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1.0 Introduction

In May of 2016, the High River Regional Airport Board (the Board) and the Municipal District of Foothills No. 31 (MD of Foothills) retained the services of Dillon Consulting Limited (Dillon) to prepare an updated Area Structure Plan (ASP) for the High River Regional Airport (the Airport), which would act as the guiding document for the Airport.

1.1 Purpose

The purpose of the ASP is to:

- · direct and guide future growth and development at the Airport;
- support the Business Development Strategy developed for the Airport;
- · comply with provincial legislation; and
- comply with the statutory policy documents of the MD of Foothills and the Town of High River (the Town).

This document can also be used to direct the day to day operation of the Airport and to act as a marketing tool for the Airport to attract business. The ASP outlines the existing development and demonstrates the growth and development that can occur at the Airport to support the

creation of revenue, and the continued success of the Airport.

1.2 Interpretation of the Plan

Unless otherwise stated, the graphic information provided within this ASP (eg., maps, illustrations, graphs, charts, figures) are approximate only, and should be interpreted as such.

Where the directive term "shall" is used, it indicates that the actions outlined are mandatory and; therefore, must be complied with, without discretion.

Where the directive term "should" is used, it provides direction to strive to achieve the outlined action, but is not mandatory.

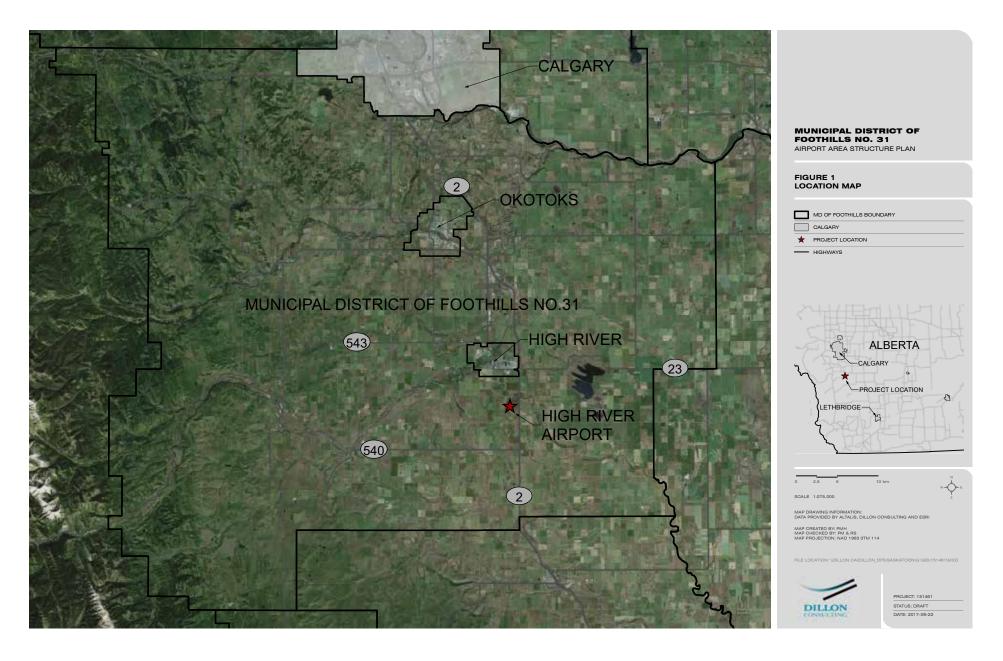
Where the discretionary term "may" is used, it provides notification that the policy in question can be enforced if the MD of Foothills choses to do so, and is usually dependent on the particular circumstances of the specific site and application.

1.3 Plan Area Location

The area that is the subject of this ASP is situated in a portion of section 19-18-28-W4M, Plan 8011027. The Airport's lands contain 63.545 hectares (ha) (157.01 acres) more or less and have an elevation reference point of 1045.8 m (3431 ft) above sea level. The Airport is owned jointly by the MD of Foothills and the Town. The Airport's lands fall entirely within the MD of Foothills. An area location map is included in Figure 1.

The facility is located 3.22 km (2 miles) south of the Town's southerly limits. The Airport's lands are currently bounded on the west by a paved municipal road, 104 Street Fast. This road is sometimes referred to as the Cayley Road and it is formerly Highway 2A. Figure 2 shows the Airport's lands.

The Airport is currently classified by Transport Canada as a Code 2 B Non-Instrument, Registered Aerodrome. However, currently an application is in process that would change the classification to a Code 2 B Non-Precision, Registered Aerodrome.





1.4 Background Leading to this Area Structure Plan

On August 26, 1976, Bylaw 405 was passed by the MD of Foothills in order to create a joint airport commission between the MD of Foothills and the Town of High River that would be responsible for the affairs of the Airport. The Town of High River had created Bylaw 3152/76 to the same effect on August 25, 1976. These bylaws both name the commission as the Highwood Airport Commission (HAC).

At the time of the creation of these bylaws, the Airport's lands were owned by the province of Alberta and leased out to the MD of Foothills and the Town of High River. The Airport's lands were surveyed on August 11, 1979 and then registered as Plan 8011027. On November 5, 1998 the title to the Airport's lands was officially transferred to the ownership of the MD of Foothills and the Town of High River.

In 2003, High River Regional Airport Limited (HRRAL) was formed as a Part 9 Company and registered under the Companies Act. At the same time a headlease between the owners and HRRAL was put into place.

Over the years several plans have been proposed for the development of the Airport lands. At this time the MD of Foothills, the Town of High River and the Airport Board have determined that the ASP should be reviewed, updated and revised to provide a long range planning document.

ASP's are statutory documents under the Municipal Government Act (MGA) Section 633(1) and provide a framework for the subsequent subdivision and development of an area within a municipality.

An ASP must describe the following

- Sequence of development for the proposed area;
- Land uses proposed for the area, either generally or with respect to specific parts of the area;
- The density of population proposed for the area either generally or with respect to specific parts of the area; and
- The general location of major transportation routes and public utilities.

In addition to the provincial legislation, this ASP for the Airport must also conform to Transport Canada regulations.

The policies established in this ASP are intended to:

· Conform with all federal aviation regulations

established by the Government of Canada;

- · Conform with the goals objectives and policies of the MD of Foothills Land Use Bylaws (LUB) and its Municipal Development Plan (MDP);
- Provide guidance and direction with respect to future commercial and industrial development, open space systems and linkage, roadway networks, utility servicing, and environmental and development constraints;
- Provide guidance and direction with respect to lot density, size and land use patterns; and
- Demonstrate the value of the Airport to the MD of Foothills, the Town of High River, the residents in the area and to the transportation network in southern Alberta.

This ASP describes a long range land use plan that identifies the existing uses, and the potential and proposed uses on the Airport property. The time frame for this plan is 20 years, with the intent to update the plan every five years to recognize the work that has been completed and the ongoing or revised plans for the long term development of the Airport.

1.5 Hierarchy of Plans

The Airport must comply with all federal legislation pertaining to the operation and maintenance of airports as well as the land use regulations of the MD of Foothills.

Under federal legislation, the owner and/or operator of the airport has the jurisdiction over land use and development, while the province retains control and regulation of any subdivision of land on the Airport.

The ASP refers to the contents of the federal legislation, which include but are not limited to, issues such as: safety, security and flight patterns. The ASP also references certain sections that are related to the development of the Airport's lands. The following legislation and standards have been considered during the preparation of this ASP.

Federal:

- Aeronautics Act (Canada);
- Canadian Aviation Regulations (C.A.R.s);
- Transport Canada TP 312; and
- Transport Canada TP 1247 E.

Provincial:

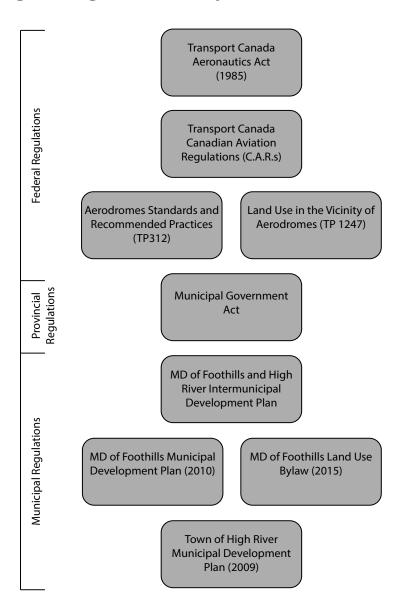
• Municipal Government Act, Statutes of Alberta, 2000 (current as of July 1 2017), Chapter M-26.1.

Municipal:

- Municipal District of Foothills No. 31. Municipal Development Plan;
- Municipal District of Foothills No. 31. Land Use Bylaw;
- · Town of High River and MD of Foothills Intermunicipal Development Plan; and
- Town of High River Municipal Development Plan.

Figure 3 shows the hierarchy of regulations which were considered during the development of this plan.

Figure 3: Legislative Hierarchy



2.0 Public Consultation

Under the MGA, public consultation is required for the preparation of an ASP, in addition to the public hearing for the bylaw to adopt the plan.

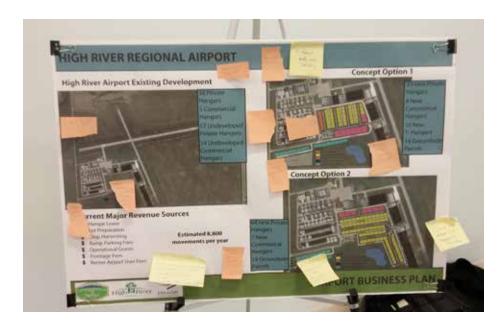
Section 636 of the MGA states: "While preparing a statutory plan, a municipality must provide a means for any person who may be affected by it to make suggestions and representations, notify the public of the plan preparation process and of the means to make suggestions and representations" (Government of Alberta, 2000).

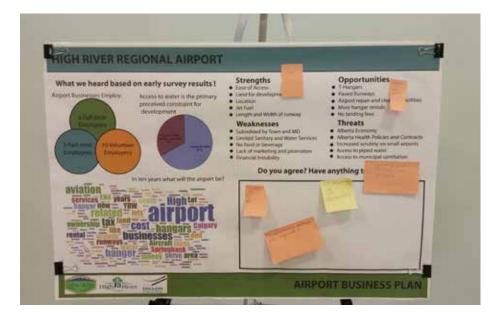
In the preparation of this ASP, the Board was consulted, there was an open house held at the Airport in November 2016 to collect information from the users and tenants of the Airport, and a subsequent open house to present the ASP on November 21, 2017.

2.1 Open House #1

The first public consultation was completed on November 26, 2016 at the Airport. The purpose of the open house was to collect input and information from the community about their vision for the airport. The following are some of the key comments:

- Tenants want to own their lots, but if that is not possible, 49 or longer year leases would be acceptable;
- A runway extension to 5,500 ft would be advantageous, but land needs to be acquired;
- Piped water and sanitary would allow the Airport to grow, but there are limitations to the water line;
- The Airport has open skies that allows aviation expansion; and
- The Airport needs a plan to promote growth.





2.2 Open House #2

A second open house was held on November 21, 2017 for the High River Regional Airport Business Development Strategy, Area Structure Plan and proposed land use.

A sign-in sheet indicated a total of 23 participants attended, including tenants from the High River Regional Airport (the Airport) as well as residents in the MD of Foothills. Included in the attendance were members of the High River Regional Airport Board (the Board), staff from the MD of Foothills and Dillon Consulting Limited (Dillon).

Patricia Maloney and Ryan Siersma from Dillon presented an overview of the project. Five display boards, presenting the key items from each document, supported the presentation and provided opportunities for viewing and discussion by attendees. Dillon provided hard copies of the Airport Area Structure Plan with recommendations in the Business Development Strategy for information and discussion purposes. Questions from the audience focused on items such as leasing or selling airport lots, proposed uses, and the impact of the airport overlay districts.

3.0 Legislation

Since 2003, the Airport has been jointly owned by the MD of Foothills and the Town of High River and operated by the Board. The Airport is located in the MD of Foothills. Under federal regulations, the owner of the airport controls and regulates the land uses on the airport.

3.1 MD of Foothills Municipal **Development Plan**

The MD of Foothills MDP in the Transportation Section (page 33 of the 2010 adopted plan) addresses airports. It specifically addresses the ASP as adopted by MD of Foothills Council in 2002. Upon adoption of this ASP, a minor text amendment may be considered, which specifies the date of this newly adopted ASP.

"Airports and Airstrips

The publicly owned High River Regional Airport and a number of private airstrips are located throughout the MD. These facilities provide recreation and education opportunities, as well as facilitating efficient movement of goods and people, and farm management operations. The High River Regional Airport Area Structure Plan was adopted by MD Council in 2002" (MD of Foothills, 2010).

While the goals of the MDP want to protect the Airport from encroachment by other development, the MDP does not provide a long range plan for the Airport, or direction on how they will achieve economic development, and how they will develop and grow to a self-sustaining component of the transportation network. The MD of Foothills and the Town of High River intend to continue to foster developent of the Airport. This will be accomplished in part through the ASP which creates a long term strategy, along with a business plan which identifies business opportunities.

This ASP will build on the general direction and provide policy direction for the implementation of the business plan.

3.2 MD of Foothills Land **Use Bylaw**

The MD of Foothills LUB includes Direct Control District # 5 that is applied to the Airport's lands and selected lands surrounding the Airport. The purpose and intent of the land use district is:

"To provide for the protection of the Airport from encroachment of uses that may have an effect on the operational safety of the airport facility and to allow Direct Control by the Council over development of the following lands: In Township 18, Range 28, west 4 Meridian: Section 19, Plan 8011027, Airport" (MD of Foothills, 2014).

This is followed by a series of discretionary uses that are based on the Transport Canada regulations and address the development that existed at the time the land use district was approved. However, it does not promote growth, or provide any distinction between the airside, groundside or operational reserve areas on the Airport, and restricts

lands off airports. Because an ASP should not just be a snap shot of the existing, but should be a long range plan for the growth and development of an area, the Airport ASP should look at future development and the land use district should allow for those uses to facilitate the economic development and future sustainability of the Airport.

For this reason, a complimentary LUB amendment would be appropriate in conjunction with the ASP adoption to provide for future development on the Airport, and to create an overlay district that will ensure that development within a 4 km radius does not negatively impact the continued safe operation of the Airport.

It is recommended that the current Direct Control District #5 be renamed the High River Regional Airport District and divide the Airport into three zones: airside, groundside and operational reserve, and outline both permitted and discretionary uses for each zone within the district. In addition, it is recommended that the MD of Foothills adopt an Overlay District that sets out development restrictions in the vicinity of the Airport (using the obstruction zone that is measured using a 4 km radius from the centre point of the runway). This is to ensure that uses that are over 45 m in

height or those uses that unduly create dust, smoke, steam, electronic interference, or attract birds, are not permitted in the area.

3.3 Town of High River Municipal **Development Plan**

While the Airport is not located in the Town, the Town understands the potential for the Airport to impact its economy. An airport can be a catalyst for economic development and this has been demonstrated with the Airport.

"2.3.7.3 Encourage the development of the airport as a catalyst for creating new jobs within the town" (High River, 2009).

With the majority of airport employees living with their families in the Town, they are using local businesses and institutions, along with tenants at the Airport purchasing equipment, supplies and using local labour from the Town. There are hundreds of thousands of dollars annually put back into the economy from the existence of the Airport. In addition, there is an added benefit of emergency services such as medivac offered at the Airport and corporate

charter flights that support businesses in Town of High River. It is recognized that there is a potential for conflict or competition for business, but uses that desire an airport location either have a relationship to the aviation industry or require an unserviced light industrial parcel of land that is not available within the Town's boundaries.

3.4 Intermunicipal **Development Plan**

The MD of Foothills and the Town of High River adopted an Intermunicipal Development Plan (IDP) in 2012 to address lands and uses that are of interest to both municipalities. This included the Airport. Section 6.3.6 of the IDP states:

"The High River Regional Airport is owned in partnership by the Town and the MD. It is physically located in the MD of Foothills so it is subject to regulation by municipal council.

The land, upon which the airport is situated, is leased to a nonprofit corporation called the High River Regional Airport Limited (HRRAL). This company is charged with the responsibility of operating and maintaining the airport and managing the land. The corporation is run by a board of seven directors that includes three members from

the airport's leaseholders and two each appointed as representatives of the municipal councils of the Town and the MD.

The Town and the MD agree that the airport is an important component of the regional transportation system and a significant economic generator. Both municipalities will endeavour to cooperate to provide the support necessary to ensure that the airport continues to grow and thrive" (High River & MD of Foothills, 2012).

The ownership remains the same today. The MD of Foothills provides significant financial investment in the Airport with regards to maintenance, planning and grant application. The Town and the MD of Foothills currently each provide \$8,000 per year in grants. However, the Town and the MD of Foothills, by virtue of articles in the headlease agreement, have determined that this grant will be reduced by \$1,000 per year over the next eight years. This places a significant responsibility on the Airport to become self-sufficient.

In terms of servicing the Airport, the IDP acknowledges that the water line from the Town to Cayley is also available to service the Airport. Figure 4 shows the location of the Cayley water line which passes the western propoerty

line of the Airport. It is understood that the water license and the water pressure may not currently be adequate for servicing the airport, but should these items be rectified, potable water could be piped to the airport lands.

"Wastewater and Water Service

The Town pumps all wastewater through the mainline to the wastewater treatment located 2 km north of the town in the Highway 2A Industrial Corridor in the MD.

Water to service the town is withdrawn from the Highwood River and treated at a plant located adjacent to the east end of George Lane Park. From there it is pumped through the Town's network of water service lines. There is also a water line that runs from the town water treatment plant north to service the Highway 2A Industrial corridor and other lands in the MD. In addition, preparations are underway for a water line that will run south from the treatment plant to service the lands in the MD, including the Airport and the Hamlet of Cayley. The Town and the MD have undertaken a joint Sustainable Water Resource Management Plan the results of which may impact future joint servicing agreements with respect to water" (High River & MD of Foothills, 2012).



4.0 Site Analysis

This section provides a summary of the existing development, the topography and drainage of the site, and the servicing of the site. The Airport is owned jointly by the MD of Foothills and the Town of High River.

Land adjacent to the subject lands are owned by individuals predominantly involved in agriculture with some natural resource extraction.

4.1 Existing Development

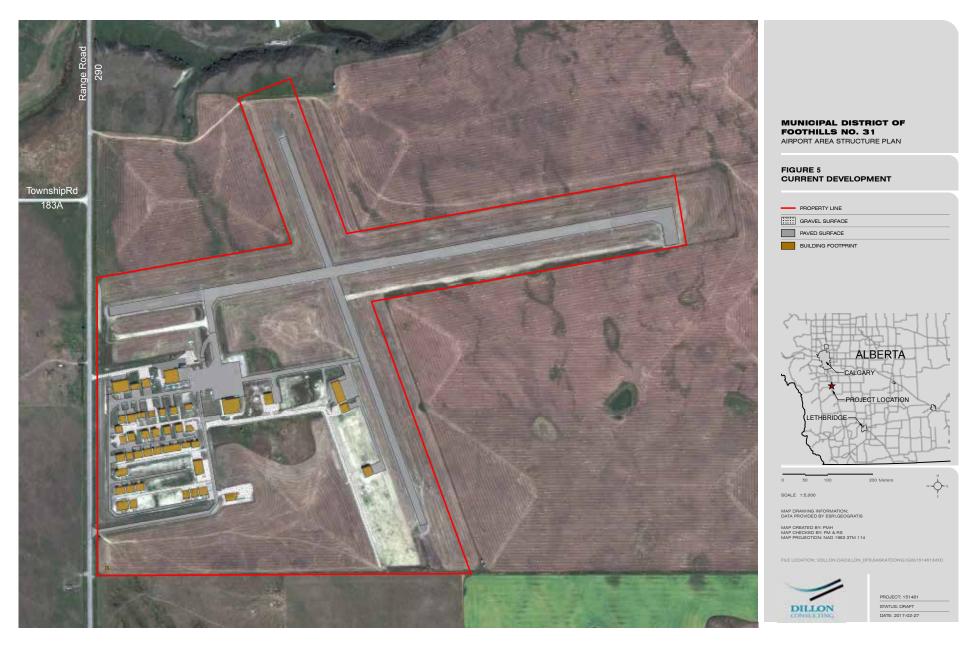
The ASP lands contain two runways (07/25 and 14/32), and associated taxiways. Runway 07/25 is asphalt and runs in a near east/west direction. The crosswinds runway 14/32 runs in a near north/south direction and is stabilized gravel. This runway is in need of upgrading. The two runways intersect centrally.

Currently, there are twenty commercial "C" lots. At this time the Hangar/Terminal takes up all of C1 and a portion of C2. Their lease is for both parcels.

There are 51 private "P" lots. The intent of these lots is to be

used for leased hangar space. Each lot has a separate lease and none of the buildings cross over the boundaries. There are also five "N" lots. The road network access from 104 Street East into the southwest portion of the Airport's lands. From there it travels to the north and west of the utility right-of-way. The road network does not cross over the utility right-of-way. There is a public parking area just to the southwest of Lot Cl and C2. The road also extends between the two rows of Lots PI to P12.

The taxiway network is more extensive. It has access onto both runways, the north side of Lots Cl to C4 and on the outside of Lots PI to P12. Currently, there are overhead lines that run along the east side of 104 Street East. They are buried at the point at which they cross in front of the western edge of runway 07/25. Figure 5 illustrates the current development at the Airport.



4.2 Water Supply and Distribution

The Airport is currently not serviced with potable water and does not have a proven water supply or infrastructure for firefighting. As a result, there are building size limitations currently in place through the Alberta Building Code. Users of the facility depend upon water transported to the site by truck.

Water wells drilled in the area and on the site have test yields ranging from a low of 0.5 gpm to a high of 15.0 gpm. A well drilled in 1979 had a test yield of 2.5 gpm. Testing of the water supply for domestic consumption was not contained within the files.

Currently the Airport has an easement agreement over S.W. 19-18-28-W4M and N.W. 19-18-28-W4M for the purpose of access to a well.

4.3 Sanitary Waste Disposal

Holding tanks and one outdoor privy are being used for human and domestic waste disposal. Solid wastes are disposed of through on site private containers and individually trucked to the regional land fill site.

4.4 Storm Water Management and Drainage

Existing Conditions

The Airport currently does not have a coordinated stormwater management system to manage runoff. Approximately 12 existing culverts serve to maintain the natural drainage direction by conveying runoff under roadways and taxiways to the northwest corner of the property, ultimately draining into the roadside ditch along 104 Street East (ASP, 2002). A few hundred meters north of the Airport, the ditch flows down an escarpment and then becomes less defined, allowing water to flow towards the adjacent property owner's land, eventually reaching an existing watercourse.

The Airport property and surrounding topography is relatively flat, gently sloping from the southeast to northwest. Boreholes drilled in the 1960s and 1970 indicate tight topsoils, primarily composed of sandy clay with some gravels. The previous ASP (2002) noted that there is significant existing depression storage along the southern portion of the property which retains water during rainfall events.

The proposed development plan will approximately double the total impervious area at the Airport compared to existing conditions. Combined with a reduction in depression storage, this will increase the runoff generated during storm events.

Water Quantity

The future stormwater management system is designed to safely convey runoff generated by extreme storm events. Roads, taxiways and runways should not be inundated during the 1:100 year storm event.

A pond is proposed to attenuate peak flows resulting from the increased development area (Figure 7). As runoff naturally drains to the north before it is impeded by the east-west runway, the proposed pond is located north of the future development and south of the runway (Figure 7). The pond should be designed to:

- Safely manage the 1:100 year, 24 hour storm within the pond. Freeboard may be limited by grade constraints.
- Attenuate the peak flow rate during the 1:100 year, 24 hour storm to match existing conditions. This will mitigate downstream impacts.
- A permanent pool should be avoided and water should

- drain to negligible levels within a few days to reduce the possibility of attracting wildlife.
- All vegetation will be selected to not attract any wildlife.
- Allow runoff from storms that exceed the 1:100 year, 24 hour storm to be conveyed away from the runways via an overland escape route.

An orifice structure to be located on the dry pond bottom will allow water to slowly drain from the pond to the west. A combination of swales and culverts will convey water from the pond outlet to the roadside ditch along 104 Street East. Upgrading the ditch along the east side of 104 Street East, north of Township Rd 183A, could be explored as it has the potential to convey the runoff directly to the drainage course and avoid any runoff volume impacts to the adjacent landowner.

Water Quality

The quality of the water leaving the airport should also be considered as part of the stormwater management plan. Maintenance operations, vehicle traffic and aircraft traffic will likely result in stormwater contamination with particulates (sediment), heavy metals, and hydrocarbons. Hangars and other areas where aircraft maintenance activities occur should be designed to collect oil and grease, preventing these hydrocarbons from interacting with stormwater. Best Management Practices (BMPs) such as raingardens or bioswales may be considered to reduce Total Suspended Solids (TSS) and reduce the total volume runoff draining from the development site.

Future Requirements and Approvals

The following plans and approvals may be required, depending on the stormwater management strategy pursued for the site:

- A Stormwater Management Plan, stamped by a Professional Engineer.
- Stormwater Management design should be consistent with the Stormwater Management Guidelines (AEP, 2013).
- · Negotiations with the adjacent landowner may be required due to potential runoff volume impacts.
- Water Act approval may be required if stormwater discharge is considered an impact to the downstream watercourse.

4.5 Shallow Utilities

UtiliCorp Networks Canada (Alberta) Ltd. (TransAlta Utilities Corporation) provides electricity, and Telus Communications Inc. provides telephone service and a public pay phone. ATCO (Atco Gas and Pipelines Ltd.) provides natural gas. Some hanger units use propane. With an increase in development, one or more of the preceding utilities may require easements for utility right-of-ways for service lines.

4.6 Biophysical

The Airport is located on agricultural land. A high level assessment of the biophysical characteristics revealed nothing that would impact the Airport's operations.

5.0 Opportunities and Constraints

5.1 Opportunities

Location: The Airport's lands are situated between 104 Street East and Highway 2 approximately 5 miles south of the Town. The location is both easy to access by road and close to major populations. In addition, it is outside of the Calgary Airport controlled air space, providing open air for flying. This is a significant benefit to the future growth and development of the Airport.

5.2 Constraints

Runway Length: The current primary runway length is 4,150 ft. To accommodate larger aircraft, the ideal length of 5500 ft would be required. However, there are physical, financial and land ownership constraints to the expansion of the runway. Runway 07/25 (East/West) is limited by the physical presence of the road and by the height of the take-off/approach slope height restrictions. Runway 14/32 (North/South) needs to be upgraded. It should be noted

that residential development and development setbacks off the end of the runways are calculated based on runway length; any change in the runway length would have to accommodate any existing developments and meet the setback requirements.

Noise Exposure Contours: Airport Vicinity Protection Area (AVPA) regulations were previously established for the Airport, in full force and effect until December 31, 1998. The regulation was then repealed with the adoption of the MGA's Planning Legislation Division 12, Section 693(i). The Noise Exposure Forecast Contours (ii) (NEF) that were developed in the 1970's were based on assumptions of much larger aircrafts utilizing the Airport. As such, the existing NEF contours may not accurately represent existing and future traffic volumes. NEF contours were developed to provide an advisory tool for municipalities as to when they may expect noise complaints. In addition, Canada Mortgage and Housing Corporation has put restrictions on insuring mortgages that are located in the higher noise contours.

It is understood that some residents have in the past complained about the noise at the Airport. However, the traffic volumes are extremely low, the type of aircraft using the Airport are generally small general aviation aircrafts and there are no airlines that provide regularly scheduled passenger flights. Therefore, it is generally considered that the actual noise contours for the Airport do not extend off the Airport's property. Figure 8 illustrates the NEF contours as prepared by Alberta Transportation in the 1970's. For lack of any other noise mapping, these contours can provide guidance and direction but should not be considered as the definitive indication of unacceptable noise or totally restrict development. The Canadian Mortgage and Housing Corporation may not insure mortgages for homes constructed within the 28 NEF contour (unless they include special noise abatement techniques).

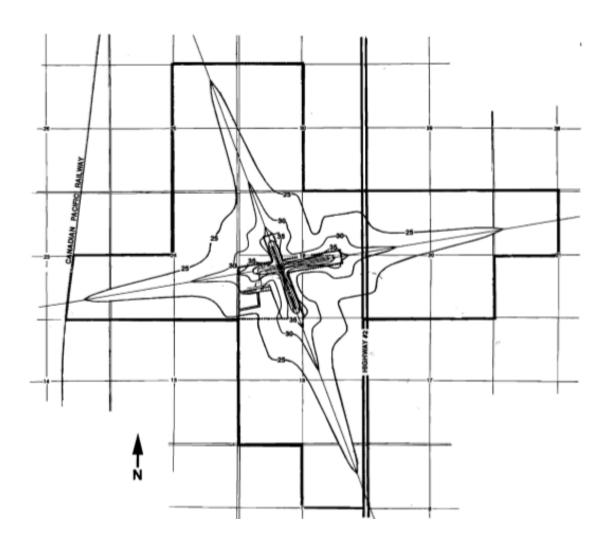
Sanitary waste disposal: There is currently no operating communal sanitary waste disposal system on the Airport. With proposed increased usage of the Airport's facilities the disposal of sanitary waste will need to be addressed for the full site. Generally, the Airport users are low water users and currently some individual hangars have sewage tanks that are pumped out. This may continue until such time as a communal system is constructed.

Water supply: There is no on-site supply of communal potable water. Any new wells will require a license from the Province of Alberta. Individual hangars can haul in water for the use on-site. There is a municipal water line that is located in the road right-of-way and supplies the Hamlet of Cayley with potable water. The water line is owned by the MD of Foothills and treated by the Town, and while several documents indicated that the intent is for the Airport to ultimately tie into this line, there are costs associated with this tie-in, including a reservoir, integrated fire suppression system, and the internal distribution pipes. The lack of piped potable water will restrict development of uses such as student housing, eating and drinking establishments, and manufacturing. If water access is provided, it will be at the sole cost and expense of airport users, not through the general tax base.

- Of the original 38 AVPA's that were prepared by the Provincial Government, only two remained by special resolution in the MGA, Calgary and Edmonton International Airports.
- NEF contour models are calculated based on 11 factors; absolute noise levels, noise spectrum, maximum tone, noise duration, aircraft type, mix of aircraft, number of operations, runway utilization, flight path, operation procedures and time of day. As a result of this they will vary with time and the use of the airport facilities.

Figure 8

NOISE EXPOSURE FORECAST (N.E.F.) RATINGS



6.0 Vision and Goals

The following section outlines the vision, metrics for measuring success and the goals for the long range plan for the Airport.

6.1 Vision

The vision for the Airport is:

The High River Regional Airport is a successful regional airport serving the Foothills Region, Calgary and Southern Alberta.

The metrics that will measure what success looks like might include:

- Financial independence;
- Long term sustainability;
- Continued Safe operation; and
- Demonstrated contribution to the community.

6.2 Goals

The overriding goals for the Airport that will assist with achieving the vision are:

- To identify and encourage development that will provide revenue for the Airport;
- To develop a strategy for growth;
- To balance the airside and groundside development; and
- To continue the safe operation of the Airport.

6.3 Plan Philosophy

The overall philosophy of this plan is to provide direction for the growth and development of the Airport for both the owners (the MD of Foothills and the Town of High River) and the Board. The continued safe and financially viable operation of the Airport is ingrained in every action to be taken on the Airport property.

The Airport is a Registered General Aviation (GA) Airport

and it is not proposed that this airport attract regularly scheduled passenger flights. However, it is proposed that this airport grow, and see an increase in number of flights including itinerant, general aviation, charter, and flying school flights.

GA airports provide an indispensable link to local, regional and provincial transportation systems. This transportation link contributes to local and regional economies that in turn promote and sustain the GA airports. In 1993, it was calculated in the US that the annual economic activity from GA airports contributed an estimated \$18.5 million to the national economy ("The Economic Impact of Civil Aviation on the U.S. Economy Update '93," prepared for the FAA and Lockheed Martin, by Wilbur Smith Associates, April 1995).

In addition to the economic benefits contributed by GA airports, other vital GA activities include emergency medical flights, police and fire support, search and rescue operations, traffic reporting, and agricultural and environmental management operations. Most GA airports were constructed with runway lengths of 3,000 to 4,000 feet. The airports were located away from communities,

and were generally surrounded by agricultural or industrial land uses. While the primary users of the Airport may be perceived to be recreational flyers, and while it is generally the Flying Clubs that donate hundreds of volunteer hours to operate and maintain the Airport, there are many other users of GA airports. The increase in corporate users is placing pressure on these airports to extend their runways and expand their airport services.

The philosophy for the continued operation of the Airport is to maintain the GA registered aerodrome status, while planning for a runway extension and continued growth and development of the Airport's lands including the extension of taxi ways, increase in tie down area, increase in apron area and construction of more hangars, and attraction of commercial aviation-related businesses. The Airport can provide an alternative location to the Springbank Airport, as well to the Okotoks Air Ranch Airport.

7.0 Airports "101"

Airports are specialized development that requires unique considerations for the land use approvals. In addition, airports are regulated by multiple levels of government. Airports have extremely limited sources of funding and as such must consider a balance of land uses to generate revenue to reduce the pressure and responsibility on the municipality. This section of the ASP provides background on the operation of airports in general.

7.1 Transport Canada

TP312 is the Transport Canada standard that defines the requirements for the development and operation of airports in Canada. This sets out the requirements such as: physical characteristics, obstacle limitation surfaces, visual aids and technical services the aerodrome operator at a certified land aerodrome (airport) provides to support aircraft operations. This document incorporates both a design and operationally based concept. The implementation of standards under the operational concept is primarily based on aerodrome operational level and physical aircraft characteristics, such as:

- The size of the critical aircraft;
- The type of runway (non-instrument, non-precision or precision); and
- The aerodrome operational visibility limits.

As a registered aerodrome, the Aiport is required to comply with only the parts of TP312 that apply to registered land aerodromes. If the Airport extends a runway or should attract a regularly scheduled passenger airline, the airport code may change. An increase in the size of critical aircraft or the provision of lower landing, departure, or taxi limits will require the aerodrome operator to re-assess the aerodrome facilities and/or operational procedures to ensure they provide the required standards. These changes may require the Airport to follow additional requirements in TP312.

7.2 Airport Category

Code 2 B Non-Instrument, Registered Aerodrome. However, currently an application is in process that would change the classification to a Code 2 B Non-Precision, Registered Aerodrome...

7.3 Obstacle Limitation Surface

Airports have identified areas for protection of the operation of an airport. The outer surface establishes an area above an airport, at a height of 45 m for a radius of 4 km from the centre point of the runway. The purpose of this is to protect the area for aircraft conducting a circling procedure or manoeuvring in the vicinity of an aerodrome. The outer surface establishes the height above which it may be necessary to take one or more of the following actions: (a) restrict the erection of new structures which would constitute an obstruction; or (b) remove or mark obstacles to ensure a satisfactory level of safety and regularity for aircraft manoeuvring visually in the vicinity of the airport before commencing the final approach phase. This is illustrated on Figure 9.

In addition to the obstruction zone, there are setbacks

from the ends of the runways, called take off and approach areas and surfaces, and along the sides of the runways and taxiways, called transitional areas (Figures 10 & 11).

For the Airport, which is a Code 2 B, Registered Aerodrome, the dimensions of the takeoff/approach areas and surfaces shall be:

Non-precision:

• Divergence: 10%

• Length: 2,500 m

• Slope maximum: 3.33%

Non-Instrument:

• Divergence: 10%

• Length: 2,500 m

• Slope maximum: 4.00%

The lengths are measured horizontally, unless otherwise specified. Regardless of the slope specifications all objects considered by the certifying authority to be hazardous shall be marked and/or lighted.

For more specific information obstacle limitation surface, please refer to Transport Canada TP1247 - Land Use in the Vicinity of Airports.

Figure 9

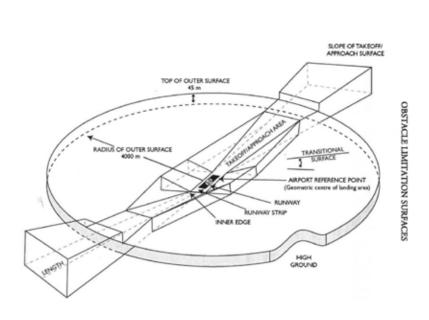
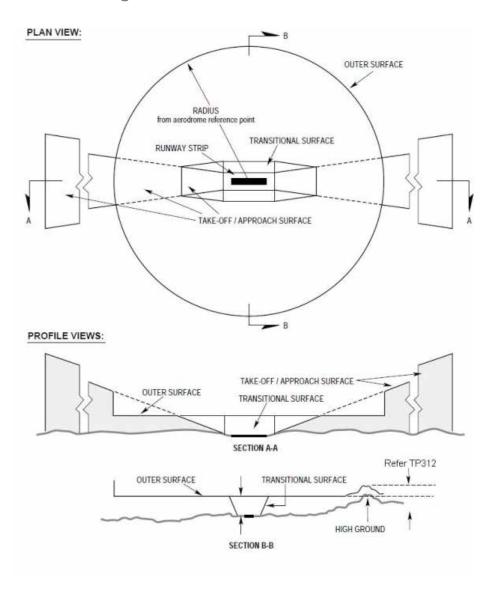
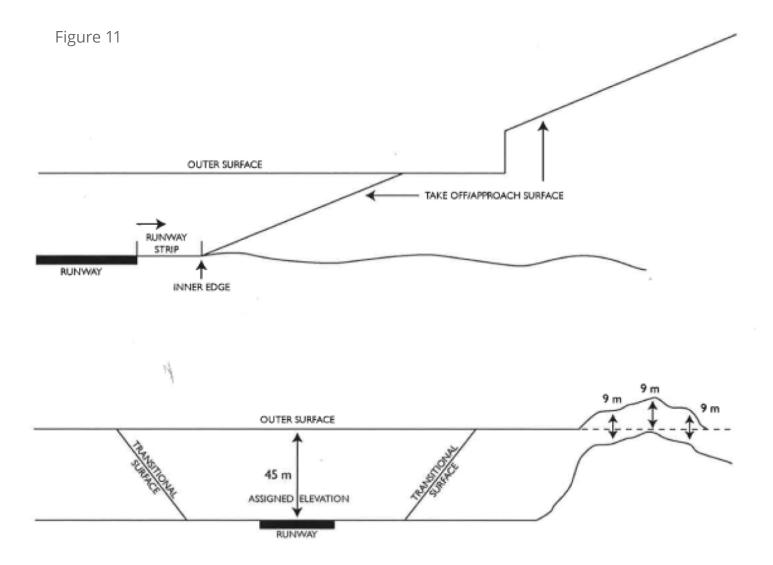


Figure 10





The transitional surface is a complex surface along the sides of the runway strip that runs parallel to the approach surface and slopes up to the outer surface. Its purpose is to ensure the safety of aircraft at low altitudes displaced from the runway centre line in the approach or missed approach phase. The slope of a transitional surface measured in the vertical, perpendicular to the runway is 20.0% for non-Instrument runways, Code 1 and 2. The slope of the transitional surface for a Code 1 or 2 Non-Precision runway is 14.3%.

Where topographical or natural obstructions make it economically unreasonable and in the opinion of the certifying authority, an equivalent level of safety will be achieved. The transitional surfaces for runways where the code number is 1 or 2, used in Visual Meteorological Conditions (VMC), may be steepened or eliminated.

Width of strip for non-precision approach runway is 45 m where the code number is 1 or 2 or for a Non-Instrument Runways is 30 m where the code number is 1 or 2.

7.4 Land Uses on Airports

An airport is made up of three categories of land use:

- Airside development located with direct access to the taxiways and runways, including hangars, tie down areas, aprons, and fuelling operations.
- **Groundside** development on an airport that does not have direct access to the runways and taxiways including parking, concessions, light industrial lands and other commercial enterprises
- Airport Operation development of necessary infrastructure for the operation of the airport including runways, taxiways, aprons, navigational aides, weather stations, equipment and salt sheds, terminal buildings, and other similar uses.

AIRSIDE

Airside lands should be utilized for those uses that require direct access to the runway, taxiway or apron. It is very rare that an airport can create more airside lands. Groundside uses should not be allowed to take up the valuable airside space. The types of uses that may be considered appropriate airside uses include:

- Aerial application and spraying operations
- Aerial photography services
- Agricultural (crop production)

- Air ambulance
- Air cargo facilities
- · Airport vehicle and equipment compound
- Aircraft charter operations
- Aircraft fuel and provisioning services (above ground)
- Aircraft parts supply and services
- · Aircraft sales, leasing and rentals
- Aircraft storage facilities
- · Aircraft maintenance and operational facilities
- Aviation related information services
- Aviation research facilities
- Baggage services
- Cleaning, servicing, testing or repair activities relating to aviation
- Distribution hangars
- Emergency response services
- Fixed base operations
- Flight training schools including temporary residential facilities
- Hangars
- · Military operations including search and rescue, RCMP and Military Cadets
- Passenger terminals

 Private clubs and organization related to airport activities

GROUNDSIDE

There is concern that the Airport development should not compete with local commercial and light industrial developments. However, the generation of revenue for the Airport is critical to its future success. The types of groundside uses that might still have an aviation theme or purpose would be the ideal uses in this case but an airport often provides unserviced lands outside of an urban centre for commercial or industrial uses that do not conflict with the operation of an airport, and would be considered compatible by Transport Canada. These uses do not take up any land that would have direct access to the airside lands. These uses may include:

- Agriculture (including Greenhouses)
- Camping (this might be only for overnight pilots)
- Contractors yards
- Restaurant establishments
- Emergency services
- Helicopter operations
- Logistics and distribution

- Manufacturing (airport-related)
- Museum
- Outside storage
- Parking lots
- · Repair shops (where all of the business is conducted inside the building)
- RV storage
- Solar installations (industrial or commercial)
- Technical/Training schools
- Warehousing (airport/multi-modal transport related)

OPERATIONAL USES

Operational reserves are the lands required to operate the Airport. These uses may include:

- Agricultural (including crops and grazing)
- Airport maintenance and operational support facilities (e.g., control tower, fire hall, airport maintenance complex)
- Air terminal buildings and associated uses
- · Air traffic control facilities
- Aircraft fuel and provisioning services
- Airport maintenance and operational facilities
- Aprons
- · Emergency response services
- Meteorological installations
- Navigational aid facilities
- Runway
- Taxiways
- · Takeoff and approach and transition areas
- Utilities/ Public Utilities

8.0 LONG RANGE LAND USE PLAN

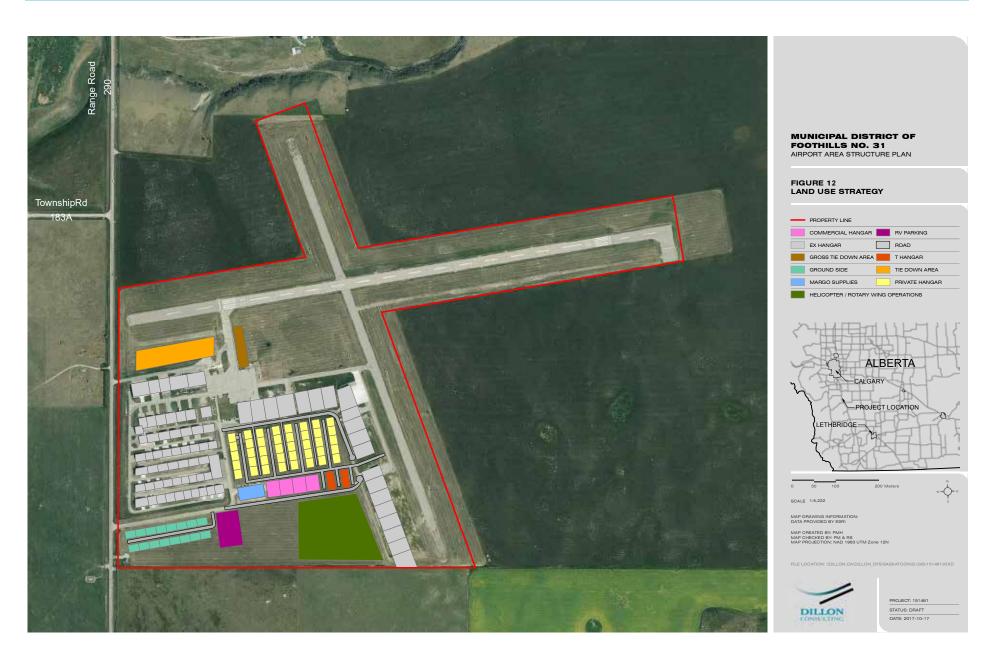
The Future Development Concept Plan (FDCP) illustrated in Figure 12 has been compiled in light of the identification and analysis of constraints detailed in the previous sections of this plan. It also attempts to employ the input received from persons in attendance at the open houses and from submissions made to the Board, MD of Foothills, and the Town, as well as all current governing regulations.

As such, the FDCP is a generalized picture of how future land use and development is anticipated to extend from the existing built up area of the airport facilities into the undeveloped portions of the site. The FDCP outlines, in general terms, areas for future development, proposed future road and infrastructure system, runway and taxiway improvements.

Phasing or staging of future development is dependent upon several factors:

- 1. Market demand.
- 2. Funding availability.
- 3. The approval of future development by the MD of

- Foothills and the Town of High River as joint owners of the property.
- 4. The approval of future development by the MD of Foothills as approving authority for the Airport's lands.
- 5. The approval of future development by Transport Canada, in so far as, it is an area over which they have jurisdiction.
- 6. The expansion into these areas being a logical growth direction.



9.0 POLICIES

The following policies shall apply to any development that occurs on or is proposed for the Airport's facilities, hangar sites, and airport related commercial and industrial uses. The purpose of these policies is to ensure that any development project commenced within the ASP area will comply with, and will be consistent with the provisions of the MD of Foothills MDP and the MD of Foothills LUB.

9.1 General

- 1. Future development at the Airport shall generally follow the Land Use Strategy outlined on Figure 12.
- 2. No development at the Airport shall unduly attract birds or create animal habitat, smoke or steam, or electronic interference.
- 3. The Airport's lands have been identified for one of three purposes: airside, groundside or operational reserve.
- 4. The Airport shall not be a residential air park.
- 5. Should the flight school propose student housing on the Airport property, it must be located on groundside lands

- and must demonstrate sufficient water and sanitary sewer system to the MD of Foothills and Provincial standards.
- 6. Development on and off Airport property should consult the NEF Contours developed for the Airport (Figure 8) when proposing new development.
- 7. The Airport's lands shall continue to be leased to tenants and the term of the lease shall be lengthened to a much longer term to allow for bank financing. The lease term shall be between 25 and 49 years.
- 8. Any development activity proposed for the Airport shall be consistent with the MD of Foothills MDP, this Airport ASP and the LUB provisions.
- 9. Any development shall be limited in size according to fire protection requirements in the building code.
- 10. All new developments or leases shall sign a deferred servicing agreement to tie into communal services in the future.
- 11. Utility mapping and easements shall be put in place,

- where they do not already exist.
- 12. Sewage tanks must be located within the limits of the individual lot that they serve.

9.2 Airside

- 1. Any use to be located on airside lands must be an aviation use and require direct access to the runway.
- 2. Retail commercial activities such as concessions, eating and dining facilities shall be restricted to terminal areas.
- 3. Commercial enterprises, including but not limited to, the selling or repairing of aircraft parts and accessories, flight tours, and other products and services related to the aircraft industry may be allowed to develop in the airside area at the discretion of the development authority.
- 4. Light industrial activities associated with the Airport facilities' operation and the aircraft industry may be allowed to develop in the airside area at the discretion of the development authority.
- 5. Any developments that are a large consumer of water will be discouraged.
- 6. With the exception of a caretaker/resident manager dwelling accommodation for the facilities, other forms of

- permanent residential development is not permitted.
- 7. Outside storage of recreational vehicle motor home or trailer accommodation on airside lots may be permitted for periods of no more than five consecutive days when the tenant has a hanger.
- 8. To ensure that the Airport can accommodate a variety of aircrafts in the future, the MD of Foothills may pursue a potential extension of Runway 07/25 to the extent allowed by the existing parcel size.
- 9. The MD of Foothills, the Town and the Board should plan for a parallel taxiway to runway 07/25.
- 10. The MD of Foothills, the Town and the Board should plan for the upgrading of runway 14/32 (north/south).
- 11. The MD of Foothills, the Town and the Board should plan for the accommodation of a future terminal building and flight centre. This may be provided by a private developer as a fixed base operation, or some other partnership arrangement.
- 12. A specific area for helicopter operations should be designated in order to separate the rotary wing and fixed wing aircraft.

9.3 Groundside

- 1. Groundside developments shall have access from the internal road network, but no access to the Airport runways.
- 2. Development shall be low water users until such time as piped water is available to the Airport, at which time the tenant will pay for infrastructure upgrades on a pro-rated basis
- 3. Outside storage of recreational vehicles may be permitted on lots with development permit approval and appropriate access and fencing.

9.4 Operational

- 1. Airport operational uses shall be expanded as required including navigational aids, lighting and weather station.
- 2. Any future runway extensions shall require planning collaboration between the MD of Foothills, the Town of High River and the Board to design the runway, acquire the land, and construct the runway.

3. The Board shall identify ways to market the Airport, increase revenue, record the number of flights and increase pilot services to increase the use of the Airport and develop a financial reserve fund that shall pay for the major operational infrastructure.

9.5 **Servicing**

- 1. As new airside and groundside lots develop, the Board shall ensure that the lots are surveyed and serviced with power, and that all development conforms to the stormwater management plan.
- 2. The MD of Foothills, the Town of High River and the Board may collaborate on planning for the provision of a water supply for the Airport that would be adequate to accommodate both domestic use and firefighting requirements.
- 3. All new developments or leases must sign a deferred servicing agreement to tie into communal services in the future.
- 4. On-site drainage shall adhere to the stormwater management plan, including the retention facilities as illustrated in Figure 7.
- 5. Sanitary waste disposal should be handled by

- individual pump-out tanks and shall be installed on the subleasees lot unless otherwise approved by the authority of jurisdiction, and until such time that piped sanitary services are available. At this time connection shall be mandatory.
- 6. The provision of a "lagoon system" or other form of piped sanitary treatment facility should be investigated prior to any student housing or high water user developments, at the discretion of the approving authority.

9.6 Infrastructure

- 1. The Airport's land area shall be serviced by a network of internal lane ways connected to collector roads that connect to 104 Street East. These roads shall connect to all airside development. All main roadways through the Airport's lands should have 30 m (100 ft) right-of-ways. As the road branches off (i.e., into the hangar area) the width may be reduced to 15.24 m (50 ft).
- 2. In addition to the internal roadway system there shall be an internal taxiway system. This shall connect to all airside development. As a Code 2 B airport the current maximum wingspan is up to but not including 24 m. The

- constructed surface of the taxiways; therefore, should be 15.24 m (50 ft) with additional area where need arises to accommodate safe manoeuvrability of the aircraft.
- 3. Development standards for the road system shall be as defined in the development agreement, or as otherwise agreed upon among the owners, HRRAL and any future developer, to the satisfaction of the MD of Foothills Public Works Department.
- 4. There should not be any point at which aircraft and land vehicle traffic should cross.
- 5. Pedestrian crosswalks and traffic calming devices shall be located as deemed necessary by the approving authority.

9.7 **Phasing**

- 1. The phasing of the development of the Airport shall occur from the north to the south of the future growth area to use the existing road network as outlined in Figure 13 - Phasing Map..
- 2. Infill development shall be the first phase of development, as it does not require any additional infrastructure.
- 3. The Board shall survey new lots for leasing and shall

- provide engineering cost estimates for the construction of access roads in a logical manner.
- 4. Prior to new lots being brought on stream, the storm pond shall be constructed and all new lots shall be required to drain in to the pond area through open ditches in conformance with the stormwater management plan.



10.0 Implementation

10.1 Plan Adoption

An ASP is a statutory document; that means, a set of formal regulations made law by a legislative body (Council). The regulations contained in this plan must be adopted by bylaw, pursuant to the MGA, Chapter M-26.1, R.S.A. 1994 as amended. Upon adoption, the Plan becomes Schedule "A" to the adopting bylaw.

10.2 Municipal Development **Plan Conformity**

The MGA requires that an ASP must be consistent with all other statutory plans of a municipality. The Airport ASP must be consistent with the provisions of the MD of Foothills MDP and the LUB.

10.3 Timeframe for Area Structure Plan Review

This Plan is a statement of intentions and desires regarding the long-term development of the Airport area, and is intended to guide and direct that development. The policies set forth in it are based upon current trends and expectations for the future. However, as the future is an uncertain entity, this document should be periodically examined to ensure that its policies reflect the current desires of Council and affected landowners.

Should future development conditions, issues or proposals change to such a degree that the plan's policies become ineffective, obsolete or an impediment to the continued development of the Airport, this ASP should be amended or repealed.

10.4 Public Participation in **Amendments or Reviews**

Any substantive change to the policies established in this ASP should be done in consultation with and as a result of direct input from and participation, of the adjacent landowners and the users of the Airport facility. The facility operators and land owners of the sites should also assist in monitoring the plan's policies and should be solicited with respect to expectations and perspective when the plan is to be reviewed. This could be accomplished by establishing a review committee, or by holding a series of open houses and/or information sessions to ascertain public input.

11.0 References

Government of Alberta (2000) Municipal Government Act. http://www.qp.alberta.ca/documents/Acts/m26.pdf

Municipal District of Foothills (2010) Municipal Development Plan. https://www.mdfoothills.com/services/planning-anddevelopment/municipal-plans/municipal-development-plan. html

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Town of High River (2009) High River Town Plan. Policy 2.3.7.3, page 13. http://www.highriver.ca/images/ Planning/2013/13-03-11 Town-Plan final mar4-2013.pdf

Town of High River and Municipal District of Foothills (2012) Intermunicipal Development Plan. Page 56. http://highriver. ca/wp-content/uploads/2017/07/12-12_thr_inter-municipaldevelopment-plan.pdf