OLIVER AIRPORT STRATEGIC PLAN

Final Report

Town of Oliver Airport

Strategic Planning Project

"Respecting the Community, Serving the Region"

Cornerstone Planning Group

May 2012

Town of Oliver
Oliver Airport Strategic Plan

Executive Summary

In the summer of 2011, a team of business and aviation consultants was contracted by the Town of Oliver to produce a strategic plan for the Town's airport (the Airport). A key purpose of this plan was to investigate ways in which the Airport could become a catalyst for economic development in the south Okanagan region. In its new role as a regional facility, the Airport's place as a community-based facility having value to more than pilots and aircraft owners/ operators was to be enhanced as well.

Throughout the fall and winter of 2011/12, 2 key groups were responsible for providing the Consultant Team with input and direction. The first of these groups was the Project Advisory Group (PAG). The PAG's role was to represent the interests of stakeholders in any future proposed for the Airport; in other words, direction as to the nature and extent of services and facilities that should be on site. The second group, the Project Steering Committee (PSC), was responsible for analyzing all input coming from the PAG and the Consultant Team. The PSC's analyses resulted in recommendations for directions and priorities that were to become components of the overall plan.

An early priority for this project was to build on earlier planning initiatives by developing the Airport's conceptual future. This future was articulated in the mission and vision statements developed by the PAG and adopted by the PSC.

Mission Statement The mission of the Town of Oliver Airport is to support economic diversity and sustainable, healthy growth of all South Okanagan communities by increasing the number of air travelers and by increasing the number of businesses located at the Airport, in the Town of Oliver and in the surrounding communities.

Vision Statement The vision of the Town of Oliver Airport is to become the premier regional airfield for the South Okanagan providing excellence in services and facilities available to air travelers and aircraft operators and to become recognized as a model for convenient access, cost effectiveness and effective partnerships with the Town's residents and businesses.

Achieving the Airport's vision was to be accomplished through the following 7 goals:

1. Strive to develop and operate the Airport with minimum reliance on public funding
2. Acknowledge and give consideration for legacies created by people and organizations that helped create and maintain the Airport's current status
3. Preserve and support investments made by businesses and organizations currently accommodated on the Airport's site
4. Engage residents of the Town and of the southern Okanagan region in planning for the Airport's future at each stage of development
5. Allow the Airport to continue accommodating a variety of functions that encourage site use by pilots, passengers, local businesses and all Town of Oliver residents
6. Operate the Airport as a Town-owned business using stakeholders in the decision-making processes

7. Allow the Airport to evolve in a manner that is respectful of all Town residents, and especially those living close to the Airport and most likely to be impacted by noise

In order for the Airport to achieve these goals and be able to support the full, proposed role and scope of services, it was determined that the following improvements and enhancements would have to occur:

- An expanded runway with fully integrated taxiway system and main apron
- Approach and departure features including visual approach systems and published visual and instrument approach/departure procedures
- Hangar facilities in support of general aviation (GA)
- On-site aviation fuel storage and delivery facilities
- Industrial facilities supporting aviation-related businesses
- Terminal building accommodating a variety of functions
- An Airport Management Structure with clearly defined and assigned responsibilities for day-to-day operations and future development
- Ongoing marketing and promotion campaigns aimed at raising awareness of the Airport and attracting businesses and users
- Flexibility to accommodate multipurpose use of the site with a focus on those uses committed to the support of aviation

The first 6 items in the above list represent capital development projects. The Airport Management Structure and marketing/promotion campaigns are operational components of the overall plan and need to be implemented early to ensure the Airport's continued and logical evolution.

The final plan illustrates how each of capital projects could be accommodated on the site. This will be a long range plan, and it is generally accepted that a planning horizon of approximately 25 years would be required to achieve the final plan. A phasing strategy and estimated costs, where appropriate, are included as well.

Town of Oliver
Oliver Airport Strategic Plan

FINAL REPORT

May 2012

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NOTE: *Conclusions and recommendations appearing in this report were based on understandings and assumptions of prevailing conditions. Specifications contained herein do not absolve any parties providing subsequent planning services from their own responsibility to provide fully functional and complete services and facilities based on updated conditions and standards.*

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1.0 INTRODUCTION

1.1 Study Rationale

"The Oliver Airport Strategic Plan will be the first step in the overall Oliver Airport Improvement Project (AIP). The AIP is anticipated to end with an airport that services the south Okanagan region and is the home for commercial air related businesses. The strategic plan will help ensure that the Town of Oliver is ready to meet current and future demand for air services and will provide a catalyst for economic development in the south Okanagan region."

(Source: Extracted from the Town of Oliver's Request for Proposals, Town of Oliver Airport Strategic Plan, May, 2011)

As a resource and in its current state, the Town of Oliver Airport (the Airport) serves a core group of users and represents considerable value to this group, local and visiting owners and operators of small aircraft. Looking at it from a broader perspective, the Airport is a Town-owned asset that possesses untapped potential for residents of Oliver and the surrounding communities. This potential is seen in a variety of forms. An obvious expectation is that revenues are generated by tenants and users of the site in the form of taxes, lease revenues and user fees. More people using the site translates into more of these revenues. A more broadly-based vision sees the Airport's potential for attracting new businesses not only to the Airport site, but also to the Town and surrounding communities. In essence, the Airport becomes another component of an economic base supporting an influx of new families into the region.

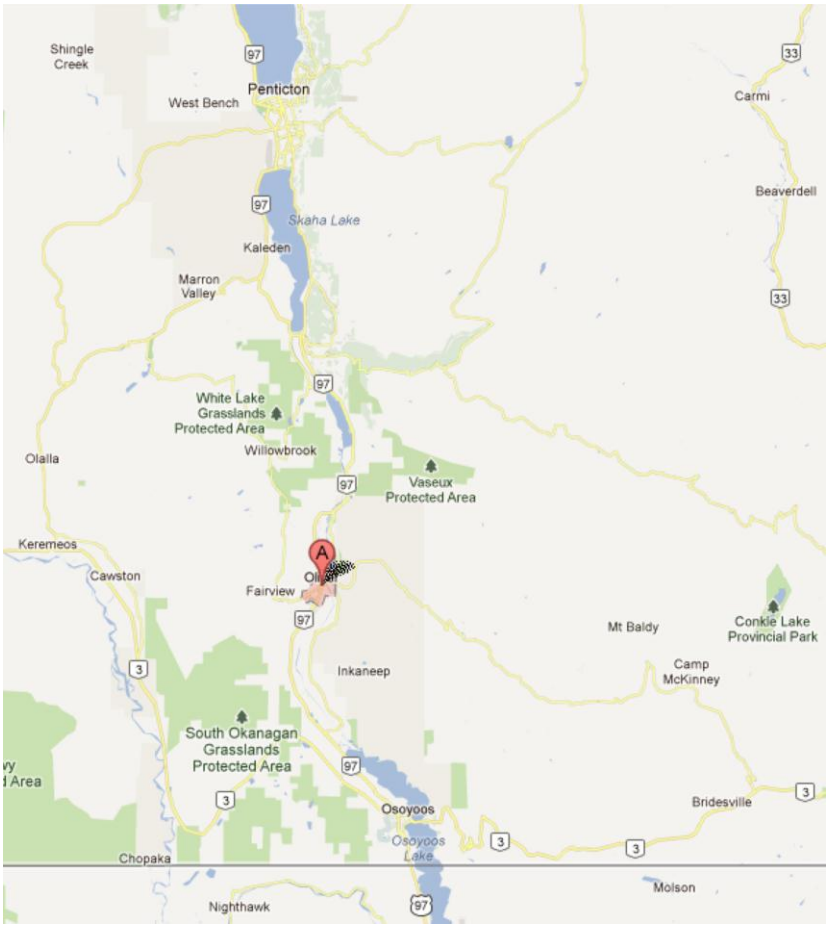
Accessing the Airport's development potential is a key motivating factor behind the conduct of this strategic planning study. The purpose of the Oliver Airport Strategic Plan is to provide a roadmap that will guide the Town of Oliver in the future development of the Oliver airport. As cited in the project's initial Request for Proposals (RFP), "*The strategic plan will provide the Town with the guidelines for future projects at the airport."* A second stated purpose for compiling a plan is that it *"…. will form part of the business case that will be used to request formal approval and to seek funding for future development at the Oliver Airport."*

This strategic plan is not only a concrete picture of what the Airport's future could resemble, but also a presentation of discrete steps enabling the Airport's transition from its current state.

1.2 Regional Context

The Town of Oliver sits in the middle of a line containing five major communities; Penticton, Kaleden, Okanagan Falls, Oliver and Osoyoos. The City of Penticton is at the northern end of this line while the Town of Osoyoos marks the southern end. All municipalities are located within a 40 kilometer radius. Provincial Highway #97 provides north-south vehicular transportation on paved roads that are divided, and some sections two lanes. Studies conducted by the Ministry of Transportation and Infrastructure show that Highway #97 is used by all types of vehicles including commercial, large transport trucks delivering goods to/from the southern Okanagan and into/out of the United States.

Geographic Context Map



1.3 Population and Demographics

There are approximately 4,800 residents living within the Town of Oliver today. Another 4,000 to 5,000 live in the surrounding rural areas accounting for a total services catchment area population of just under 10,000.

The 20-year projections for the Town's population range from 5,000 to 9,400 depending on the source of the analysis. Comparable numbers for the total catchment area (Town and rural residents) range from approximately 9,400 to 14,073. The highest population estimates were projected using growth rates of 3.5% in the 2006 to 2010 interval. Oliver was susceptible to the same economic downturns experienced throughout British Columbia during this period. The actual growth rate was less than 3.5%, and under these circumstances, future growth is expected to trend towards more conservative estimates.

According to the 2006 census, 1,540 of 4,370 or approximately 35% of Town residents were 65 years of age or older. This trend is expected to continue with retirement-age residents making up a substantial and growing segment of the total population.

1.4 Economic Context

A 2006 planning report prepared for the Town of Oliver cited the following:

> *"The Oliver regional economy is driven by the service sector, followed closely by retail and hospitality, reflecting Oliver's role as a retirement and vacation destination. Oliver has become a key regional service centre, providing professional, government and hospitality services as well as a variety of retail, educational and health care services. Tourism is one of the pillars of the Oliver area economy; the Town itself hosts over 100,000 tourists per year."*
>
> *"Rural Oliver is still dominated by agricultural occupations, owing to the south Okanagan's abundant and growing orchards and vineyards. Following a distant second in Rural Oliver is the sales and service sector….."*

The above quote suggests an environment associated with stable and modest growth. There do not appear to be any forthcoming economic changes that would cause the population projections to change dramatically. Oliver is, therefore, somewhat protected from the volatility experienced by larger centres where the younger workforce tends to move to follow opportunities in the local, national and international markets.

One factor that may affect the Town's growth in the near future is the provincial government's January 2012 announcement of its plans to build a major correctional centre in the southern Okanagan. The selected site is located on the Osoyoos Indian Band's land, approximately 6 kilometres north of Oliver. Planning and construction are expected to bolster the region's economy between now and 2016 when the facility opens. Ongoing facility operations are projected to add more than 200 full-time, permanent jobs locally.

Other factors to consider in projecting local and regional population growth include:

- New local residential projects coming on line in 2012
- Reconstruction of the local high school following the fire destruction of the former buildings in 2011
- Resort properties being developed in the south Okanagan
- Rising property prices in areas north of Oliver including in the centres of Vernon, Kelowna and Penticton

Any of these factors could result in more aggressive growth locally and regionally challenging the original assertion of modest population increases. Future planning initiatives would need to include an updated review of population projections before deciding on any project whose success is influenced by the number of people moving into the area.

1.5 Existing Air Transport Infrastructure

The Town of Oliver Airport is one of three airfields located in the southern portion of the Okanagan. The other two are in Penticton and Osoyoos with the former being the only facility accommodating scheduled air services supported by instrument approach and departure procedures. The airfield in Osoyoos consists of a single, paved surface of approximately 2,500' in length. There are no services or other facilities located at the field, which is used exclusively for general aviation.

Given the condition and quality of connecting roadways, Penticton's airport is commonly viewed as the "regional" facility providing travelers air access to the southern Okanagan.

The Kelowna International Airport located approximately 1 hour and 20 minutes north of Penticton's Airport by road also brings air travelers to the southern Okanagan. Travelers making the trip between Kelowna and Penticton by car may or may not continue south to Oliver. There is a perception that Oliver loses many potential visitors every year because of reluctance to make the last part of the journey.

1.6 Airport Development Potential

At the present time the Town of Oliver Airport (the Airport) primarily serves a dedicated core group of local and visiting owners and operators of small aircraft and represents considerable value to this group. The Airport holds marginal appeal/usefulness to the general public except for those occasions when special events and/or displays are scheduled.

The Town of Oliver considers the Airport to have considerable untapped potential to contribute to the economic well-being of the residents of Oliver and the surrounding communities. Some of its key attributes include:

- Proximity to local wineries that are a key source of tourism
- Point of entry for private aircraft arriving from the United States due to geographic proximity
- Easy and affordable access for owners/operators of light aircraft

- Land available for development as compatible revenue-generating properties

Approaching the Town of Oliver Airport from the northwest

2.0 MISSION, VISION, and GOALS

2.1 Mission

From a Town perspective the Airport's mission is to act as a catalyst for change. It seeks to fulfill this role according to the following **Mission Statement**:

> *The mission of the Town of Oliver Airport is to support economic diversity and sustainable, healthy growth of all South Okanagan communities by increasing the number of air travelers and by increasing the number of businesses located at the Airport, in the Town of Oliver and in the surrounding communities.*

2.2 Vision

To achieve this mission means changing the Airport from its current status to something more. The Airport's future state is defined conceptually by the following **Vision Statement**:

> *The vision of the Town of Oliver Airport is to become the premier regional airfield for the South Okanagan providing excellence in services and facilities available to air travelers and aircraft operators and to become recognized as a model for convenient access, cost effectiveness and effective partnerships with the Town's residents and businesses.*

2.3 Goals

In pursing the Vision, the Town and the Airport will be guided by the following goals:

1. Strive to develop and operate the Airport with minimum reliance on public funding
2. Acknowledge and give consideration for legacies created by people and organizations that helped create and maintain the Airport's current status

Over a period spanning years, the South Okanagan Flying Club members have contributed to the Airport's development and maintenance

3. Preserve and support investments made by businesses and organizations currently accommodated on the Airport's site

Self-service fuel dispensing station at the Airport

4. Engage residents of the Town and of the southern Okanagan region in planning for the Airport's future at each stage of development
5. Allow the Airport to evolve in a manner that is respectful of all Town residents, and especially those living close to the Airport and most likely to be impacted by noise

Residential home and aircraft hangars in close proximity

6. Allow the Airport to continue accommodating a variety of functions that encourage site use by pilots, passengers, local businesses and all Town of Oliver residents
7. Operate the Airport as a Town-owned business using stakeholders in the decision-making processes

Recently constructed commercial facilities located in the Airport site's northwest quadrant

Air cadet hangar/facilities located in the Airport site's northeast quadrant

3.0 DEVELOPMENT CONTEXT

3.1 Development Priorities

In order for the Airport to achieve the stated goals and support the intended functions and activities there are a number of features and initiatives that will be required:

- An expanded runway with fully integrated taxiway system and main apron
- Approach and departure features including visual approach systems and published visual and instrument approach/departure procedures
- Hangar facilities in support of general aviation (GA)
- On-site aviation fuel storage and delivery facilities
- Industrial facilities supporting aviation-related businesses
- Terminal building accommodating a variety of functions
- An airport management structure with clearly defined and assigned responsibilities for day-to-day operations and future development
- Ongoing marketing and promotion campaigns aimed at raising awareness of the Airport and attracting businesses and users
- Flexibility to accommodate multipurpose use of the site with a focus on those uses committed to the support of aviation

3.2 Development Feasibility

The Plan includes strategies that will minimize the reliance on locally based public funding. However, the Town will still need to make some initial investments to get the implementation process started. As the key initiatives are implemented in a phased manner, the Airport should begin generating revenues that will support operations and will provide a return on the initial investments. The recommended approach in the Strategic Plan is modeled on a process that was successfully implemented at Langley Airport, with adjustments to reflect the opportunities and constraints of the Oliver context. It envisions a process that will unfold over several years, allowing for adjustments as new opportunities arise.

Given the variety of the proposed development initiatives it is not feasible to assess the potential for success in a rigorous manner. However, the work to date indicates that there are realistic opportunities for the Oliver Airport to attract:

- More private hanger leases

- A regional fuel depot
- Tier 1 businesses (e.g., aircraft repair and maintenance and avionics repair and maintenance)
- Tourist charter and sight-seeing flights
- Airpark residential housing

Although there are no guarantees that investing in transportation facilities will promote economic growth and development, experiences in other communities have demonstrated that a viable airport is adds to, rather than detracts from, economic growth and development.

4.0 DEVELOPMENT GUIDELINES

4.1 Planning Assumptions and Understandings

The location of the existing Airport is both an asset and a liability. Its close proximity to the Town's centre makes it an ideal arrival and departure destination for air travelers accessing nearby amenities. This same feature, however, puts air traffic and its associated noise and increased vehicular traffic, in very close proximity to residential communities and businesses. While taking advantage of the Town access feature, any development must be cognizant of each person's right to the quiet enjoyment of their property and take the necessary steps to protect this right.

Assuming continued functioning as an airfield, a number of improvements would be needed to accommodate the proposed functions and activities. The following guidelines were established during study discussions to ensure that future development is carried out in a way that recognizes the opportunities and constraints associated with the site:

- Achievement of any future plan will not require acquisition of new land
- Retain current north-south alignment of the runway
- No additional or cross-runways are to be considered
- The Airport's "public face" should continue to be oriented on the site's western perimeter with a clearly identified main entrance/general site access point
- Development along the Airport's western perimeter should be compatible with land uses immediately opposite across Airport Street
- The recent commercial development in the Airport's north-west quadrant will remain and future commercial development should be located in this sector of the site
- Provide on-site accommodations for the local Air Cadets Squadron and the local civilian search and rescue (SAR) organization in their current or alternative locations
- To allocate as much Airport property as possible to revenue generating uses, use the municipal road system that surrounds most of the site for vehicle movement around the Airport *(Maximum benefit of this concept would be realized by completing the perimeter road loop by extending Cessna Street south to Road 1)*
- Upgrade runway and taxiway facilities to improve safety and efficiency for all aircraft movements
- Ensure appropriate site security and access controls for proposed uses

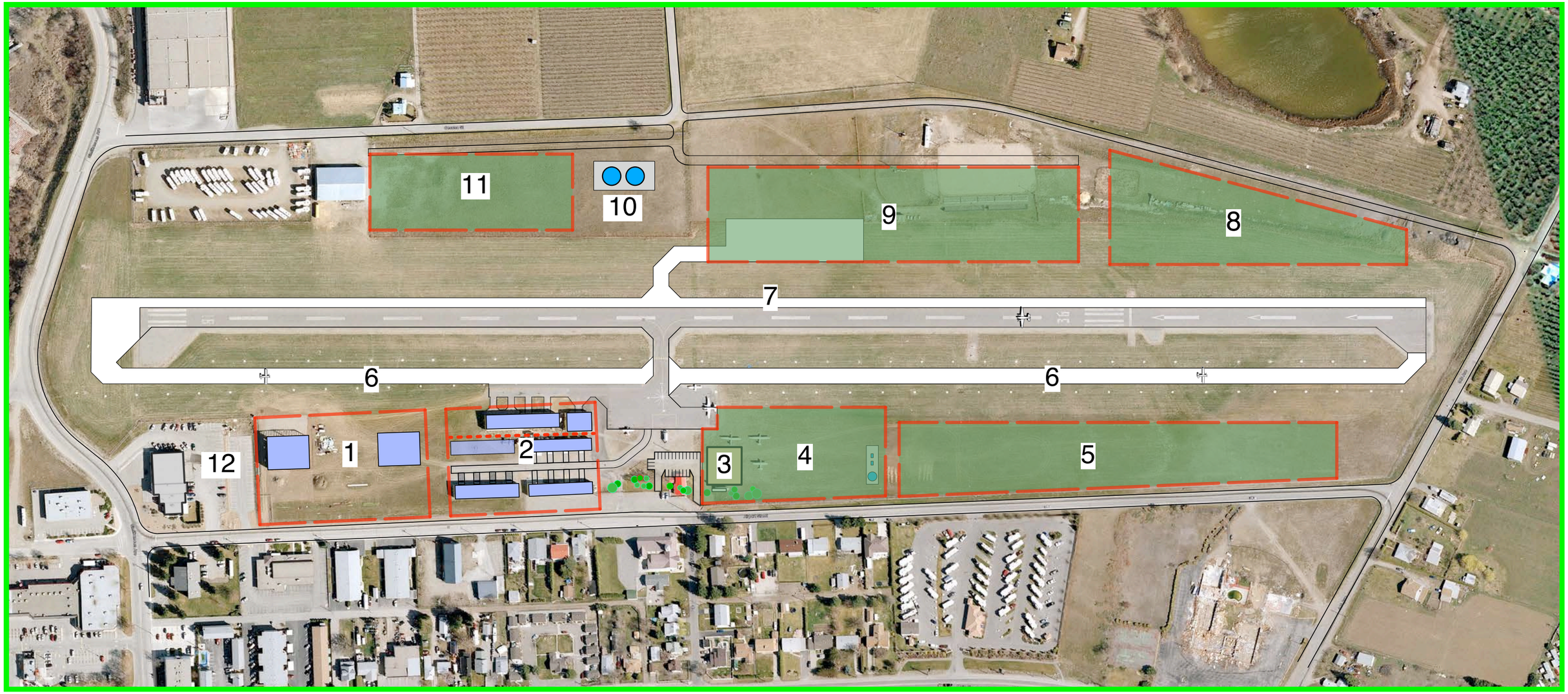
5.0 PROPOSED MASTER PLAN

5.1 Components of the Plan

Based on the Development Priorities identified in Section 3.1, the Airport Master Plan envisions six major development components:

- Runway, Taxiway and Apron Rehabilitation
- General Aviation (GA) Hanger Rehabilitation and Expansion
- "Main Gate" - Public Main Entrance Development
- Terminal Building Development
- Mixed Development *(Including options for aviation related light industrial development, residential airpark development and combined live/work facility development)*
- Instrument Approach and Departure Procedures Design and Development

The site plan on the following page illustrates a functional arrangement of these components on the site in a way that respects the Development Guidelines noted in Section 4. The site plan concept represents what the site might look like when fully developed. While the specific shape and orientation of buildings and structures will not necessarily be constructed as shown on the plan, the Master Plan can serve as a guide for maintaining a functional and logical land use pattern with a viable security perimeter as shown on the second site plan drawing.



Legend

1. Existing Aviation Support Industry

2. Existing G.A. Hangar Complex (Option 1- Retain and reuse with maintenance as required, Option 2 - Retain eastern-most line of hangars only with replacement/expansion facilities in the southeast quadrant Area 9, Option 3 - Demolish and replace/expand in southeast quadrant Area 9)

3. New Terminal Building (Estimated total building area of approximately 10,000 square feet on 2 levels with adjacent prepared surface parking lot)

4. Improved Main Apron (Includes transient parking/tie-down area, fuel dispensing facilities and night security lighting)

5. Potential Mixed Use Development Area (Potential uses include: 1. Light Industry, 2. Residential Airpark, 3. Live/Work Accommodation)

6. Taxiway Enhancement and Expansion (Includes: 1. 35 foot wide taxiway providing access to both thresholds and the runway centre point, 2. Taxiway lighting in accordance with industry standards)

7. Runway Widening, Lengthening and Resurfacing (Includes: 1. Increasing existing runway width from 50 feet to 75 feet, 2. Adding approximately 200 feet to the runway's north end, 3. Resurfacing entire runway, 4. Installing runway lighting and visual approach systems for both approaches in accordance with industry standards)

8. Potential Light Industry Development Area

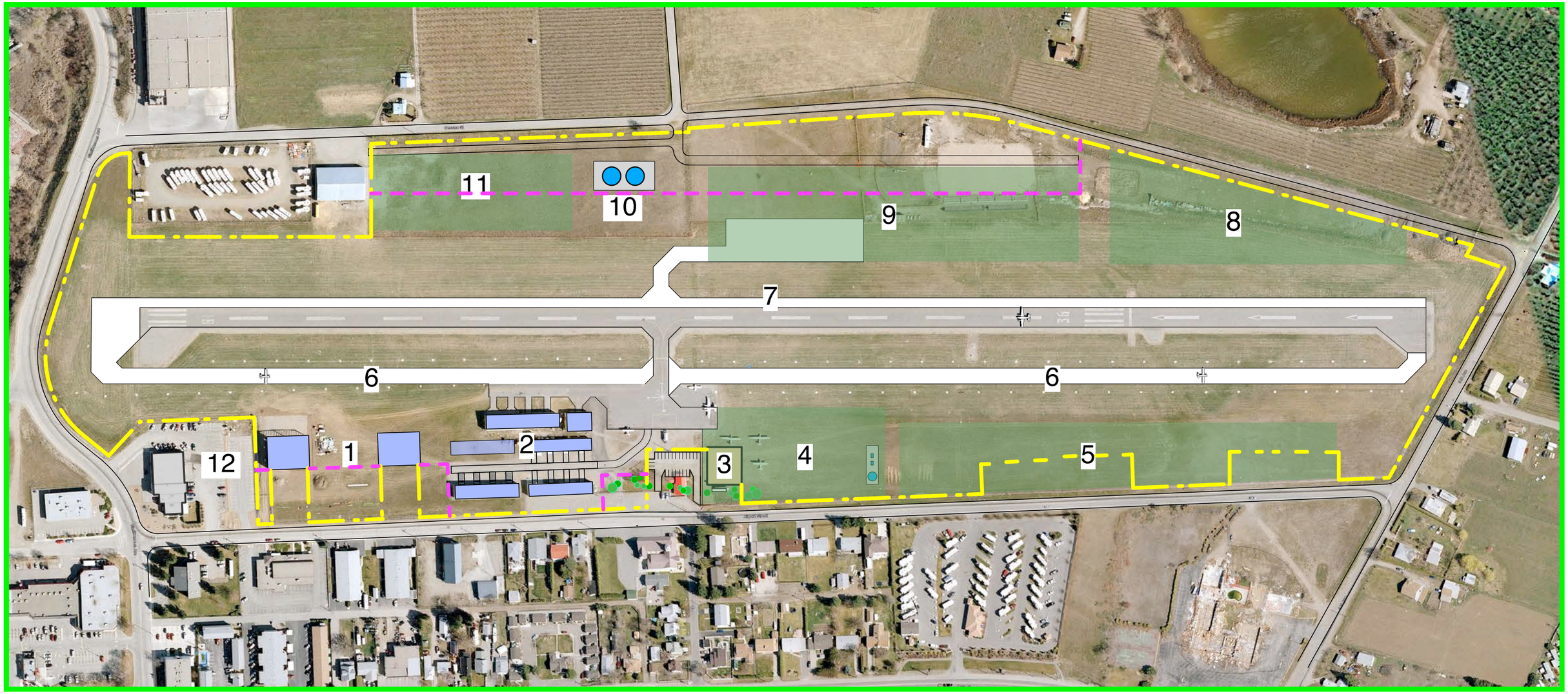
9. Potential G.A. Facility Replacement/Expansion Area

10. Proposed Fuel Depot Location (Includes 1/4 acre site accommodating 2, 100,000 litre fuel storage tanks and tanker truck circulation)

11. Potential Light Industry Development Area

12. Existing Firehall

Drawing No: SK-01	Drawing: Proposed Plan	Project: Town of Oliver Airport Strategic Plan	CORNERSTONE
Project No: 1133	Date: 10 May 2012		



1. Perimeter Fence
2. Air Side / Ground Side Barrier

Drawing No: SK-01	Drawing: Proposed Plan - Fencing Scheme	Project: Town of Oliver Airport Strategic Plan	CORNERSTONE
Project No: 1133	Date: 10 May 2012		

5.2 Runway, Taxiway and Apron Rehabilitation

Key to achieving the vision and to the Airport's long-term survival is a movement network allowing for the safe operation of arriving, departing and taxiing aircraft. The focus of this network will be an expanded runway. It is recommended that the existing 50' width be extended to 75' by adding to the existing runway's eastern edge. The runway's overall length can be increased by approximately 200' at the north end. Repairing and resurfacing would be part of this comprehensive project.

Examples of runway surface condition – open and sealed cracks

The existing runway is approximately 3,200' overall paved length. This entire surface is not available to northbound arriving aircraft due to higher terrain south of the Airport. The runway's south end threshold is displaced by 700' to accommodate a normal descent angle and obstacle clearance to a designated touchdown zone. The paved surface south of the displaced threshold is still available for northbound departures and rollout of southbound approaches. Adding 200' in length would result in a paved surface of approximately 3,400' for northbound departures and southbound arrivals and departures. Northbound arrivals approaching from the south would still be faced with the displaced threshold, but the available runway would be increased to approximately 2,700'.

Specific parameters around the "maximum" size of aircraft eligible to use the lengthened runway cannot be cited due to each aircraft having a unique set of performance specifications. Wind strength/direction, density altitude and aircraft weight are key variables that determine a runway's suitability for a given aircraft. Pilot proficiency and technique also play a vital role in an aircraft's ability to use a particular landing and takeoff surface.

In general terms, lengthening and widening the existing runway would add to operational safety; more surface area increases

the likelihood that aircraft will remain within the runway parameters under a variety of handling conditions. The nature and extent of the proposed runway expansion also would increase the Airport's operational capacity. Compared to the size and type of aircraft currently using the Airport, the proposed future facility would accommodate larger aircraft and more types.

A taxiway complex is recommended to run parallel to the runway's western edge. The taxiway would be 35' wide and would connect at each runway threshold and at the existing mid-length intersection. If a GA hangar complex evolves on the site's southeast quadrant as proposed in the Master Plan, a second taxiway would be required to connect east side traffic to the main west side taxiway.

All runway and taxiway lighting would be installed to Transport Canada standards. There is currently a visual approach lighting system (PAPI) for Runway 36; in the future, it is recommended that a comparable facility be installed for Runway 18.

A final feature in this rehabilitation project is an enhanced main apron. This area would be located to allow for an adjacent terminal building, and would accommodate passenger (un)loading, designated tie-down areas for transient parking, fuel dispensing station and helipad for transient helicopter traffic. The apron area would be equipped with night lighting eliminating "black holes" and creating a safe, secure area for parked aircraft and night operations.

5.3 General Aviation Hanger Rehabilitation and Expansion

The existing GA hangar complex is well used and is valued by the current private aircraft owner/operator tenants. In the short term it is assumed that existing GA hangars located on the site's northwest quadrant would remain with capacity estimated at approximately 22 light aircraft. As these structures reach the end of their useful lives, the Town could either elect to retain and refurbish these to a consistent building standard, or could vacate and demolish these buildings in favour of a new complex located in the southeast quadrant as shown on the proposed Master Plan layout.

Existing general aviation hangars showing variety of building standards, finishes and conditions

Demolition of the existing GA hangars could be phased, as the eastern-most line of hangars is relatively new and modern. Even a partial demolition strategy that preserves the newest of existing GA hangars would create development potential for more light industrial facilities in the already established northwest commercial sector. The proposed southeast location would allow for expansion as the demand for these facilities increases.

If all existing hangar complexes are eventually vacated and demolished, capacity for GA hangars could at least double by using the proposed new southeast location.

5.4 “Main Gate” - Public Main Entrance Development

Installing signage, landscaping and a parking area early in the Airport’s evolution will define the main entrance "gateway" and help to convey an image of “being open for business” and for many types of users, not just aircraft owners and operators. The appearance of the parking lot can be enhanced by using “green” permeable features like open joint paving stones or turf grid surfaces. The location for the new entrance suggested on the Master Plan is approximately the same as the current entrance.

Examples of permeable paving:

Open joint pavers

Porous asphalt

Pervious concrete

Turf grid

5.5 Terminal Building Development

Air travelers have come to expect a certain level of service when arriving at and departing a destination. A terminal building accommodating multiple services is among these expectations. As Airport use increases, it is recommended that the Town invest in the planning, design and construction of a terminal building that would offer:

- Passenger greeting/congregation area
- Baggage sorting/handling area
- Canada Border Services Agency reporting station and passenger screening room
- Washroom facilities
- Pilot lounge/flight planning station
- Southern Okanagan Flying Club Room/Office *(**Note:** Accommodation for the Southern Okanagan Flying Club is proposed to recognize this organization's long-standing history with the Airport and for contributing to the Airport's development, operation and upkeep over many years.)*
- Restaurant/cafeteria
- Access to rental cars and regional accommodation shuttle services

Example of a small, regional airport terminal building

In addition to accommodating people-centered functions, the terminal building acts as a key barrier between groundside and airside operations. The building should be contiguous to the apron area, transient parking/tie-down area and fuel station.

Unlike other on-site facilities, it is recommended that the terminal building be a Town-owned asset. Planning, design, construction and operating costs will be assumed by the

municipality. Offsetting revenue would come from lease/rent payments and fees from tenants and users.

As it will be one of the most modern municipal-owned facilities in the area, it is recommended that consideration be given to building the terminal to post-disaster standards. If this approach were adopted the Terminal building could serve as the command/dispatch centre for combined disaster response services.

5.6 Industrial Support Development

A key goal of the strategic plan is to attract aircraft owners and operators and other businesses. To support the anticipated increase in on-site activity, two key facilities have been included in the Master Plan.

Fuel Depot

The fuel depot would serve as the storage site for aviation fuels delivered throughout the southern Okanagan. There is a regional need for this type of facility to supply the Airport's fuel dispensing station as well as other dispensing stations located at other southern Okanagan airfields. Based on preliminary inquiries, a private fuel supply company indicated interest in locating this type of facility at the Oliver Airport. An area of approximately ¼ acre would be required for two 100,000 litre tanks (AVGas and Jet fuel) and the associated tanker truck maneuvering area. The proposed location for this facility is in the site's northeast quadrant with access off the intersection between Cessna Street and Elliot Road.

Outdoor Storage Compound

The compound would provide secured, temporary storage of large, unused items. This type of facility is necessary to avoid the unsightly clutter that can accumulate around industrial areas. This will enable the Town and the Airport to maintain a professional appearance that will help to attract businesses and will also generate revenue from storage rental fees. A location in the site's northeast quadrant adjacent to the proposed fuel depot would be appropriate.

5.7 Mixed Use Development

The Airport site's southwest quadrant is undeveloped, and currently accommodates seasonal crop foraging. The development potential for this portion of the site is deemed to be high. It benefits from access to Airport Street, which runs parallel to the site's western perimeter, and is serviced by utility lines coming onto the property. The location and configuration of this land makes it appropriate for a variety of uses including:

- Light Industry *(May or may not be aviation related*

depending upon terms of reference adopted by the Town)

- Residential Accommodation (Airpark)
- Combined Live/Work Accommodation

Industrial development offers benefits in to the Town in the form of business and property taxes and by introducing new jobs into the local economy.

Airparks are becoming more prevalent at Canadian airfields, especially in smaller communities where people are attracted because of lifestyle choices. This type of development allows private aircraft owners to store their airplanes in close proximity to their house. It is similar in principle to the idea of avid golfers having townhouses on golf courses.

The last option of live/work accommodation is essentially a blend of light industry and residential accommodation. It offers business owners a place for conducting their operations as well as a place to live. This and the previous airpark option offer the added benefit of enhanced site security by having people on site 24/7.

Opposite and Below: Samples of airpark community layout and residences

The Master Plan shows Mixed Use Development in the southwest quadrant of the site along Airport Street. The nature and extent of land use in this area will ultimately be determined by a business case analysis. Regardless of the decision(s), it will be important for future planning initiatives to acknowledge that the western perimeter is the Airport's "public face." How it looks and how it interfaces with commercial and residential property across Airport Street will be key factors in determining the overall image portrayed by the Airport. This strategic plan recommends development that respects and enhances the community feel in this neighbourhood. Any development should also address the planning principle of the Airport appealing and being of value to all Town residents.

The Master Plan allows for additional light industry development in the site's southeast quadrant. This option allows for expansion if demand for industrial space exceeds available land in the southwest quadrant. Another option would be to use these two parts of the site to separate residential and live/work accommodation from an industrial zone.

5.8 Instrument Approach and Departure Procedures Design and Development

There are arguments both for and against incurring costs to design, develop and implement instrument procedures for the Oliver Airport. There are a limited number of days on which arrivals would benefit from having an instrument approach, and the surrounding terrain imposes relatively high approach minimums. However, that instrument procedures improve safety is a fact cited by pilots, air operators and regulatory agencies. At the moment, the only option for pilots arriving at the Oliver Airport in weather below visual flight rules (VFR) limits is to conduct an instrument approach at Penticton, obtain visual contact with the ground, and providing conditions at that point remain above VFR limits, proceed to Oliver under VFR.

Another consideration is that airports offering instrument procedures convey a different impression or perception. They become part of the group of airports viewed as capable of supporting “professional”, commercial operations. In essence they offer the potential to attract a different category of user.

Considering the Town of Oliver Airport’s aspirations to evolve into a regional facility with capabilities of attracting charter operators, this strategic plan recommends investment in GPS-based approach and departure procedures. A key incentive supporting this recommendation is the absence of any ground-based technology supporting this feature; there is no equipment to purchase, install nor maintain. Everything required to use the procedures is onboard an aircraft. Beyond initial design, development and implementation (publishing) costs, there are no ongoing expenditures associated with this feature.

6.0 PROPOSED ACTION PLAN

6.1 Airport Management Structure

The Airport is owned by the Town of Oliver, and it has, over the years established both formal and informal affiliations with the site's key users, namely private aircraft owners/operators, aviation industry tenants, the South Okanagan Flying Club and those responsible for aviation fuel supply and dispensing. Owing to the variety of relationships the Town has with site users, there is variety in the extent to which these relationships generate revenues and expenses for the Town. Another complication is the lack of clear accountability and responsibility, which could prove costly in the event of a critical incident.

As the Town moves forward with the proposed Master Plan, the Airport becomes a business. As such, it will no longer be feasible to operate informally with any of the site's users. Formally assigning responsibility and authority for the Airport's future is a vital step towards ensuring that a plan is in place, that the plan is being followed actively and that the plan is a "current" reflection of the Town's goals and objectives.

It is strongly recommended that an Airport management structure be established at the earliest possible date. The body or individual responsible for management should ideally report directly to the Town's senior administration. The responsibilities of the Airport administration would include:

- Recommending and setting fees and prices
- Recommending policies and procedures to Municipal officials and administering these on the Town's behalf, including development, implementation and enforcement of noise abatement procedures (NAP) governing aircraft operations in the local area
- Administering lease agreements
- Managing on-site fuel sales to aircraft operators
- Collecting revenues and paying expenses
- Establishing standards for all on site facilities
- Coordinating site and facility development
- Acting as liaison between the Municipality and other levels of government, funding sources, Nav Canada, Transport Canada, citizens, and airport users

6.2 Communications

Effective marketing and communications will be critical to achieving the goal of becoming a viable, small scale, regional

Priorities

facility. Two initiatives have been identified as short to medium term priorities.

Marketing Campaign

The Airport does not have a high profile within the Town or the region. It is generally associated with the activities of the Flying Club and the site of periodic seasonal fairs. Transition to the new image envisioned by the Master Plan will require an active and dynamic approach. “Word of mouth” will help spread news about the Airport’s vision and plans for change. But this method is relatively slow and limited in its sphere of influence. Advertisements and notices at trade fairs in key locations around the region and in professional publications offer more targeted, widespread promotion. Making some physical changes on the site will also signify that something is happening and that the Airport is "open for business"

Branding Campaign

Involving the community in the transformation of the Airport is an evolutionary process that can begin with relatively simple and inexpensive initiatives such as:

- School competitions for naming the airport, developing a slogan or designing a new logo,
- Airport posters being displayed in local businesses,
- Artwork created by local artists and students depicting the future Town of Oliver Airport or aviation in general, and displayed at venues around Town (e.g., open houses, shopping mall, or at the Airport site during construction projects).

Once a management structure in place, managing, promoting and branding the new Town of Oliver Airport will be ongoing with evolving development initiatives.

6.3 Site Surveys

It is important to establish a well-documented understanding of the site and surrounding airspace to inform planning and design. Inaccurate and/or incomplete data will compromise the ability to make effective decisions and can lead to costly mistakes.

It is recommended that the Town update site and aerial surveys to fully define site perimeter, dimensions, lot lines, service/utility lines, elevations, existing structures, soil conditions and obstacles and terrain affecting arriving, departing and circuit traffic.

It is possible to conduct surveys as they apply to specific projects. However, this will not provide the comprehensive overview that is required at the early planning stage. This

approach can also be more expensive than conducting the full set of up-front surveys.

6.4 Proposed Development Initiatives

Implementing the seven proposed developments described in Section 5 will involve a number of discrete projects. The pace at which these projects can be undertaken will depend to a large degree on funding and financing factors. However, some projects will not be practical until the runway, taxiway and apron have been upgraded and expanded. The following chart described these projects and the rationale for the proposed sequence.

PROJECT NUMBER/ NAME		DESCRIPTION	RATIONALE FOR SEQUENCE
Before Runway Expansion			
1	**Airport Management Structure**	Formally establish an Airport Management structure and assign responsibility	Successful implementation of the proposed Master Plan will require focused coordination by a person or body with an authorized mandate. This should to be in place as early as possible.
2	**Communications Plan**	Establish an approved communications and marketing strategy.	Community support and business interest will be necessary if the Airport is to fulfill its desired role. Based on referenda research conducted by Cornerstone, initiating early consultation at enhances the chances of success.
3	**Airport Land, Geotechnical and Aerial Surveys**	Complete surveys of the Airport property, on-site utilities and services, soil composition and condition and surrounding airspace, including topographical survey for obstacle clearance analyses.	Having accurate information available early in the process puts the Town in a stronger position when negotiating with potential partners and investors. The risk of estimating errors is also reduced.
4	**Instrument Procedures Design, Development and Implementation**	Design and publish instrument approach and departure procedures for the categories of aircraft capable of using the Airport.	The timing of this project can vary, but timing to get an instrument approached fully approved and implemented can be as long as 2 years. It is recommended to proceed with instrument procedures planning early, and based on understandings about the future runway/thresholds.
5	**Main Gate Project**	Develop a formal site main entrance with landscaping, signage and prepared parking surface for approximately 15 – 20 vehicles.	This undertaking could provide a relatively inexpensive means of signifying to the community and potential investors that the Airport development project is indeed underway.

PROJECT NUMBER/ NAME		DESCRIPTION	RATIONALE FOR SEQUENCE
Before Runway Expansion (continued)			
6	**Security Fencing**	Fencing is required to separate groundside from airside operations, and to provide perimeter security to keep people and animals from entering the area and endangering themselves or aircraft.	As the Airport develops, it is recommended that fencing be either installed or upgraded in a manner that makes sense for any given project. This means that the final fencing scheme would be developed over time, but at no time would security be less than what it is today
Runway Expansion			
7	**Main Runway, Taxiway, and Apron**	Increase width of existing runway from 50' to 75', increase length by approximately 200' and bring all surfaces to consistent standard. Develop 35' wide taxiway parallel to western edge of runway with intersections at each threshold and at the runway's midpoint Develop main apron area complete with transient parking area, tie-down area, passenger (un)loading area, helipad and fuel dispensing station	A larger runway, taxiway and apron are all critical to achieving the Airport vision. The sooner this work can be completed the easier it will be to attract investors and businesses. Note that this project could be undertaken in 3 steps to accommodate funding availability. The first priority would be to lengthen and widen the runway as specified. Taxiway development could occur in 2 phases with the north end taxiway being the first scheduled for development.
After Runway Expansion			
8	**Industrial Support Development**	Plan, design and build a fuel depot accommodating two 100,000 litre tanks and maneuvering area for tanker trucks	There appears to be some interest within the fuel supplier industry to locate a depot in Oliver. If a suitable development agreement could be reached it would provide a strong signal that the proposed Airport is a viable concept.
9	**General Aviation Hangers**	Plan, design and build a GA hangar complex for approximately 20 – 25 light aircraft in modules of 4 – 6 aircraft accommodated per module.	The timing of this project will depend to some degree on the level of interest generated by the consultation and marketing programs. Developing in modules allows the supply to keep pace with demand for these facilities.

PROJECT NUMBER/ NAME		DESCRIPTION	RATIONALE FOR SEQUENCE
After Runway Expansion (continued)			
10	**Industrial Area Support Development**	Plan, design and build a storage compound according to the following specifications: 670 square metres fenced holding area with prepared surface and secured access accommodating approximately 20, 3 metre X 4 metre open storage bays and forklift compatible maneuvering area.	This relatively low cost project would logically be undertaken in conjunction with development in the industrial and/or GA hanger projects.
11	**Terminal Building Development**	Plan, design and build an approximately 930 square metre multipurpose terminal building.	The timing of this project will depend to some degree on the rate of progress in attracting charter flight operators.
12	**Mixed Use Development**	Set aside property in the site's southwest quadrant to accommodate business premises, residential lots or work/live accommodation with associated support facilities for light aircraft parking.	The timing, nature and extent of this project will depend to some degree on the level of interest generated by the consultation and marketing programs.

7.0 PRELIMINARY COST ESTIMATES

7.1 Schedule of Project Costs

The following table presents a high level analysis of each of the proposed development initiatives and a proposed funding strategy.

	PROJECT NUMBER/NAME	ESTIMATED COST	FUNDING STRATEGY
Before Runway Expansion			
1	**Airport Management Structure**	Variable - contingent upon conditions of employment (contract or municipal employee)	Funded from Town budget until Airport revenue is sufficient to cover costs. Removing existing functions from the Town Manager's position and assigning these to a lower pay grade and/or part time position may achieve net cost savings.
2	**Communications Plan**	Variable - contingent upon nature and extent of marketing and promotional activity and use of media	Funded from Town budget until Airport revenue is sufficient to cover costs. Could become integrated with a larger, Town-wide communications portfolio of which the Airport is a portion.
3	**Airport Land, Geotechnical and Aerial Surveys**	$5,000 to $6,000 excluding taxes and reimbursable expenses	Funded from Town budget.
4	**Instrument Procedures Design, Development and Implementation**	$12,000 - $20,000 Cost will vary depending upon the nature and extent of the initial land and aerial surveys (see Project #3). If comprehensive in nature and extent, the total cost range would reduce to $12,000 - $15,000.	Initially funded from Town budget, offset later by Airport user fees.
5	**Main Gate Project**	$55,000 to $60,000	Initially funded from Town budget, and offset later by Airport revenue.
6	**Security Fencing**	$56 per linear metre	Initial stage funded from Town budget with subsequent stages included in specific project budget.

PROJECT NUMBER/NAME		ESTIMATED COST	FUNDING STRATEGY
Runway Expansion			
7	**Main Runway, Taxiway, and Apron**	$1.1 million	The provincial government is expected to reintroduce its Transportation Partnership Program (TPP) which assists airports in funding safety-based infrastructure development and refurbishment. The TPP could fund up to 1/3 of the total project cost with the remaining 2/3 costs shared between the Town and Airport operating revenues.
After Runway Expansion			
8	**Industrial Support Development - Fuel Depot**	$0	Costs to be assumed by owner/operator of the fuel depot .
9	**General Aviation Hangers**	$0	Designated land parcels could be leased to hanger clients. Structures would be built by the Airport according to a common set of standards, but wholly owned by the client.
10	**Industrial Area Support Development - Storage Compound**	$60,000	Initially funded from Town budget, and offset later by Airport revenue.
11	**Terminal Building Development**	$3.7 million	Initial costs to be assumed by the municipality with future offsets from Airport revenues (tenant rental and user fees). This cost is inclusive of HST and related architectural and engineering fees, but exclusive of equipment and service/utility relocation costs.
12	**Mixed Use Development**	$0	No cost to the Town if development is undertaken by a private builder/developer who would initially assume responsibility for all leases. Upon construction and sale, leases would then be transferred to homeowners and business owners who would make lease and tax payments to the Town.

7.2 Estimating Assumptions and Comments

Unless noted, all costs are exclusive of taxes and reimbursable expenses.

With regard to the runway/taxiway/apron rehabilitation, this total project could be broken down into multiple phases: 1) runway expansion (lengthening and widening), 2) taxiway development (north and south portions being completed either concurrently or separately and 3) apron development. While this strategy may reduce the initial, up-front costs, having a contractor back on repeated occasions for site preparation and paving, plus the escalation due to inflation would likely increase the total budget. A single project is recommended subject to the financial resources of the Town and contributing funding sources.

8.0 NEXT STEPS

8.1 Next Study Steps

Comments and suggestions from the PAG and the PSC, in response to a first draft of the final document, were incorporated into this final edition. This represents the PSC's recommendation to Council.

In addition to posting a report summary on the web site, the Town will host an open house presentation to update the community on the outcome of the study.

8.2 Using this Strategic Plan

The information in this report has a shelf life. Its expiry date is uncertain as it responds to local, provincial, national and international events that have a direct impact on local conditions. How frequently this document needs review depends, to a large extent, upon the volatility of the environment(s) that affect the Town of Oliver generally and the Airport specifically.

It is important that readers and users of this report view it as a "living document." It illustrates just one of an infinite number of potential futures, each one with its own degree of feasibility. The recommended plan is considered highly feasible given current conditions and understandings about the future. Events occurring after the study's completion can lead to conditions that alter our view of the future substantially. Our changing perceptions argue for close and regular reviews of this report's information testing the hypothesis that it is a valid guide to a future that is still desirable and preferred.

The Strategic Plan presented in this document is a concept. Transitioning from conceptual to physical will be at the Town's discretion and only after the concept has been adopted in principle. With the plan in place, it will be up to the Town to decide on the earliest development priority or priorities. A business case can then develop around a proposed project, or phase of a project. This will be the opportunity to begin detailed analyses of potential benefits, liabilities, costs/expenses and revenues/cost recoveries.

Appendices

A: Study Process

B: Analysis of Tier 1 Business Proximity

APPENDIX A: STUDY PROCESS

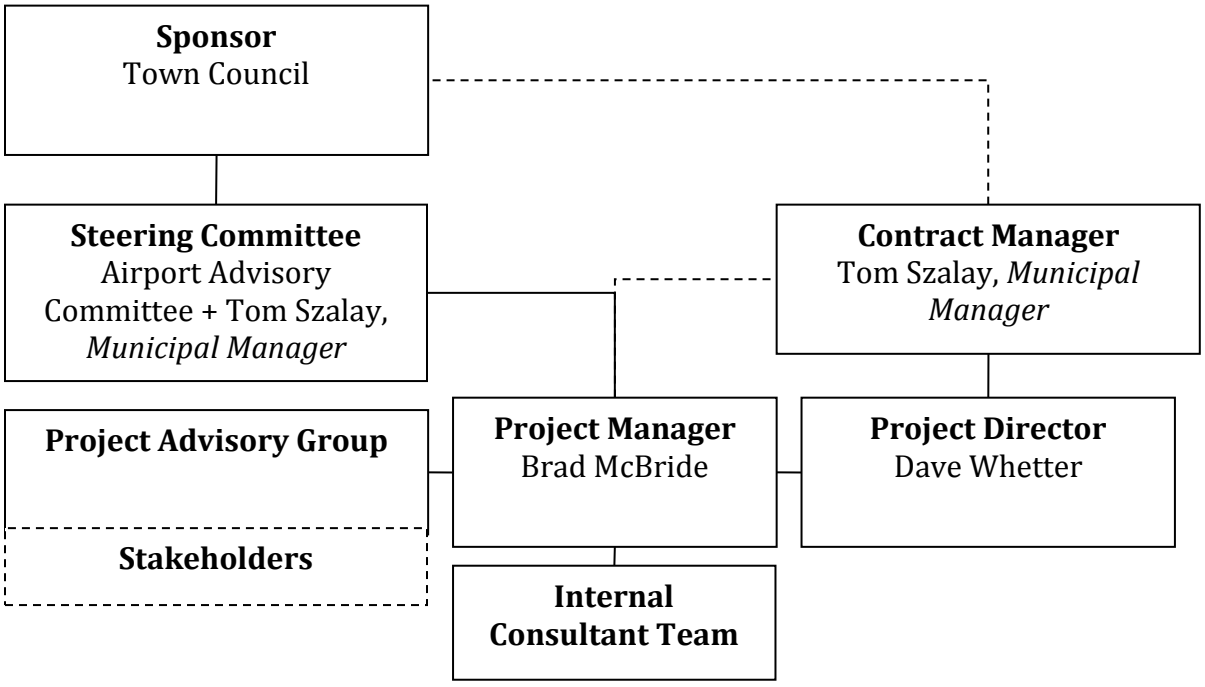
The Town of Oliver Airport Strategic Plan project was conducted over a period of 10 months, from July 2011 through April 2012. This appendix illustrates the context in which the project was conducted. Key people and groups used to collect information/ data and to help draw conclusions and make recommendations are identified as are key milestones.

PROJECT ORGANIZATIONAL STRUCTURE

The Town's Council, mayor and council members, hold ultimate accountability for this Town of Oliver Airport Strategic Plan project. Acceptance of this document as a valid plan and all future decisions about the Airport's development are within Council's scope of authority and responsibility. Three key working groups that were responsible for developing all project-related information were:

- Project Steering Committee (PSC)
- Project Advisory Group (PAG)
- Internal Consultant Team

The following organizational chart illustrates reporting relationships among the working groups.



Terms of reference and membership for each of the working groups are contained below.

Project Steering Committee (PSC)

The function of the PSC is to take responsibility for the business issues associated with the Strategic Plan phase of the Oliver Airport Improvement Project. The PSC is

responsible for approving budgetary strategy, approving scope and schedule changes, and monitoring risks, quality and timeliness.

The role of the PSC is to:

- Take responsibility for the project's achievement of outcomes
- Ensure the project's scope aligns with the requirements of the stakeholder groups
- Provide those directly involved in the project with guidance on project business issues
- Ensure effort and expenditure are appropriate to stakeholder and sponsor expectations
- Address any issue that has major implications for the project
- Keep the project scope under control as emergent issues force changes to be considered
- Reconcile differences in opinion and approach, and resolve disputes arising from them
- Report on project progress to the project sponsor (Oliver Town Council)
- Take on responsibility for any cross-jurisdictional issues associated with the project

PSC Membership:

- Graham Jenkinson, Chair, Airport Advisory Committee
- Jack Bennest, Councilor
- Marueen Doerr, Councilor
- Olivier Combret, Owner, VMR Aviation
- Tom Szalay, Municipal Manager
- Ron Hovanes, Mayor (November 2011 – Present) Ex Officio
- Patrick Hampson, Mayor (August – November, 2011) Ex Officio

Project Advisory Group (PAG)

The function of the PAG is to assist the project team and the PSC with development of the strategic plan by identifying directions, issues, constraints and opportunities to be considered by the project team. The advisory group will also serve as a sounding board for ideas and plans before taking them to a more general audience.

The role of the PAG is:

- To engage key players in the community in the learning process of the strategic planning project
- To identify opportunities, issues and concerns related to the project
- To provide advice to the project team and the steering committee as requested

PAG Membership:

- Beth Garrish, President, Oliver Tourism Association
- Bill Michael, Regional District of Okanagan Similkameen
- Bonnie Dancey, Manager, South Okanagan Chamber of Commerce
- Calvin Craik, Town of Oliver Residents

- Christine Lynn Hewitt, Local Businesses, Commercial Insurance Broker / Town of Oliver Residents
- Jim Newman, Community Development Manager, Town of Osoyoos
- Jim Wyse, Burrowing Owl Winery / South Okanagan Wineries Association
- Olivier Combret, VMR Aviation, Airport Commercial Tenants
- Ron Casorso, Oliver Rural Area Residents
- Shawn Goodsell, Director of Operations, Town of Oliver
- Steve Bryson, Oliver Indian Band Tax and Land Manager
- Ted Ellen, Town of Oliver Residents
- Vic Seder, President, South Okanagan Flying Association / Recreational Users and General Aviation

Internal Consultant Team

The Internal Consultant Team is comprised of strategic and facility planning specialists and specialized consultants from the aviation industry. The function of this team is to assimilate information received from project stakeholders with industry-based knowledge and forecasts, and then to develop recommendations based on this analysis.

The role of the Internal Consultant Team is to:

- Assemble and analyze data related to the Town and the southern Okanagan
- Receive input and document deliberations of the PAG and members of the general public
- Make recommendations to the PSC based on public/PAG input and on specialized knowledge in the aviation industry

Internal Consultant Team Membership:

- David Whetter, Partner, Cornerstone Planning Group, Project Director
- Brad McBride, Senior Associate, Cornerstone Planning Group, Project Manager
- George Miller, Airport Facilities and Operations Consultant, Manager, Langley Regional Airport
- Marinus Waterberg, Airspace and Operations Consultant, Owner and Lead Designer, Direct Approach Consulting Inc.
- Melanie Roskell, Cornerstone Planning Group, Business Analyst

PROJECT TIMELINE – KEY EVENTS AND DATES

Project Initiation..... July 2011
Contract for the Town of Oliver Airport Strategic Planning Project awarded to the consultant team led by Cornerstone Planning Group

Internal Consultant Team Meeting #1 ..... July 2011
A first meeting of the consultant team reviewed the project's requirements, proposed timeline, data requirements and next steps.

Town of Oliver Airport Site Visit..... August 2011
Members of the Internal Consultant Team, George Miller and Brad McBride, visited the

Airport to develop an understanding about the conditions of existing facilities and services and to begin assessing the site's potential for development

Project Steering Committee Meeting #1 ..... September 2011
The focus of this first meeting was to review the overall approach to the project, and to discuss terms of reference for a workshop to be conducted with the PAG.

Project Advisory Group Meeting #1 ..... September 2011
Building on early planning work conducted in 2010, key outcomes of the workshop were: 1) a recommended definition of the Airport's future status in terms of the nature and extent of services to be accommodated on site, 2) mission and vision statements for the Airport and 3) recommendations for integrated solutions pairing the Airport's development with that occurring in the Town and in surrounding communities.

Public Consultation/Open House ..... October 2011
This event held in Oliver was the public's opportunity to comment on the proposed vision for the Airport's future and to make any recommendations for facilities or services.

Project Steering Committee Meeting #2 ..... November 2011
Results of the public open house were reviewed and the PSC gave its approval to proceed on the basis of recommendations received to date.

Internal Consultant Team Meeting #2 ..... November 2011
A "gap analysis" was conducted by the consultant team to identify missing components from the current Airport site. These omissions were to become the focus for strategic planning by identifying priorities for future development.

Project Advisory Group Meeting #2 ..... December 2011
Conclusions and recommendations drawn from work completed to date, including all workshops and the public open house, were reviewed, edited and/or confirmed with the PAG.

Site Visit – Langley Regional Airport ..... December 2011
Town of Oliver representatives visited Langley BC to witness development occurring at the Langely Regional Airport and to understand the role and scope of services that can be accommodated at a facility comparable in scale to that of the Town of Oliver Airport.

Project Steering Committee Meeting #3 ..... January 2012
The Airport's mission, vision and the components needed to achieve these were reviewed in detail. With the PSC's approval in principle, the internal consultant team began compiling a physical plan that articulated the desired future.

Internal Consultant Team Meeting #3 ..... February 2012
A physical plan and implantation strategy were developed showing how the Airport site could evolve over time. Associated costs and potential funding sources were included in the plan.

First Draft of Final Document published ..... April 2012

Approval in Principle for the Strategic Plan by the PAG and PSC..... April 2012

Presentation to Town Council and Final Public Consultation ..... May 2012

APPENDIX B: ANALYSIS OF TIER 1 BUSINESS PROXIMITY

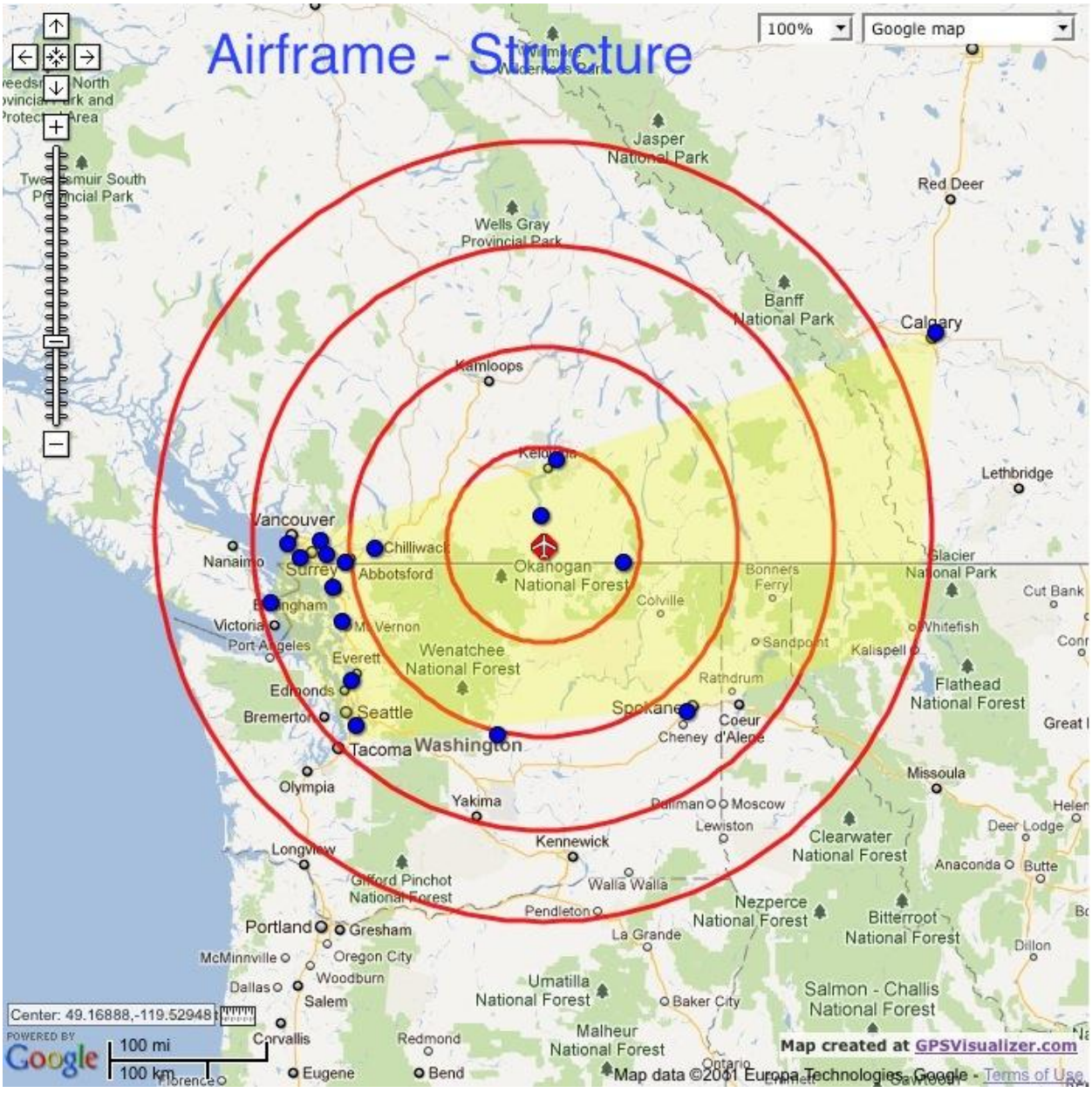
In the context of this project, businesses are organized under a 3-tier system. Tier 1 includes businesses directly related to aviation and located on an airport's site. Examples of Tier 1 businesses are fuel suppliers, aviation maintenance engineering and avionics repair and maintenance. Tier 2 includes businesses that either directly or indirectly support aviation, but are also accommodated on the airport site. Examples of Tier 2 businesses are food services, grounds maintenance and passenger terminal/ lounge/meeting facilities. Tier 3 businesses are those that rely on aviation for at least partial support of their operations, and are located off the airport site.

Maps appearing on the following pages illustrate key Tier 1 businesses with proximity to the Town of Oliver Airport. Early development initiatives may include attracting businesses to the Airport site that would have a good chance of being profitable, and this tabulation is intended as a preliminary guide for future decision making. A key assumption in this presentation is that fewer providers of a particular service and greater distances between a service provider and the southern Okanagan pose greater prospects for local business development.

A single map is provided for each category of service provider. The maps do not distinguish if more than 1 service provider is represented at a single location, nor are there references made to the nature and extent of services offered by providers. Further analyses into these questions would be a required component of any business case development.

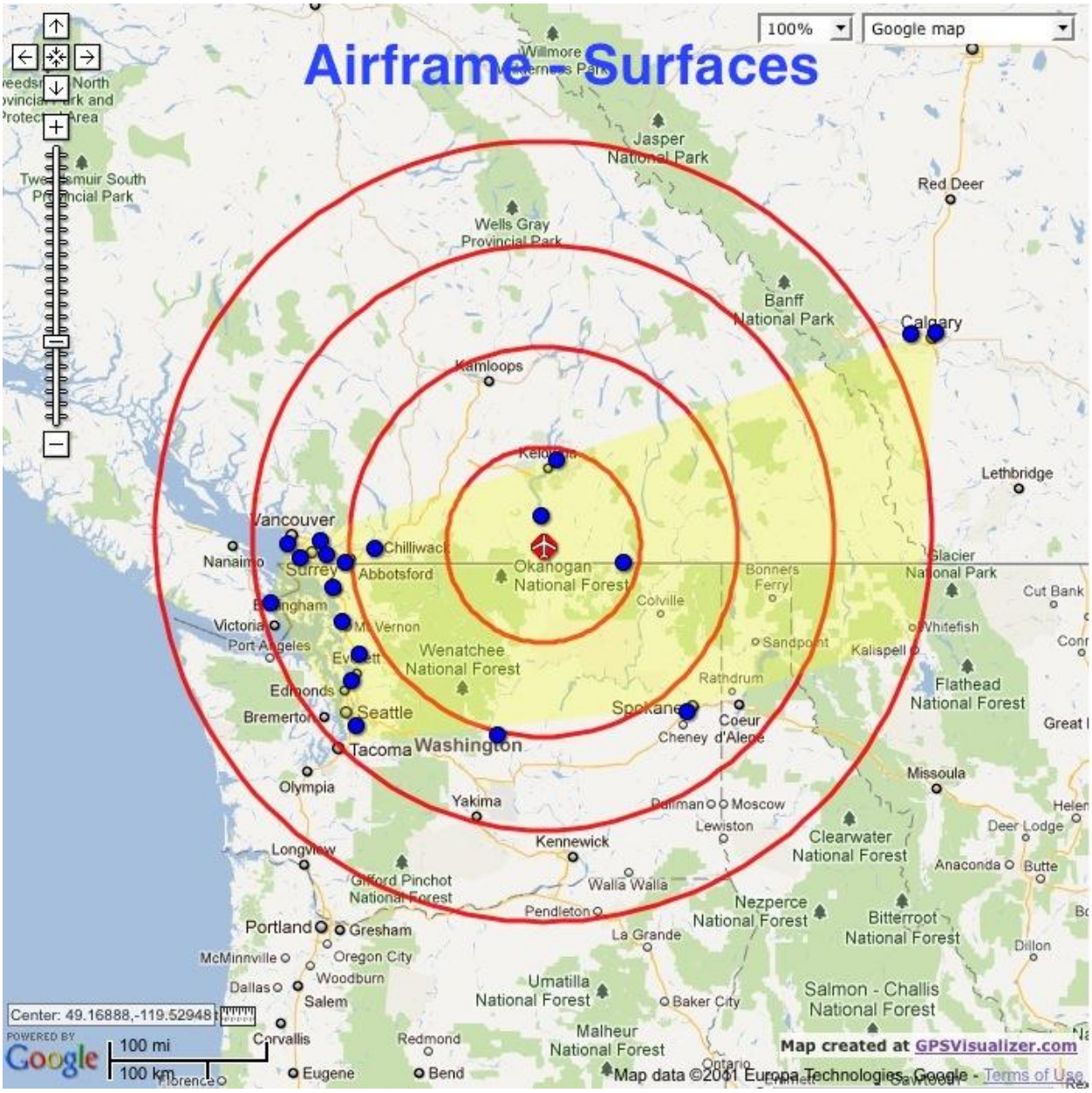
SERVICE PROVIDER CATEGORY:

Airframe Structures (Spars/Bulkheads/Landing Gear) - Repair and Maintenance



SERVICE PROVIDER CATEGORY:

Airframe Surface/Sheet Metal Repair and Maintenance

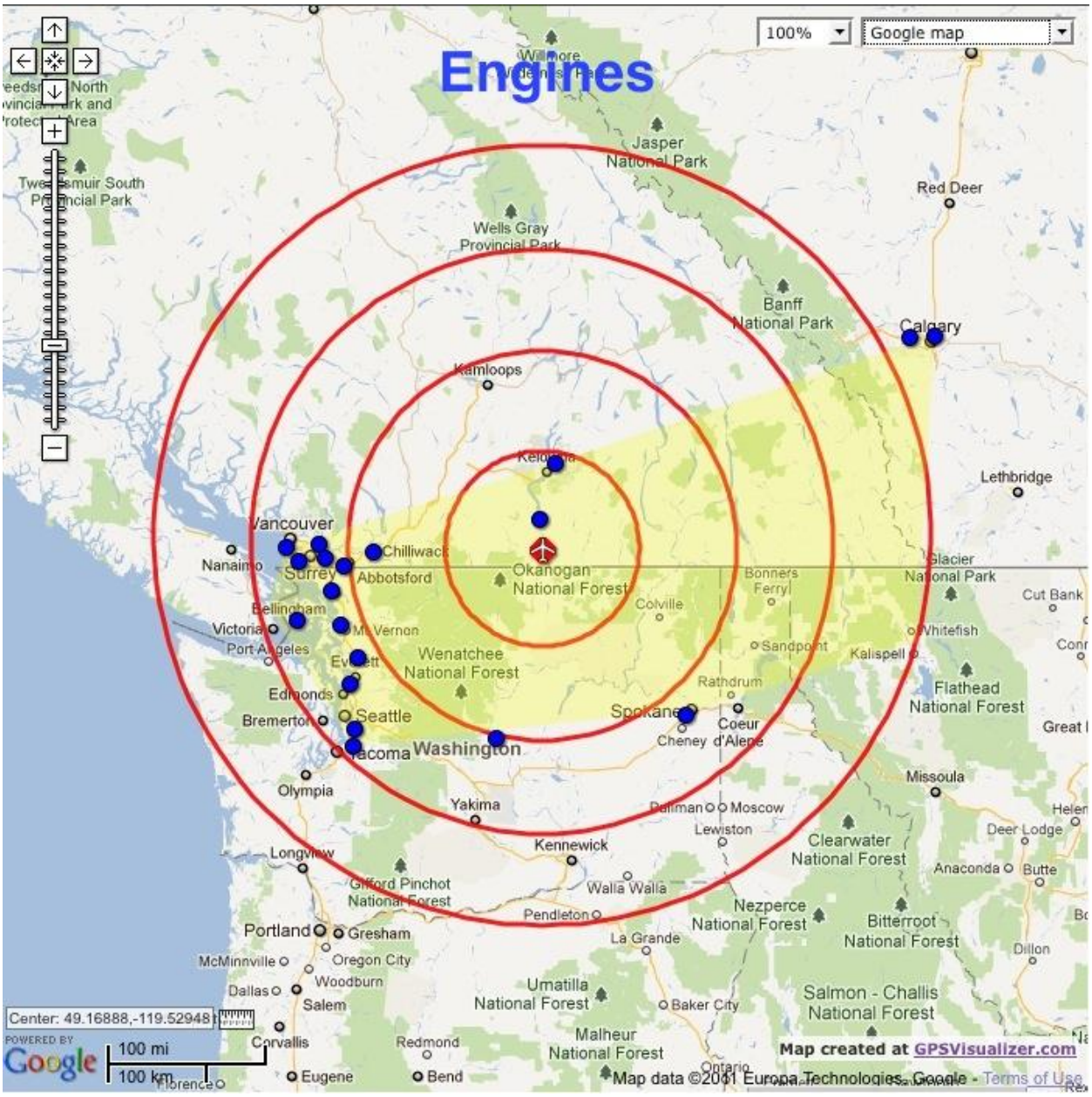


SERVICE PROVIDER CATEGORY:

Avionics Retail Supply, Repair and Maintenance

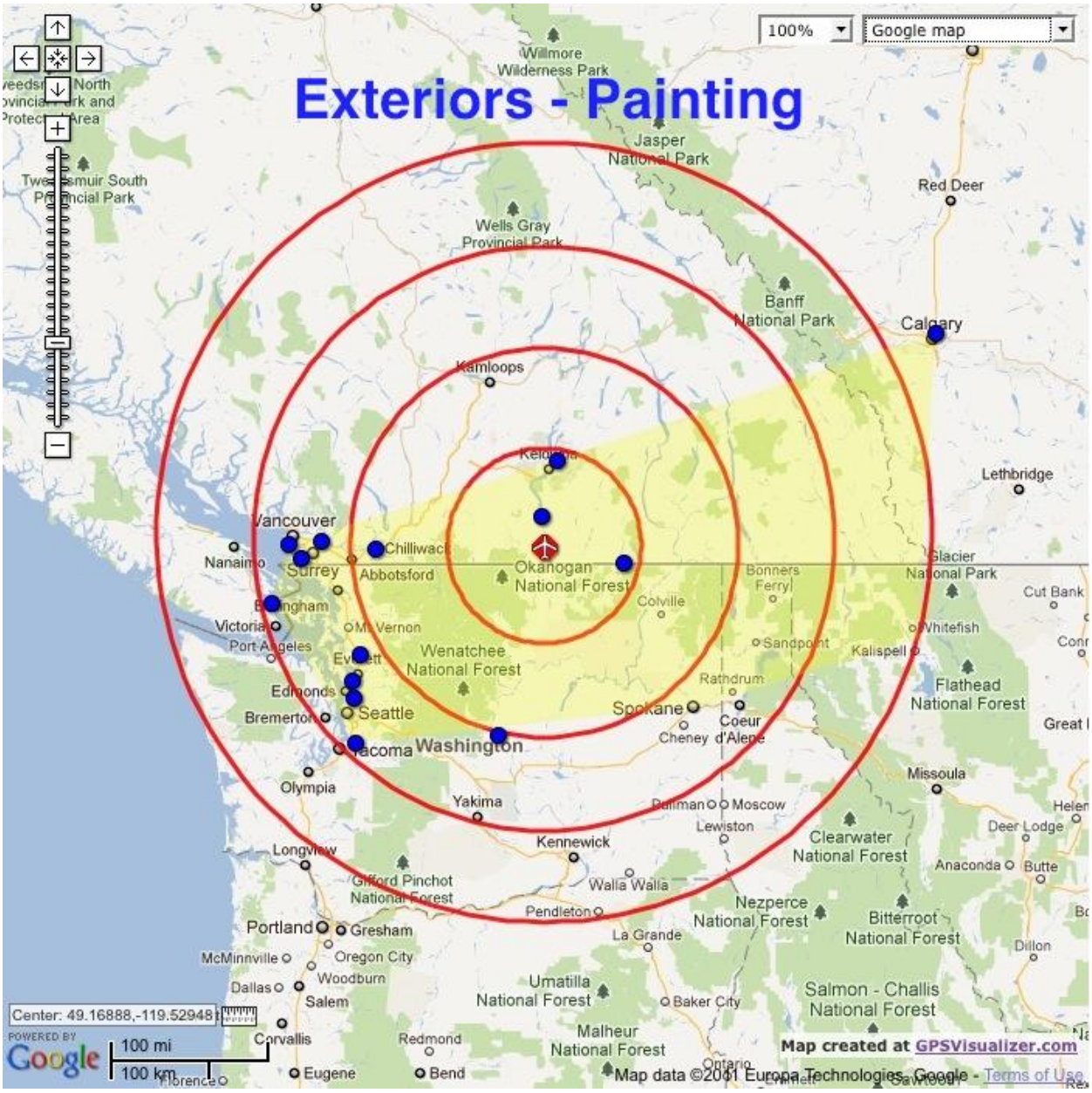
SERVICE PROVIDER CATEGORY:

Aircraft Engines – Parts Sales, Repairs and Maintenance



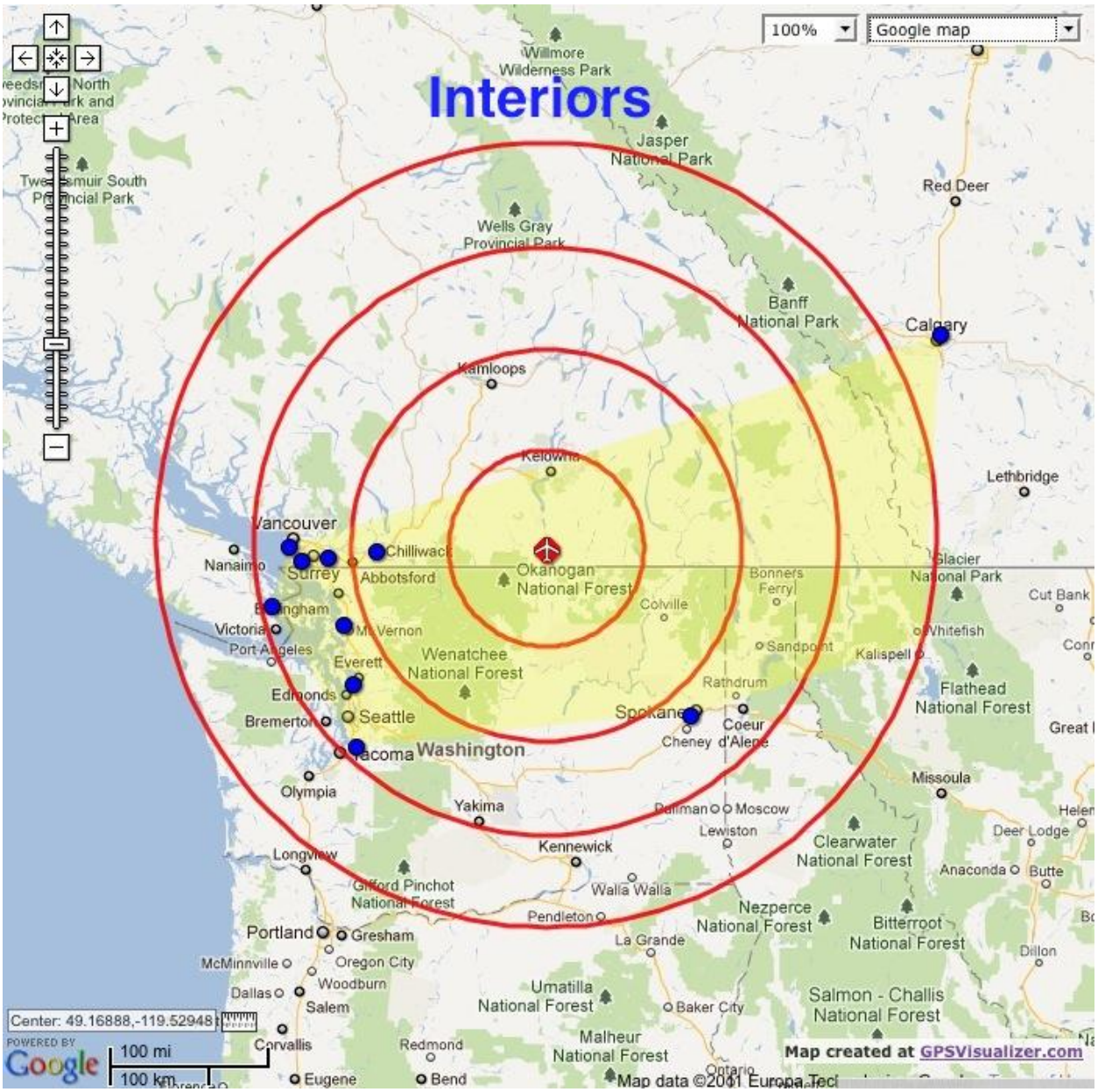
SERVICE PROVIDER CATEGORY:

Aircraft Painting and Applications



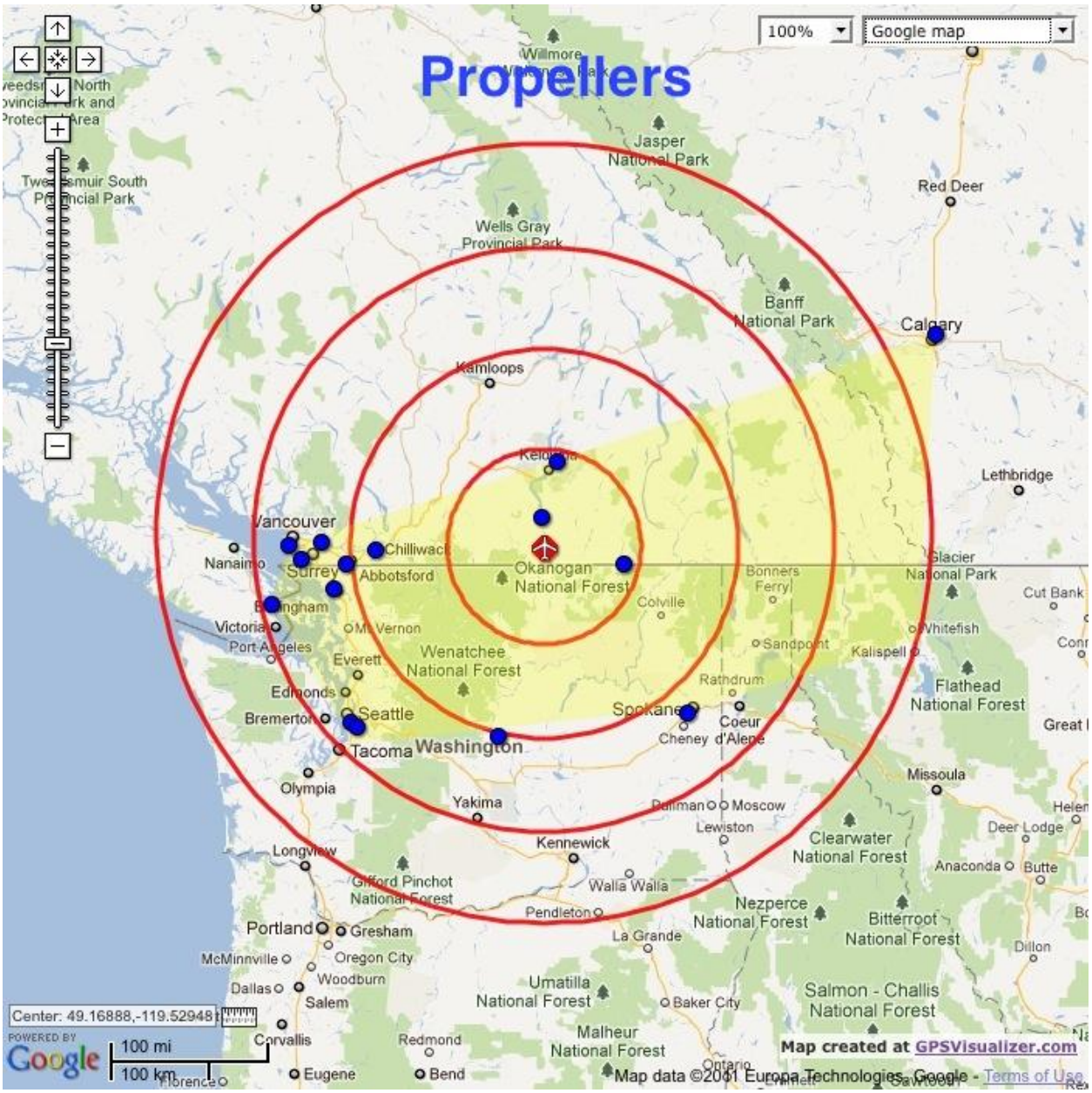
SERVICE PROVIDER CATEGORY:

Aircraft Interiors – Installations and Refurbishing



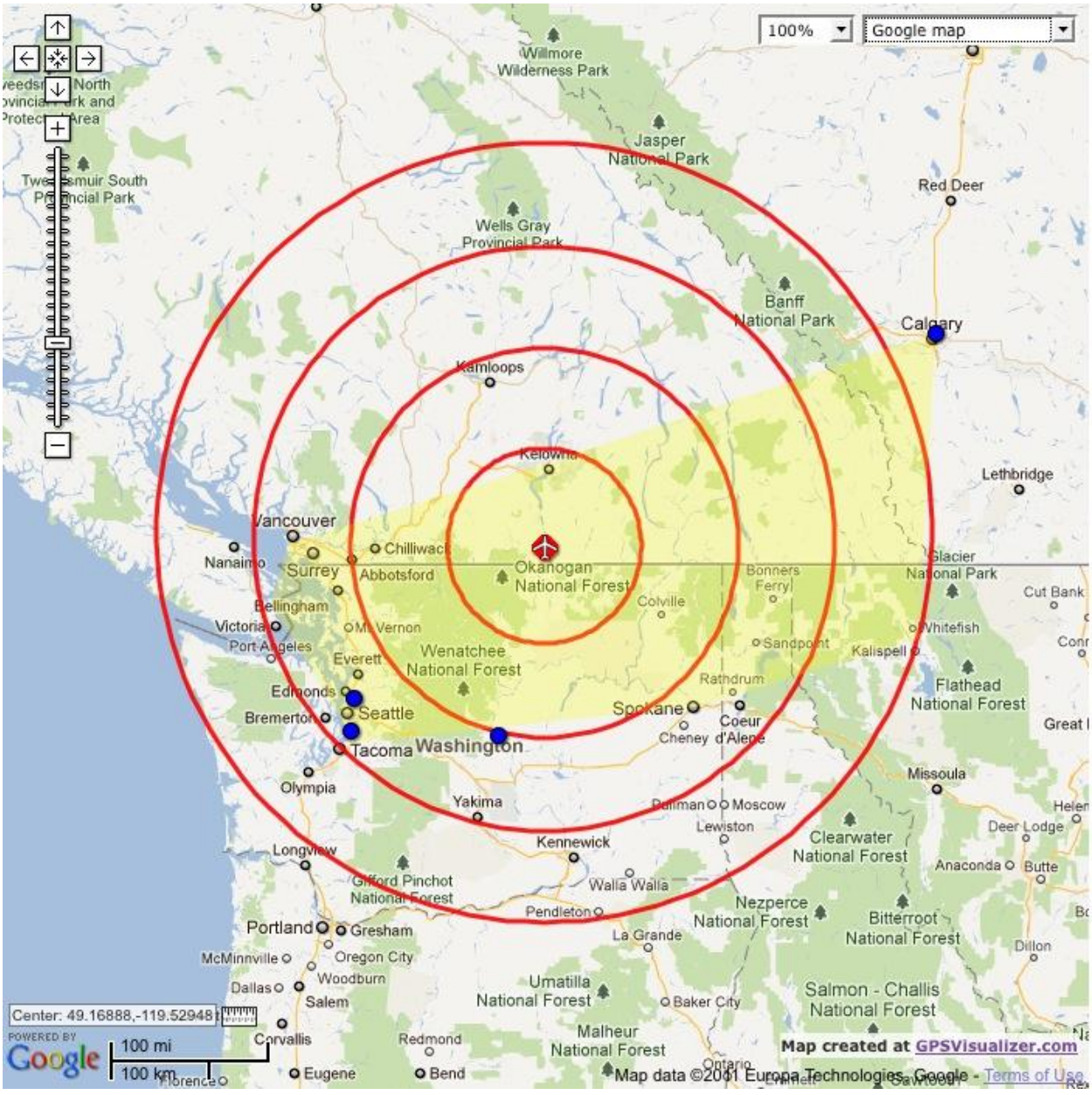
SERVICE PROVIDER CATEGORY:

Aircraft Propellers – Retail Supply, Maintenance and Repair



SERVICE PROVIDER CATEGORY:

Shrink-Wrapping and Delivery Preparation



SERVICE PROVIDER CATEGORY:

Aviation Safety Management Systems (SMS) Consultants