



# LAND DEVELOPMENT MANUAL

## PEMBERTON AIRPORT

September 12, 2006

Adopted: September 12, 2006

Council Meeting No: 1163

## INDEX

1.0	Purpose.....	3
2.0	Land Development.....	3
2.1	Building and Structure Heights.....	3
2.2	Building Setbacks .....	4
2.3	Lot Coverage and Maximum Density (Floor Area Ration-FAR) .....	4
2.4	Parking Requirements .....	4
2.5	Landscape/Planting .....	5
2.5.1	Present Landscaped Areas.....	5
2.5.2	Landscape Plans .....	5
2.5.3	Plant Material.....	5
2.5.4	Irrigation.....	5
2.5.5	Maintenance Programs.....	6
2.5.6	Wildlife .....	6
2.6	Construction in a Floodplain.....	6
2.7	Environmental Requirements.....	6
3.0	Site Servicing.....	7
3.1	Road Widths and Access.....	7
3.2	Responsibility for Site Service Connections .....	7
3.3	Underground Services Specifications:.....	8
3.4	Water Connections .....	8
3.5	Sewer Connections.....	9
3.6	Electrical and Telecommunications Services .....	9
3.7	Seismic Protection of Natural Gas Service.....	9
3.8	Storm Drainage.....	9

4.0 Building Requirements..... 10

    4.1 Airside/Landside Security Requirements..... 10

    4.2 Bird Nesting ..... 10

    4.3 Navigational Requirements ..... 10

    4.4 Signage ..... 11

    4.5 Annual Tests – Backflow, Sprinkler Systems and Hydrants ..... 11

    4.6 Barrier Free Requirements for Construction..... 11

    4.7 Fire Inspection, Investigation and Prevention Services: ..... 11

5.0 Construction Requirements ..... 11

    5.1 Security Requirements..... 11

    5.2 Temporary Water Connections ..... 12

6.0 Development Approval Process..... 12

    6.1 Introduction..... 12

    6.2 Building Design Guidelines ..... 13

        6.2.1 Architectural Style..... 13

        6.2.2 Buildings and Massing ..... 13

        6.2.3 Roofs ..... 14

        6.2.4 Street Façade ..... 14

        6.2.5 Exterior Materials ..... 15

        6.2.6 Outdoor Storage ..... 15

        6.2.7 Landscaping ..... 15

        6.2.8 Zoning and Parking..... 16

**Appendices**

Appendix A – Environmental Standards

Appendix B – Development Flow Chart

## **1.0 Purpose**

The primary purpose of the Land Development Manual is to inform lessees and their designers to requirements for development of property at the Pemberton Airport.

## **2.0 Land Development**

### **2.1 Building and Structure Heights**

The following documents govern the allowable height of buildings and structures at the airport:

1. "Land Use in the Vicinity of Airports – TP1247E" which covers Obstacle Limitation Surfaces, Protection of Telecommunications and Electronic Systems, Bird Hazards, Aircraft Noise, Restrictions to Visibility and Site Protection and Line of Sight Requirements, information on Obstacle Limitation Surfaces (OLS), Protection of telecommunications and Electronics Systems, and Line of Sight requirements for the Pemberton Airport is available on the drawing "Runway Layout with Constraints and Obstacle Limitation Surfaces" available through the Airport Manager.
2. Village of Pemberton Design Guidelines including the Zoning Bylaw No. 466, 2001 and subsequent amendments, Official Community Plan Bylaw No. 435, 1999 and subsequent amendments, Village Building Bylaw No. 518, 2003 and subsequent amendments, Fixtures and Fittings Bylaw No. 510, 2003 and subsequent amendments and Village Vision should be incorporated into any proposal;
3. TP312E Aerodrome Standards and Recommended Practices
4. TP2586 Heliport and Helideck Standards and Recommended Practices and pending Heliport Standards (CAR 325).

**Airside Commercial**

In areas designated Airside Commercial (AC), In the Airport Land Use Plan, building height will be limited by Obstacle Limitation Surfaces (OLS) and the Village of Pemberton Design Guidelines, Zoning Bylaw, OCP Bylaw, and Village Vision.

**Landside Commercial**

In areas designated Landside Commercial (LC) in the Airport Land Use Plan, the maximum height of buildings and structures shall be limited to the lesser of two (2) stories or 10.5 m for principle buildings and 4.5 m for accessory buildings.

**2.2 Building Setbacks**

The minimum requirements for building setbacks for all developments are:

Front Yard	7.6 m and Transport Canada requirements
Side Yards	7.6 m and Transport Canada requirements
Rear Yard	7.6 m and Transport Canada requirements

Exceptions: Cornices, leaders, gutters, pilasters, and sills may intrude into this setback by up to 610 mm (2'-0") for side yards. Steps, eaves, sunlight control projections, canopies may intrude into this setback by up to 1220 mm (4'-0") for front yard. – Should be able to project more than 2 feet into front setbacks with maximum of 4 feet. Side and rear setbacks should be limited to 2 feet. (Reference Section 205, Zoning Bylaw No. 466, 2001)

**2.3 Lot Coverage and Maximum Density (Floor Area Ratio-FAR)**

AC (Airside Commercial):	60% lot coverage and a density of 1.0.
LC (Landside Commercial):	50% lot coverage and a density of 1.0.

**2.4 Parking Requirements**

Provisions for parking are as per Section 500, Village of Pemberton Zoning Bylaw No. 466, 2001.

## 2.5 Landscape/Planting

The landscaping at Pemberton Airport forms a significant part of the impression a visitor has of our region of Canada. Developers are encouraged to ensure that both a high level of quality and an appropriate consistency is maintained in accordance with the OCP and Village Vision.

### 2.5.1 Present Landscaped Areas

Contractors must respect established landscaped areas and will be required to install safe zones around these areas using hoarding or fencing. During construction, contractors will be required to submit a plan for utilities relative to large trees and their root systems and indicate what steps are being taken to lessen the impact on the trees.

### 2.5.2 Landscape Plans

Plans should be prepared by a Landscape Architect registered in the Province of British Columbia and include a cost estimate for labour and materials for Letter of Credit purposes. Plans must indicate plant material, quantity, and irrigation systems valve and backflow preventer locations, proposed grading materials, quantities and proposed lot grading elevations. Trees are to be used for planting on landside only.

### 2.5.3 Plant Material

Plant material is to meet or exceed BC Nursery Trade Association (BCNTA) standards. Native to B.C. plants should be used, (substitutes will be considered). In addition to the regular plant materials, seasonal plants are recommended to increase colour.

**Bark Mulch and Cedar Trees are not allowed for fire protection purposes.**

For recommended landscape materials please refer to the Village Vision for a complete list of acceptable plant material.

### 2.5.4 Irrigation

Irrigation systems are required to protect the landscape investment during dry periods. Backflow prevention is required. All underground irrigation shall conform to Irrigation Association of BC (IABC) standards. **Note testing requirements in Sections 3.5.**

### **2.5.5 Maintenance Programs**

Information is to be provided to the Village on landscape maintenance programs in place when the landscaping is completed. Please provide the company name, phone number and contact to the Airport Manager.

### **2.5.6 Wildlife**

During design, consideration must be given to eliminating nesting or roosting areas for birds. Plant material chosen must not provide a food source for birds or other wildlife.

## **2.6 Construction in a Floodplain**

It is recommended that building foundation elevations be built at or above the design flood level but this is not mandatory. The applicant will be responsible for providing designs that consider the use and occupancy of the site, operational requirements, flood proofing, risk assessments, and requirements imposed by other agencies. No habitable space will be permitted below the required flood elevation, and the applicant will provide plans that indicate the FCL for their proposals

## **2.7 Environmental Requirements**

All new land development activities at Pemberton Airport are required to undergo an environmental review to ensure that environmental issues are identified and impacts are mitigated. Prospective land developers and builders are encouraged to contact the Village as early in the planning stages of their project as possible. Environmental approval may be required prior to submission of a Development/Use Permit or Facility Permit.

Proposed developments must meet the requirements of all relevant Provincial and Federal environmental legislation, regulations and guidelines, and provide a written report from a qualified professional confirming all regulations have been addressed. See Appendix "A".

### 3.0 Site Servicing

All off site servicing works must conform with Village of Pemberton servicing and development standards. The applicant may be required to provide a letter of credit for all off-site works required for the project.

#### 3.1 Road Widths and Access

Road access guidelines are intended to ensure safe and efficient vehicular access. Adequate road widths and turning radii should provide for ease of access for emergency service vehicles.

Width of entrances will also have to meet the requirements of the turning radius of all Village of Pemberton rescue and utility vehicles, which currently is 12.5m centerline turning radius and a minimum 6m width.

Road designs require a minimum 90 mm asphalt base course during the development phase of an area. Upon completion of the development a 50 mm asphalt finish course is required to complete the road to the final grade specifications.

Where site servicing crosses airport roads, directional drilling shall be used for installation rather than trenching unless approved in writing by the Village Engineers.

#### 3.2 Responsibility for Site Service Connections

The developer is responsible for providing all site service connections to the site including those beyond the lease line unless special arrangements with the Village have been made. All service connections to Village utilities shall be by Village approved contractors.

**Note:** When connecting to existing service corridors, provision shall be made to allow a smooth transition between service elevations.

All connections are to be witnessed and approved by the Village of Pemberton Public Works Department or Engineers. The Developer is to provide to the Village "As Built" drawings of all underground services to the point at which they enter the building.

### 3.3 Underground Services Specifications:

Specifications shall meet or exceed municipal standards as per the Village of Pemberton Subdivision Bylaw No. 219, 1989 and subsequent amendments and Development Procedures Bylaw No. 388, 1996 and subsequent amendments.

### 3.4 Water Connections

The Village will supply all water service connections to all developments at developer's expense based on applicable Village bylaws and under the direction of the Village. The size of the connections is to be determined by the developer's engineer. The water supply may not be placed into service until the developer has furnished the Village of Pemberton Public Works Department with all tests reports related to the water service (Backflow prevention reports, Chlorinating reports and signed reports of system been flushed and all other relevant test reports) as per the Master Municipal Construction Documents (MMDC). As well, the developer must provide 'As Built's" for all of the infrastructure.

See **Section 5.2** for temporary water supply.

1. **Testing:** Prior to water main connection, the contractor shall supply **static and residual water flow tests** to the Village for hydrants up and down stream from the proposed connection. The Village must be given an opportunity to witness the field tests.
2. **Water Meters** must be installed on any building that is connected to the Village water system, at the expense of the owner, prior to occupancy of the building and such meter shall be placed in a location that is acceptable to the Public Works Department so it can be easily read by Village officials.
3. **Triple valves** shall be installed for all water line installations at each connection to mains for emergency loop continuation and potential service shutdowns
4. All **valve connections** are to be approved and inspected by the Village Public Works Department.
5. All **valve stem access covers and plates** shall be installed in and protected by asphalt or concrete pads approved by the Village.

6. **Backflow Prevention Devices:** All building developments and connections to the Airport's water distribution system shall utilize premise backflow prevention devices located at the potable water entry to the building or connection. All backflow prevention devices must be approved by the Village. **Note testing requirements in Section 3.5.**

### **3.5 Sewer Connections**

Currently the Village has a sanitary force main that runs along the north end of the Airport site, on the south side of Airport Road. Proposed developments will be required to provide the necessary sewer lift stations to pump sewage to the Village's waste water treatment plant (WWTP). The design and construction of all works must be certified by a professional engineer and approved by the Village. Maintenance and operation of the pumps will be the responsibility of the developer/lease holder.

### **3.6 Electrical and Telecommunications Services**

All electrical and telecommunications distribution is to be provided underground as approved by the appropriate utility. The objective is to reduce aeronautical obstructions. Installation of power poles is no longer acceptable, except for temporary services such as during the construction of a development. "As Built" drawings are to be provide to the Village.

### **3.7 Seismic Protection of Natural Gas Service**

All gas services require seismic protection on the gas main connection and must be done by a certified professional and approved and certified by the Provincial Inspector and copies of all reports must provided to the Village. Automatic gas shut off valves shall be installed on gas mains prior to entering the building. Series 300, 310 and 314 are accepted units.

### **3.8 Storm Drainage**

A system of drainage ditches and culverts are used to minimize the risk of storm runoff flooding. Property development must protect the capacity of the existing system and

provide additional storage and runoff capacity where required as a result of the development.

## **4.0 Building Requirements**

### **4.1 Airside/Landside Security Requirements**

The Transport Canada “Aerodrome Security Regulations” (quoted in TP 312) require that when a fence forms part of the security barrier between the airside and landside, it is to be chain link, no less than 2.13 m. high plus a 0.3 m three strand barbed wire overhang facing out. The security barrier must be kept clear of objects that may constitute a threat to the security of the aerodrome for a distance of 1 m inside (airside) the security barrier and 3 m outside the security barrier. (Generally this includes objects that may assist in climbing over the security barrier or could obscure a hole in the barrier.)

### **4.2 Bird Nesting**

Openings that permit bird nesting shall not be allowed in buildings and structures. This requirement includes the enclosure of all canopies and building soffit designs.

### **4.3 Navigational Requirements**

1. Transport Canada approved obstruction lights may be required on buildings, equipment, antennas, light poles and other objects. (Subject to review by Transport Canada.)
2. Transport Canada and NAV Canada reserves the right to require changes to building finishes, signage, flood lighting, and reflective surfaces that adversely affect air traffic or ground control operations.
3. Building materials, electronic and electrical equipment must be approved by NAV Canada to ensure there is no interference with navigational systems on the airport (TP1247E provides information on restrictions associated with navigation aid installations).

#### **4.4 Signage**

All structures on Airport Lands must have a conspicuous street number consistent with Village bylaws and policies to facilitate identification by responding emergency services.

See Pemberton Sign Bylaw No. 380, 1995 and subsequent amendments for restrictions on advertising and roof mounted signs. Backlit signs are prohibited.

#### **4.5 Annual Tests – Backflow, Sprinkler Systems and Hydrants**

The lessee will be responsible for annual testing of the premise and irrigation backflow devices, sprinkler systems and fire hydrants. Results of these tests are to be forwarded to the Airport Manager, Village Building Inspector and Fire Chief.

#### **4.6 Barrier Free Requirements for Construction**

Guided by the Village of Pemberton Building Bylaw No.518, 2003 and future amendments and the current edition of the BC Building Code.

#### **4.7 Fire Inspection, Investigation and Prevention Services:**

Fire Inspection, Investigation and Preventions Services will be done on an annual basis by the Village of Pemberton Fire Department.

### **5.0 Construction Requirements**

Building Bylaw No. 518, 2003, Fittings & Fixtures Bylaw No. 510, 2003, sprinklers are required in all buildings.

#### **5.1 Security Requirements**

The Aerodrome Security Act and the Airport and Transport Canada Security Regulations stipulate special procedures and construction requirements for development that are in or adjacent to the airside. These include the Security Escorts, and Fencing and Security requirements.

## 5.2 Temporary Water Connections

All temporary water connections to fire hydrants are to be made under the direction and approval by the Village of Pemberton Public Works Department. There will be a charge for temporary water hook up and use and will be determined at the time of application. Notice of the required connection will have to be given to the Village of Pemberton Public Works Department seventy two (72) hours in advance. If water is required for preloading or other construction activities, the developer shall contact the Public Works Department for meter, backflow and billing requirements.

## 6.0 Development Approval Process

### 6.1 Introduction

A key community issue with respect to the future development of the Airport lands is the *appearance* and *suitability* of developments and buildings on Village of Pemberton Airport Lands. These lands form an important gateway from the Airport into the Village of Pemberton and as such development requires extra scrutiny prior to approval.

Any airport development is typically industrial in appearance by virtue of the nature of the use (hangars, fuel facilities, storage buildings etc.). There are, however, some areas where a greater degree of design controls are desirable such as, the part of building(s) facing the 'Airport Road' as this forms a gateway or first impression of the Village. If developed in accordance with the following guidelines any new construction should enhance rather than detract from the surrounding area.

In order to achieve the aforementioned objectives, the requirements set out in the following guidelines must be adhered to and all developments will be required to obtain Development Approval from the Airport Manager prior to issuance of a Building Permit. The process may include a review by the Advisory Design Review Committee should the Airport Manager deem necessary. The committee will provide specific resolution(s) to assist the Airport Manager in the consideration of a Development Approval. See Appendix "B" – Development Flow Chart.

## 6.2 Building Design Guidelines

### 6.2.1 Architectural Style

- Architectural Style will not be restricted except to the extent that the frontage of the building(s) (street facing side) should reflect the requirements set out in Section 4 of the Village Vision document which requires a *Quaint Mountain Village* theme along with other guidelines.
- Buildings should also reflect the proposed uses such that hangars/shops beyond the frontage will have less detailing while more attention to detail is paid to the public/office entrances and areas which should be located street side.

### 6.2.2 Buildings and Massing

- Buildings on the Airport Lands fall into two categories, single and multi occupancy. All buildings will be considered to be comprised of two fundamental components, the shop/hangar portion and the public entrance/office portion.
- The public entrance/office portion should face the Airport Road (front yard) or access road and in the case of a corner lot this component should face both the front and exterior side of the property.
- The public entrance should be well defined and create a strong building/corporate image. Massing changes, colour, material changes and entrance protection from snow (ie, roof canopy) are examples of ways to express said image.
- The shop/hanger/storage and public/office areas should be expressed as distinctly different in both profile and appearance. Architectural devices such as different roof plane/styles, different geometric shapes for different portions of the facility, stepping in/out of wall between hangar/shop and office/public areas while maintaining an overall consistent theme are all ways of achieving a well articulated building program with visual interest.

- A two storey office component will be permitted provided there is a distinct change in the massing from the hangar/shop portion of the building.
- All buildings will be required to have fire sprinklers pursuant to Section 20 of Building Bylaw # 518, 2003.

### **6.2.3 Roofs**

- Variations in roof lines will be encouraged.
- If sloped, roofs should be sloped at a minimum 4:12 pitch and consideration should be given to snow management.
- If 'flat', roofs should be well drained to prevent standing water and the use of varying height parapets will be encouraged to create visual interest.
- Overhangs are encouraged for both visual interest and people/building protection.
- All roofing material to be Class A rated and wood roofing materials will not be permitted.
- Soffits must be a minimum of  $\frac{3}{4}$  inch thick solid wood. All gable and soffit vents to be metallic with a maximum opening size of 3mm.

### **6.2.4 Street Façade**

- A higher degree of detailing will be required on those portions of buildings/structures facing Airport Road and any other access roads.
- Combinations of different materials will be encouraged on the street façade, such as stone with wood or architectural concrete with wood, glass etc.
- Main/public entrances should be visually dominant and face the Airport Road or access road.

### 6.2.5 Exterior Materials

- Exterior materials will not be restricted except to the extent noted in Section 6.2.4 Roofs; however they will be required to be used in a manner that is aesthetically pleasing.
- The range of materials and colours used on a building will be required to be complimentary. Materials should include a variety of elements such as stone, wood and other materials that provide a varying degree of textures. Colours should be conventional in appearance: greys, greens, browns, blues, beiges are considered acceptable. The use of bright tones, other than for trim and detailing, are not in keeping with the planned character of the area.

### 6.2.6 Outdoor Storage

- Outdoor storage will *not* be permitted within front yards or visible from the Airport Road or access road.
- Outdoor storage areas will be required to be suitable screened from view through the use of fencing and/or landscaping.
- Garbage areas must be located within a lockable building (bear proof) with provisions for recycling.

### 6.2.7 Landscaping

- All landscaping will be required to be irrigated and the property owner will be required to maintain said landscaping.
- Landscaping should be of indigenous varieties (refer to Appendix A of the Village Vision document).
- Coniferous trees and bushes will be discouraged due to fire concerns and bark mulch or other similar flammable ground materials will not be permitted.

- Street trees (Sunset Maple) along the frontage should be placed at 7.5 meters on center and be a minimum of a 75mm caliper.
- In addition to providing screening of buildings, storage yards and tarmac areas, the landscape areas should serve as storm water/rain water detention areas.

#### **6.2.8 Zoning and Parking**

- Use, setbacks and lot coverage will be required to conform to Section 315 of Zoning Bylaw 466, 2003.
- Parking and loading areas will be required to conform to Section 500 of Zoning Bylaw 466, 2003.

All development at the Airport will be subject to Development Cost Charges as per the Development Cost Charge Bylaw No. 521, 2004 and its subsequent amendments.

## **APPENDIX “A”**

### **Environmental Standards**

## Environmental Standards

### Federal Acts

- Canada Shipping Act
- Canada Water Act
- Canada Wildlife Act
- Canadian Environmental Protection Act
- Fisheries Act
- Migratory Bird Convention Act
- Pest Control Products Act
- Transportation of Dangerous Goods Act

### Federal Guidelines

- Land Development Guidelines for the Protection of Aquatic Habitat.
- CEPA Glycol Guidelines
- CCME Canadian Water Quality Guidelines
- Guidelines for Effluent Quality and Wastewater Treatment at Federal Establishments
- CCME Environmental Code of Practice for Aboveground Storage Tank Systems Containing Petroleum Products
- CCME Environmental Code of Practice of Underground Storage Tank Systems Containing Petroleum Products and Allied Petroleum Products
- CCME Guideline for Sampling, Analysis and Data Management for Contaminated Sites
- Environmental Code of Practice for Vapour Recovery in Gasoline Distribution Networks

### **Provincial Acts**

- Dyke Maintenance Act
- Heritage Conservation Act
- Pesticide Control Act
- Waste Management Act
- Wildlife Act

### **Provincial Guidelines**

- BC Water Quality Guidelines

## **APPENDIX “B”**

### **Development Flow Chart**

