cherry pickers, manlifts and similar equipment near the airfield must be reviewed by the Airfield Operations department. Depending upon the location, the review time can be quite significant. For projects that involve repeated uses of mobile cranes, the Airport Authority recommends that prior to the start of construction an envelope be developed in 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 BC Safety Authority 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 the BC Safety Authority 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.

Occupancy

At least two weeks prior to occupancy the estimated occupancy date must be submitted to Engineering Services in writing, and to the IP professional that is reviewing the project. At this time the IP will issue an outstanding FAP status report that will indicate what items are outstanding and must be addressed prior to

occupancy. 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.

In cases where the occupancies have to be phased, or only a partial occupancy will be achieved, all of the life safety items have to be complete and fully functioning for the area being occupied. In addition the engineers and architects have to 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 will be occupied.

As Built Drawings

If as-built drawings are not available at occupancy an interim occupancy permit may be granted. This will be an occupancy permit that is valid for 90 days.

As-built drawings must be submitted within 90 days. In addition to the paper copies, the submitted drawings must be in Microstation or AutoCAD and PDF format unless otherwise agreed to by the Permits Group. After the 90 days there is a monthly fee for renewal of the interim occupancy permit.

Appendix List

A – FAP Application form
B – FAP Application supporting forms
- ENV1 – General Environment Checklist
- ENV2 – Exterior Environment Checklist
- OPS1 – Terminal Building Operations Checklist
- OPS2 – Airside Lands Operations Checklist
- OPS3 – Sea Island Lands Operations Checklist
- FP – Fire Protection During Construction Checklist

C – Applicable Codes and Standards
D – Facility Permit Fee Breakdown