

Slave Lake Airport

AREA STRUCTURE PLAN



Area Structure Plan

2012 Revision Draft Copy:

August 14, 2012

Slave Lake Airport

AREA STRUCTURE PLAN

1.0 Introduction

1.1 Background

In January of 2003, Pryde, Schropp McCoomb Inc. (PMSI) was awarded a contract for the preparation of an Area Structure Plan (ASP) for the Slave Lake Airport and vacant lands immediately surrounding the airport.

In March of 2012 the Slave Lake Airport Commission began a review of the PMSI Areas Structure Plan. This document is the result of that review.

The area considered by this ASP is illustrated in Figure 1.

1.2 Objectives

The objectives of this ASP are summarized below:

1. Review the existing land uses, identify conflicts and incompatibilities, and make changes that would benefit the Airport and its tenants.
2. Provide locations on the airport to locate new aviation related businesses or the expansion of existing business.
3. Provide locations for the future construction of private aircraft hangers
4. Review options for the future airport expansion onto lands adjacent to the airport.
5. Review the development design for the property on the south side of the airport, presently owned by the Province of Alberta.
6. Provide information to allow the Commission, Town, and the MD to develop the airport and surrounding lands in an orderly manner consistent with current and projected land uses.

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2.0 Area Profile

2.1 OVERVIEW

The Town of Slave Lake is located in the Municipal District of Lesser Slave River #124, in north-central Alberta, on the southeast shore of Lesser Slave Lake. It is approximately 250 km northwest of Edmonton. The surrounding region is primarily forested and hilly; however, the town itself is relatively flat and lies at the foot of the lower slopes of the Swan Hills.

The region has access to a number of natural resources which drive its economic development. It is surrounded by a significant amount of natural forestry wealth, there is an abundance of oil and gas, and it is a logical gateway to the relatively undeveloped, resource rich land to the North. The natural resources are complimented by easy access to transportation arteries such as a major highway, railway and pipeline routes, as well as an airport with a 5,550 foot asphalt runway.

2.2 ECONOMIC ACTIVITIES

The economic foundation of region was laid in the 1960s when three major oil and gas fields were discovered. The demand from the petroleum industry for services and facilities spurred rapid growth and development. The local economy received another boost when a quota system for timber harvesting was implemented in 1966. This quota system encouraged the development of forest resources in northern and remote areas of the province. Finally, during the 1970s, federal funds were allocated to Slave Lake to encourage the diversification and industrial growth.

Amongst others, this resulted in the establishment of the Mitsue Lake Industrial Park, located 8 km east of the town.

The petroleum and forestry industries continue to play an important role in the economy of region and its surrounding areas. Nearly one third of the areas work force is employed by primary resource industries. However, more recently, Slave Lake has become a regional government, medical, financial, transportation and service centre for the surrounding area. It is estimated that a regional trading area of 30,000 people is serviced by the Town of Slave Lake.

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2.3 MUNICIPAL PLANNING

Two planning documents are enacted which direct land use and development within the Town of Slave Lake. These are the Municipal Development Plan 1997 and the Land Use Bylaw #22-2007.

The Municipal Development Plan (MDP) is a broadly stroked outline of the land use and development goals of the Town. It aims to provide direction for public and private development

decisions of the Town. Among the community planning goals identified in the MDP the following are important when considering land use planning in and around the airport:

1. *To achieve orderly, economical and beneficial development of land and the use of land.*
2. *To diversify the Town's economic base in harmony with the natural environment.*
3. *To ensure the community has appropriate resources (financial, human and physical) to support its initiatives and vision.*

As part of Transportation Land Use Policy, the Slave Lake Airport is identified as a significant asset to the community and is to be protected. The MDP states:

Objective:

To ensure that the existing operation of Slave Lake airport, at its present location, is protected, and that land uses around it are compatible with airport noise and safety hazards.

Policies:

The Town will:

1. *ensure no development will take place on land adjoining the airport which could interfere with the safe operation and certification of the airport, and*
2. *prepare an overlay plan for the airport area to protect its integrity, within two years.*

Refer to Figure 2 for an illustration of the MDP.

Figure 3 illustrates the land use zones currently designated for the airport lands and its environs.

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Within the Town Bylaw, two Airport specific districts are defined: Airport Industrial District (M3) and Special Airport Industrial District (M3A). The general purpose of these districts is “To provide a district for the operations of the municipal airport and to provide opportunities for light industrial uses in connection with the airport”. The only difference between the M3 and M3A districts is a provision in the latter that states:

...all buildings in the District shall be constructed in such a manner that will not prejudice the possibility of relocating those buildings in the future.

2.4 FEDERAL / PROVINCIAL AIRPORT ZONING REGULATION

This regulation involves the Minister of Transport granting power to the municipality to enforce aviation related zoning of lands, on and adjacent to the airport.

The Slave Lake Airport has completed the Technical Documents required for the implementation of the Federal/Provincial Airport Zoning Regulation (AZR). These documents have been approved by Transport Canada.

As the development authority, the Town of Slave Lake, and Municipal District of Lesser Slave River must now enter into a legal agreement with the Federal government granting the authority to enforce development policies which protect the Object Limiting Surfaces of the airport.

The Town of Slave Lake and MD of Lesser Slave River estimate this agreement to be in place by March 1st, 2013.

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3.0 Airport Profile

3.1 DEVELOPMENT HISTORY

Prior to 1995, the Slave Lake Airport was owned and operated by the Province of Alberta. The Airport was transferred to the local government in 1995, at which time, it was estimated that 60% of the developed property was leased. Currently, approximately 95% of the developed property has been leased. Due to the location of the airport within the Town limits, property suitable for further airport development is relatively limited.



Construction completed in 2000 extended the existing runway by 550 feet, and established a partial parallel taxiway between the Air Tanker Base, Main Apron and a point approximately 1,000 feet from the threshold of Runway 10. These improvements served to improve the capacity, efficiency and safety of aircraft movements at the airport.

In 2010 a new Air Terminal Building was constructed to replace the original structure built in 1976.

3.2 AIRPORT LAYOUT

Slave Lake Airport is located at the geographic coordinates of N55°17'35" W114°46'38" in the north end of the Town of Slave Lake. The total airport property is approximately 66 hectares. The airport is surrounded to south and north by the Town of Slave Lake. To the east of the airport property is the Sawridge Indian Band Reservation. To the west of the airport are the southeast shores of the Lesser Slave Lake.

The airport property is cleared of trees, with the exception of the airport property south of runway 10 threshold. The airport terrain generally slopes gently from east to west.

Figure 4 illustrates the general airport layout, key facilities and current tenants

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3.3 AVIATION ACTIVITY

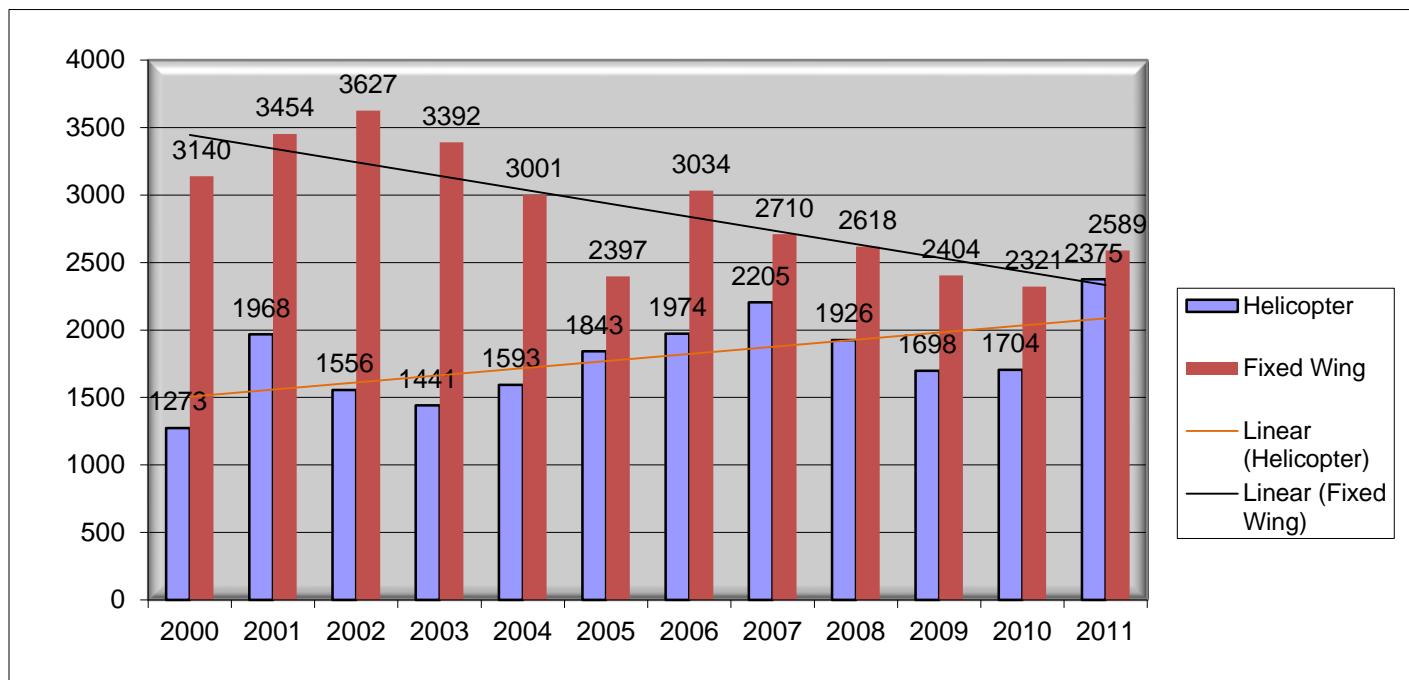
There are various types of aviation activity that occur at the Slave Lake Airport. The composition and frequency of traffic is dependent on numerous factors, however, one of the most significant is the intensity of the fire season. With the Alberta Sustainable Resource Development (ASRD) Air Tanker Base located at the airport, during the fire season, the airport experiences significant large twin turbine fixed wing and helicopter traffic.

While there is no scheduled air service to Slave Lake, charter services operate between the Town, Edmonton and Calgary, as well as other smaller communities. Outside of the fire season, much of the fixed and rotary wing traffic is created by charter demand by the local and surrounding resource industry.

In addition to these public and commercial operators, there are also a number of private aircraft based at the airport.

Statistics indicate that fixed wing traffic has declined in recent years and helicopters traffic has increased. See Graph A below:

Graph A: Fixed Wing & Helicopter Landings 2000 to 2011



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3.4 AIRPORT COMPONENTS

Slave Lake Airport is served by a single paved runway. Runway 10-28 is 5,550 feet long and the threshold for Runway 28 is displaced 550 feet.

The runway is illuminated for night operations and served by a Non - Directional Beacon located 0.4 nm north of the airport.

The runway is also served by two RNAV approaches, the RNAV 10 and RNAV 28 Approach

For detailed runway data refer to Part II of the Airport Operations Manual. (See Attached Table 1)

Runway 10-28 is served by three fully paved taxiways. Taxiways A and C are stub taxiways which are restricted to Forest Service use only and are not maintained during the winter. Taxiway B is a partial parallel taxiway approximately 3,750 feet long and connects the main apron to the runway near either end. Taxiway D is intended for tenant use only and is only paved for half of its distance. A portion of taxiway D is currently leased for helicopter parking. Taxiways A, B and C are code C taxiways while Taxiway D is a Code B Taxiway

There are three apron areas at the Slave Lake Airport. The main apron is located in front of the Air Terminal Building, is paved and is approximately 8,300 m². Two other aprons are intended for Forest Service use only. The main Forest Service apron is located north of the Runway 28 end and is served by Taxiway C. This apron is primarily used by fixed wing tankers. A smaller apron, located north of the 10 end of the runway serves as the Helitack Base and is served by Taxiway A.

3.5 UTILITIES AND INFRASTRUCTURE

3.5.1 Water

The water treatment plant for the Town of Slave Lake is located adjacent to the airport. A water main parallels the Airport Access Road and crosses the airport property between Taxiway B and the Helitack base. While fire hydrants are provided along the road, not all of the airport lots are serviced. The campground located adjacent to the Provincial Lands is serviced by a 75mm line.

3.5.2 Sanitary

While much of the Town of Slave Lake is connected to a sanitary sewer system, it has not been extended to the airport. The Air Terminal Building (ATB) and buildings in its immediate vicinity are serviced by a low pressure sewer system connected to the town sanitary sewer.

3.5.3 Electricity

Three phase power lines parallel the airport access road and serve the ATB and other airport related buildings.

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3.6 EXISTING AIRPORT LAND USE / AIRPORT TENANTS

A variety of public, private and commercial operators are present at the Slave Lake Airport. These tenants operate a mixture of both fixed wing and rotary wing aircraft.

A major tenant at the airport is the Slave Lake Air Tanker Base operated by Alberta Sustainable Resource Development (SRD).

The regular base compliment during fire season consists of the CL215T, Lockheed L188 Electra or the Convair 580.

SRD also utilize helicopters during the fire season, however these are either hired on a casual or contract basis. Among the helicopters commonly seen at the Slave Lake Airport are the Eurocopter AS350, Bell 206 and Bell 212



Many of the commercial air operators based at Slave Lake operate the helicopters often hired by SRD. Helicopter operators include:

- Delta Helicopters Ltd
- Remote Helicopters Ltd
- Slave Lake Helicopters Ltd
- Sloan Helicopters Ltd

Fixed wing operations are served by Can-West Corporate Air Charters who provide Fixed Base Operator (FBO) services as well as fixed wing charter and air ambulance.

Private aircraft owners lease property for hangers and aircraft tie down space.



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3.7 POTENTIAL DEVELOPMENT LAND

Upon review, a number of potential development areas, on and around the airport have been identified. Nine (9) areas have been identified for further review of their development potential.

1. The airport land south of the Runway 10 End, opposite the Helitack base
2. The Provincially owned land south of the above-mentioned area.
3. The area south of the Runway 28 Threshold and north of Caribou Trail N.E
4. The airport property located under the approach to Runway 28 on the East side of 7th street N.E.
5. Previously developed areas located on airport property north of Taxiway D and adjacent to the Main Apron.
6. Property west of ASRD Warehouse apron (currently overflow Helicopter Parking)
7. Airport Maintenance Shop
8. Privately Owned land adjacent to the airport (*Note 1*)
9. M3A Industrial Lots South of airport

Figure 5 identifies these general areas.

Note 1: Privately Owned Property is any suitable property adjacent to the airport and made available by the property owner

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4.0 Airport Area Structure Plan

4.1 DESIGN CONSTRAINTS & CONSIDERATIONS

4.1.1 Road Access

Access to the Airport is via Birch Road N.E. and a dedicated airport access road which is unpaved for some of its length. As this access road terminates at the Helitack base, traffic for the most part is not an issue.

Existing town streets provide access to potential development lands to the south and east of the airport, mainly 7 St. N.E. and Caribou Trail N.E. It should be noted that access to Caribou Trail may be restricted to one access, requiring the construction of a service road in order to access all potential lots in this area.

Access to potential development areas southwest of the airport is less well developed. Currently an access road off of Caribou Trail N.W., west of 8th Street N.W. provides access to the R.V. Park.

4.1.2 Burial Grounds

The Airport Commission has identified burial grounds on the airport site between the Helitack Base and Taxiway B. This area is deemed to be off limits for any future development.

4.1.3 Aviation Related Constraints

Prior to evaluating any development option, the foremost consideration must be to maintain the integrity of the existing airport facilities. The airport is currently certified and meets Transport Canada requirements for a Code 3C Non-Instrument (NI) facility. While there is no current airport master plan in place, every indication is that the airport will remain a Code 3C-NI facility. The recently developed Airport Zoning Regulation, as well as the recently constructed Taxiway "B" are to Code 3C-NI standards.

Normally for a facility the size of Slave Lake, a Non-Precision Approach would be considered in any planning exercise. However, the standards associated with a Non-Precision Approach would effectively sterilize most of the lots south of and adjacent to the airport (*Lots Currently Zoned M3A*) Also, Taxiway B does not meet the required setback from the Runway centreline for a Non-Precision facility. It is for these reasons that this ASP does not consider the more stringent Non-Precision standards.

The facilities that meet a specific code are designed to account for a number of parameters. These include aircraft specific concerns such as airplane reference field length, airplane wing span and main gear span. Also considered are the time of day and type of weather conditions

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during which operations can occur: for example, day, night, Visual Meteorological Conditions (VFR) or Instrument Meteorological Conditions (IFR). For taxiway and apron design, the code letter is the key design parameter. A Cessna 402 Utiliner is a representative Code A aircraft. A Beechcraft 1900 is a Code B aircraft and the CL-215 and Convair are Code C aircraft.

When considering the design and placement of new taxiways, Transport Canada mandated offsets must be respected. For the purposes of this ASP, all new facilities will continue to meet the Code 3C-NI requirements.

The most significant aviation concerns relate to Obstacle Limitation Surfaces. These limitations on height on and around the airport are clearly illustrated in Figure 6. For illustrative purposes, the approximate limit for 8 metre and 16 metre heights are identified. The 8 metre height was selected because it is representative of the height the larger aircraft hangars that could be expected at the airport as well light industrial buildings that could be located adjacent to the airport.

The final constraint worth noting stems from the fact that during discussions on the ASP, the possibility of locating helicopter operations beneath the approach for Runway 28 was raised. It is possible to locate buildings and other fixed objects beneath an approach path to a runway as long as they respect the Obstacle Limitation Surfaces. Helicopter operations, such as helicopter parking and hover taxi operations are not recommended beneath the approach; while ground based objects are permitted, as soon as a helicopter departs the ground, it will be considered traffic and effectively prevent other aircraft from landing on the runway. From an operational safety and efficiency perspective, locating helicopter operations beneath or immediately adjacent to a runway approach should not be recommended.

It is worth noting that the area north of the approach to Runway 28, east of the Air Tanker Base and west of 7 St. N.E. was not designated for future development, rather it is recommended that it be kept in reserve should there be a need for further tanker base apron expansion. The development potential of this area is considered minimal since it is impacted by the approach to Runway 28 and is a relatively skinny area with limited access to the road.

4.1.4 Land lease Policies

In order to ensure that land is being used for the purpose of providing space for the storage or maintenance of aircraft, and not being held for speculation, the following policies should be considered.

- a) Hanger lot leaseholders shall be allowed 1 year to construct a hanger or the lease cancelled if another request has been received to construct a hanger on site. (This requirement is included in recent lease agreements)
- b) After one year with no building being constructed the lease rate will be 2 times the current published rates.
- c) The minimum size hanger allowed to be constructed shall be based on the size of the lot.

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4.1.5 Growth Potential

Attracting new business to airports the size of Slave Lake can be difficult. To determine the amount of property the airport would realistically require to accommodate growth over the next 10 years the following was considered:

- The number of businesses located at airports of a similar size.
- Past request for airport property from aviation related businesses
- Potential requirements for additional private hanger lots
- Potential for non-aviation business to locate on suitable airport property
- Future scheduled passenger service

After considering the above, it was determined that the requirements for expansion property for the next 10 years should include:

Property suitable for Small Commercial Fixed Wing Operator (1)

Property for expansion of current fixed wing operator (1)

Property suitable for Commercial Helicopter Operations or Expansion (1)

Private Hanger Lots (3)

4.1.6 Town Planning

The current Municipal Development Plan and Zoning Bylaw have been considered as part of this ASP. Land use compatibility is an important consideration when proposing development alternatives. While some zoning amendments may be required southwest of the airport, for the most part, any development proposal should be consistent with current plans.

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4.2 SERVICING STANDARDS AND COST

It is standard practice that development in the Town of Slave Lake pays its own way. This is no different at the airport. As such, this Area Structure Plan recommends the least costly standard of service consistent with safety and marketing needs be selected so as to minimize development costs and encourage development.

New roads to access the southwest area can be built based on a rural-cross-section, with ditches as opposed to curb-and-gutter and buried storm sewers. The required right of way is 24 metres.

Individual private hangar owners generally consider municipal sewer service as unnecessary. Industrial lots however will likely have to be serviced.

A number of potential development areas are not currently directly serviced by municipal water. However, all of the considered areas are in relatively close proximity to water mains and servicing new lots should be cost effective for future developments.

4.3 PROPOSED DESIGN

4.3.1 Currently Developed Areas

The area north of the runway is already fairly well developed with few vacant lots. To the east, the Air Tanker Base occupies an important portion of land. The area between the SRD apron and the Water Treatment Plant has in the past been used as a general aviation parking area with tie-downs. Due to the relatively limited area and accessibility, it is recommended that this area not be developed more intensively. Rather, it should remain available for overflow parking for helicopters east of main street and small general aviation aircraft west of main street.

The main apron and immediately surrounding area should be for Fixed Wing Aviation related businesses. Helicopter operations should not be located in this area. For the most part this is the case. There are exceptions however, specifically the building located next to the Airport Maintenance Building, currently leased to A&B Eben Investments and the lots leased to Nelson Lumber. The buildings and lots in question are sized such that an important aviation related business could be accommodated. If these lots and building should revert to aviation use, it is recommended to expand the main apron to the east, north of the fuels tanks. This would provide aircraft access to the current building, as well as increased parking on the main apron for itinerant aircraft. The current non-aviation related business should be relocated to an area appropriately zoned for this use, or the zoning changed to allow non-aviation use until demand requires it to revert to aviation use.

Lot C1 west of the main apron is currently leased however aircraft are seldom operated from this property. This is a large lot and could be divided into two smaller parcels with only fixed wing aircraft allowed to operate from the portion nearest the main apron.

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The area west of the terminal building has been identified as an area where some incompatibility may exist between existing tenants. Specifically, fixed wing and rotary wing tenants are interspersed along Taxiway D. Part of the concern expressed relates to hover taxi operations in proximity to other aircraft, particularly private general aviation aircraft. Since only half of Taxiway D is paved, gravel is often kicked up and can cause damage to both aircraft and buildings. In the short term, paving the remaining portion of Taxiway D, and other helicopter maneuvering areas, would reduce the amount of dust and gravel kicked up during hover taxi operations

As recommended in the original Area Structure Plan a portion of Taxiway "D" has been leased to Remote Helicopters for aircraft parking.

4.3.2 New Private Hangars

The need for an area to develop new lots for private hangars is twofold. First, as mentioned above, the desire to attempt to segregate private general aviation operators from the Commercial operators so as to reduce incompatibilities north of Taxiway D. Second, it is anticipated that Private General Aviation hangars will represent the majority of new aviation related development at the airport.

4.3.2.1 North of Caribou Trail and South of Runway 28 Threshold

Private hangers could be located on the property south of Runway 28 threshold and immediately north of Caribou Trail N.E. (Location 3 Figure 5). The area could accommodate 6 lots and access road. The access road would consist of one access off caribou trail and a service road connecting all lots. A Taxiway would be required to connect these lots to the runway. A Code B Taxiway will meet the requirements of this site.

This land is currently zoned M3 - Airport Industrial District

4.3.2.2 Airport Owned Expansion Area South of 10 Threshold

The area south of Runway 10 threshold, opposite the Helitack Base (Location 1 Figure 5) is another site for Private Hangar Development. The area in question is approximately 3.7 hectares (9.2 acres). This area can accommodate 15 lots, 20 metres wide by 40 metres deep, and the required taxiway and road access. While a Code B Taxiway will suffice, offsets will be provided to Code C standards so as to not limit future redevelopment of this area.

The ability to develop this area is dependent on road access and the provision of municipal and franchise (electricity and possibly gas) services: the most significant is road access. The existing road off of Caribou Trail N.W. west of 8th Street N.W. is an appropriate starting point to access this new development area. Either a right of way will need to be secured on Provincial land or the land could be acquired. The possibility and benefit of acquiring the Provincial land is considered in greater detail in the following section

The land in question is currently zoned M3 - Airport Industrial District.

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4.3.3 Non-Aviation Light Industrial

The majority of Airport lands are zoned as M3 – Aviation Industrial, therefore non-aviation related businesses may not be legally located on this property.

The land located under the approach to Runway 28 (Location 4 Figure 5) is now zoned as I – Institutional. This zoning makes this property unusable for aviation purposes and ownership is only continued to control development that may affect the Object Limiting Surfaces (OLS) of the airport.

The land could be leased to non-aviation business which meets the town zoning requirements. Ownership would remain with the Airport Commission to allow control of the property use and protection for the OLS.

4.3.4 Aviation Related Businesses Requiring Large Lots

While a significant demand for large lots with airside access is not anticipated at Slave Lake Airport, it is prudent to consider where, if required, such lots may be developed. As mentioned in Section 4.3.1, one such lot could be reclaimed east of the Main Apron since it is currently being used for non-aviation related purposes.

Lot C1 located just west of the main apron is another location which could accommodate a large aviation related business. The lot is currently leased but no buildings have been constructed on the site. Improvements on the site consist of a fuel tank which could be easily relocated.

A section of the Provincial land that has been highlighted above for acquisition by the airport could accommodate any possible future demand. The northeast quadrant of the provincial land can be held in reserve for future large lot aviation development should the need arise. This reserve area could accommodate 4 large lots (60 m x 80 m) and a dedicated Code C stub taxiway. This proposal succeeds in maintaining a separation between commercial aviation users and private general aviation users.

OLS height limits will not be an issue here since the majority of the area is beyond the 16 metre height contour.

As previously mentioned, a water main traverses this area and it is anticipated that supply lines could tap into the main. Power is currently provided to the RV site adjacent to the property as well as to the industrial area to the east. These would have to be extended to service this property.

This property is currently zoned M3 - Airport Industrial.

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4.4 PHASING

The phasing of the Area Structure Plan is dependent on market forces, however the following timeline should be considered.

Short Term (Next 2 Years)

1. Resolve the non-complying land use of property leased by the airport for non-aviation use. Working with the Town Planning and Development department a solution must be found as soon as possible.
2. Review Airport Operations Policy and amend those sections regarding buildings and the size of those buildings in relation to the lot size.
3. Helicopter operators are required to provide paved surfaces for the takeoff and landing surfaces.
4. Complete the Federal Provincial Airport Zoning Regulation to protect the Object Limiting Surfaces during future development.

Medium Term (Up to 5 years)

1. As demand requires, make the area north of taxiway "D" between Lot C2 and P6 available for helicopter operations only.
2. Prepare road access and survey lots for private hangers in the area south of runway 28 threshold and north of Caribou Trail N.E.
3. Request road access from Caribou Trail N.W to the airport property south of runway 10 threshold.

Long Term (Up to 10 years)

1. Develop hanger lots on airport owned property south of runway 10 threshold.
2. Acquire the provincial land south of the runway 10 threshold for future airport expansion

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4.5 LAND USE CONTROL

It is critical for the safe operation and continued certification of the Airport that land use controls be in place both on and off airport property. These controls are necessary to ensure that Obstacle Limitation Surfaces are not violated, and that other incompatible land uses do not locate in proximity to the airport.

4.5.1 Onsite

Plans such as this ASP provide guidance to the Airport Commission as to the types and locations of land use on airport property. Leases with tenants can be framed in such a manner as to ensure that height restrictions are respected and specific land uses occur in specific locations. The airport is ultimately responsible controlling land use on its property.

4.5.2 Offsite

Generally it is more difficult to control land use off airport property. Two types of control are necessary. First, to control for incompatible land uses from the perspective of Town land use planning; and second, protecting the airport from land uses that have an aviation impact.

As outlined in Section 2.2, the Town of Slave Lake has recognized in both the Town Bylaw, as well as in the Municipal Development Plan, the importance of the Slave Lake Airport. These documents have incorporated the necessary zoning to protect from development of incompatible land uses. As mentioned in earlier sections, some rezoning will likely be required in the UE - Urban Expansion district.

As discussed in Section 2.3, the Airport Commission is in the process of implementing an Airport Zoning Regulation. This regulation provides to the municipality the power to zone for aviation related concerns. This regulation and its enforcement should provide sufficient protection from offsite obstacles.

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5.0 Recommended Future Steps

Based on the recommendations made throughout the development of the Area Structure Plan, a summary is provided below of the recommended future steps.

1. Pave the unpaved portion of Taxiway D so as to limit the amount of dust and gravel kicked-up during hover taxi operations. (4.3.1)
2. Lease airport property east of 7th Street N.E. to non-aviation businesses
3. Encourage the separation of fixed wing and rotary wing operations (4.3.1)
4. Seek either the outright acquisition of the Provincial land or a road right of way to allow for the development of new private hangars south of the threshold of Runway 10. (4.3.2, & 4.3.4)
5. Develop private hanger lots on the airport property south of runway 28 threshold and north of Caribou Trail N.E (4.3.2.1)
6. Ensure appropriate zoning is in place for possible future development of land south of Runway 10 and ensure Airport Registered Zoning is in place to protect against off airport obstacles. (4.3.4 & 4.5.2).
7. Hangers not currently used for storage of aircraft shall be given time to meet this requirement or risk cancellation of the lease (4.1.4).
8. Lease holders of property which have no hangers shall be notified that the lease will be cancelled with 90 days' notice if a new tenant wishes to construct a hanger on the property (4.1.4).
9. Lease rates 2 times published rates on vacant property (*no buildings*) to discourage leasing property with no intention of building (4.1.4).
10. Airport policy shall establish limits on the minimum size of hangers, based on the lot size, and the permitted type of hanger construction (4.1.4).

Figure 1 - Land Considered by Area Structure Plan

Slave Lake Airport - Area Structure Plan

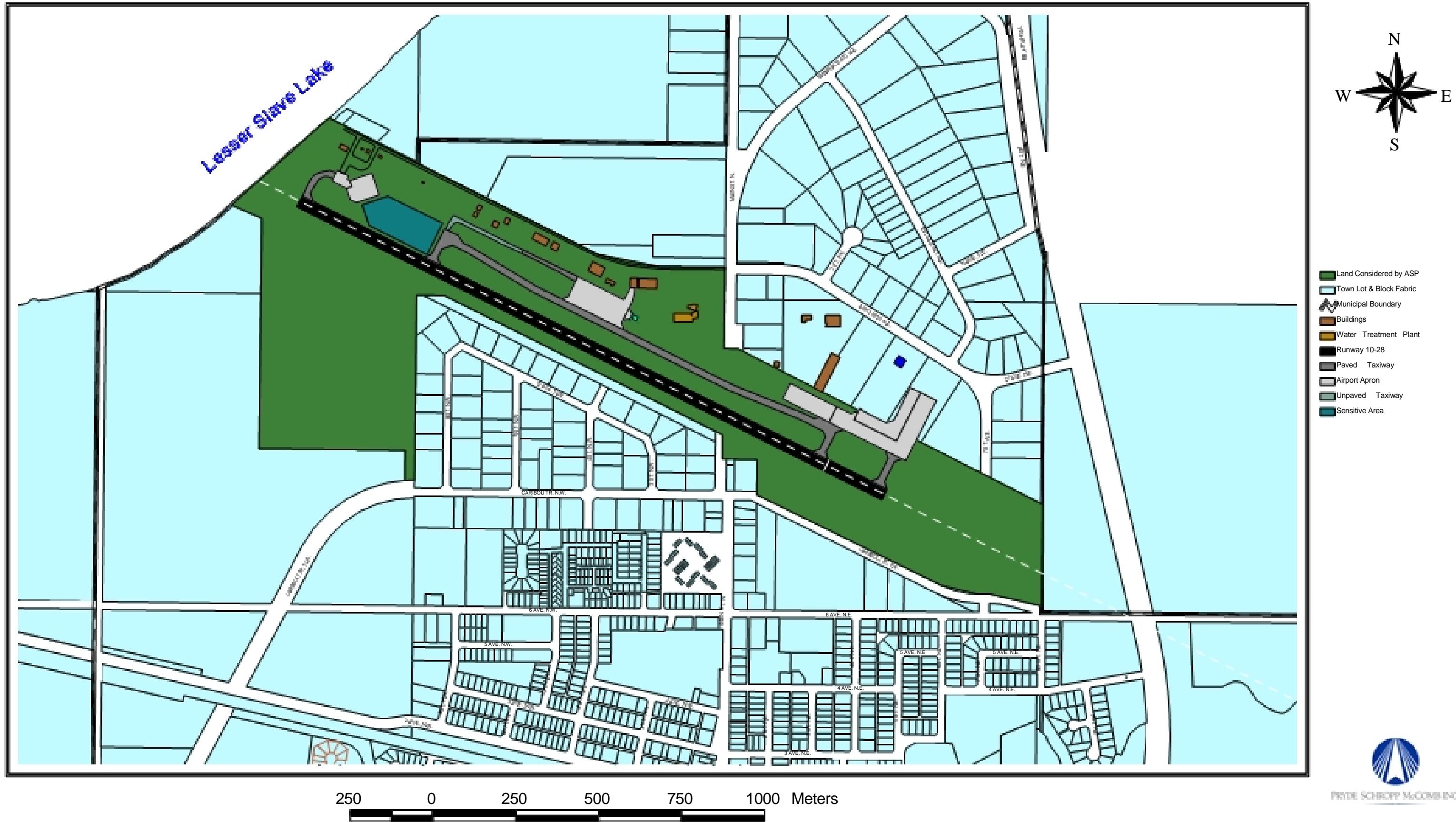


Figure 2 - Town of Slave Lake MDP

Slave Lake Airport - Area Structure Plan

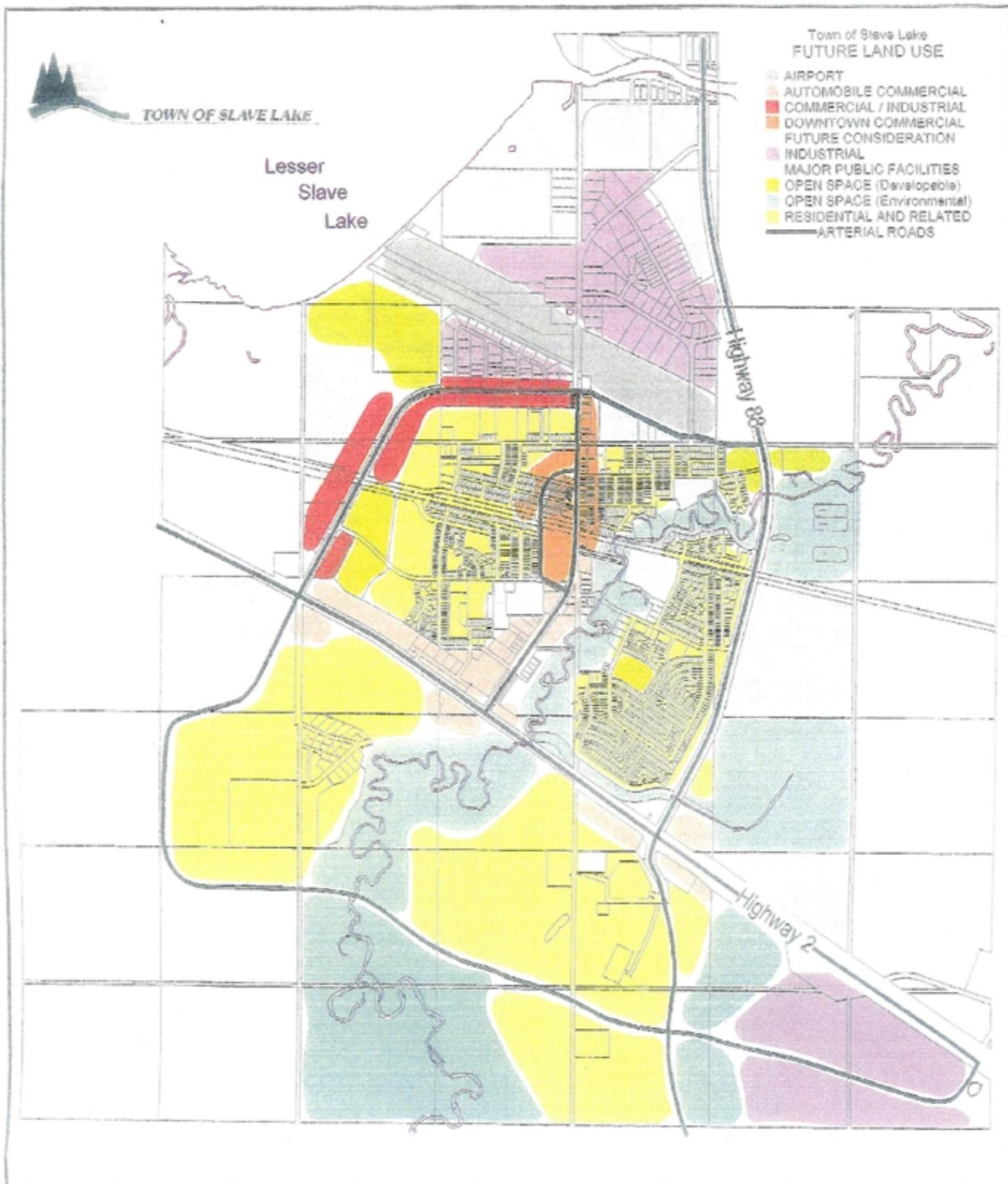
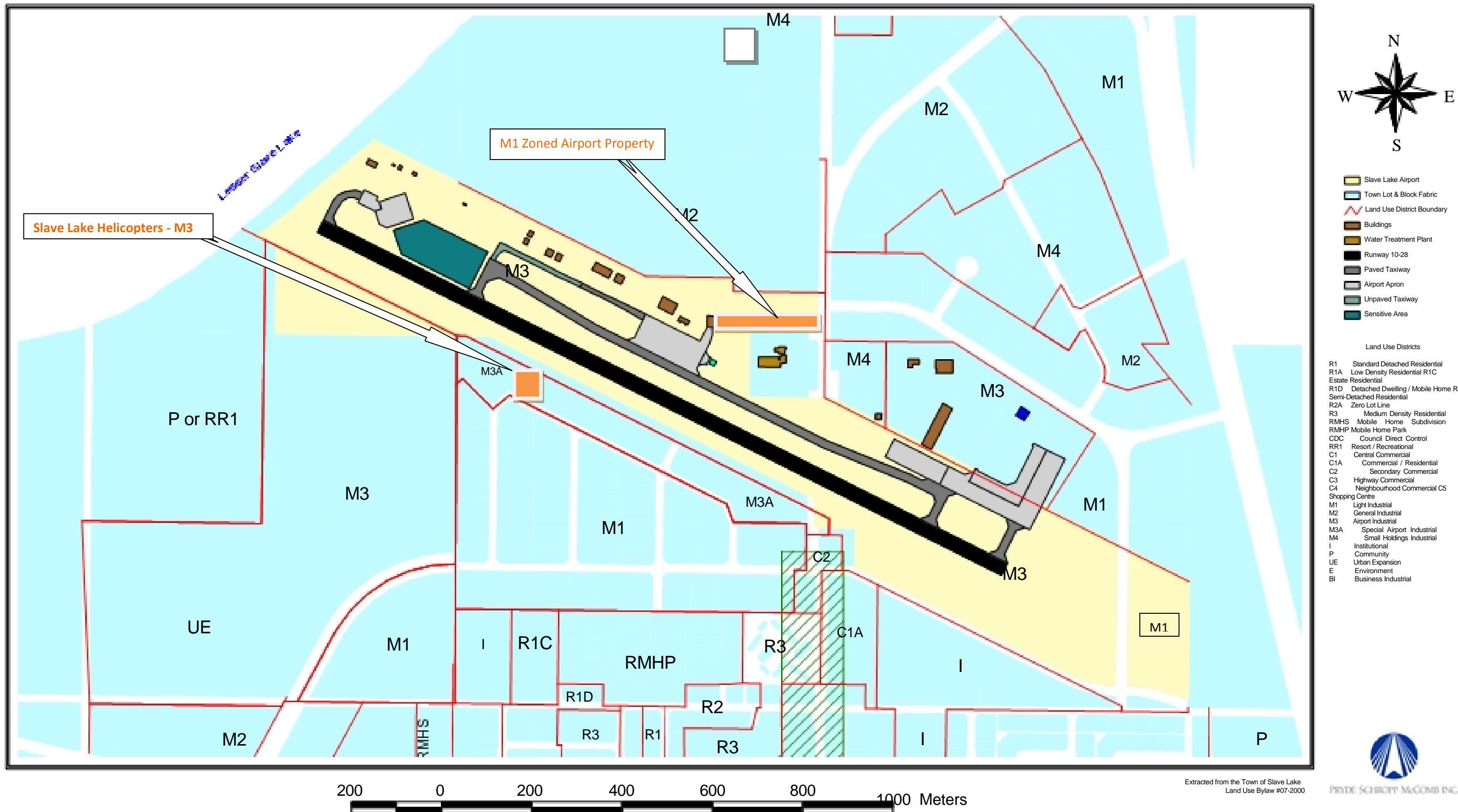


Figure 3 - Excerpt from Town of Slave Lake Land Use Bylaw #22-2007

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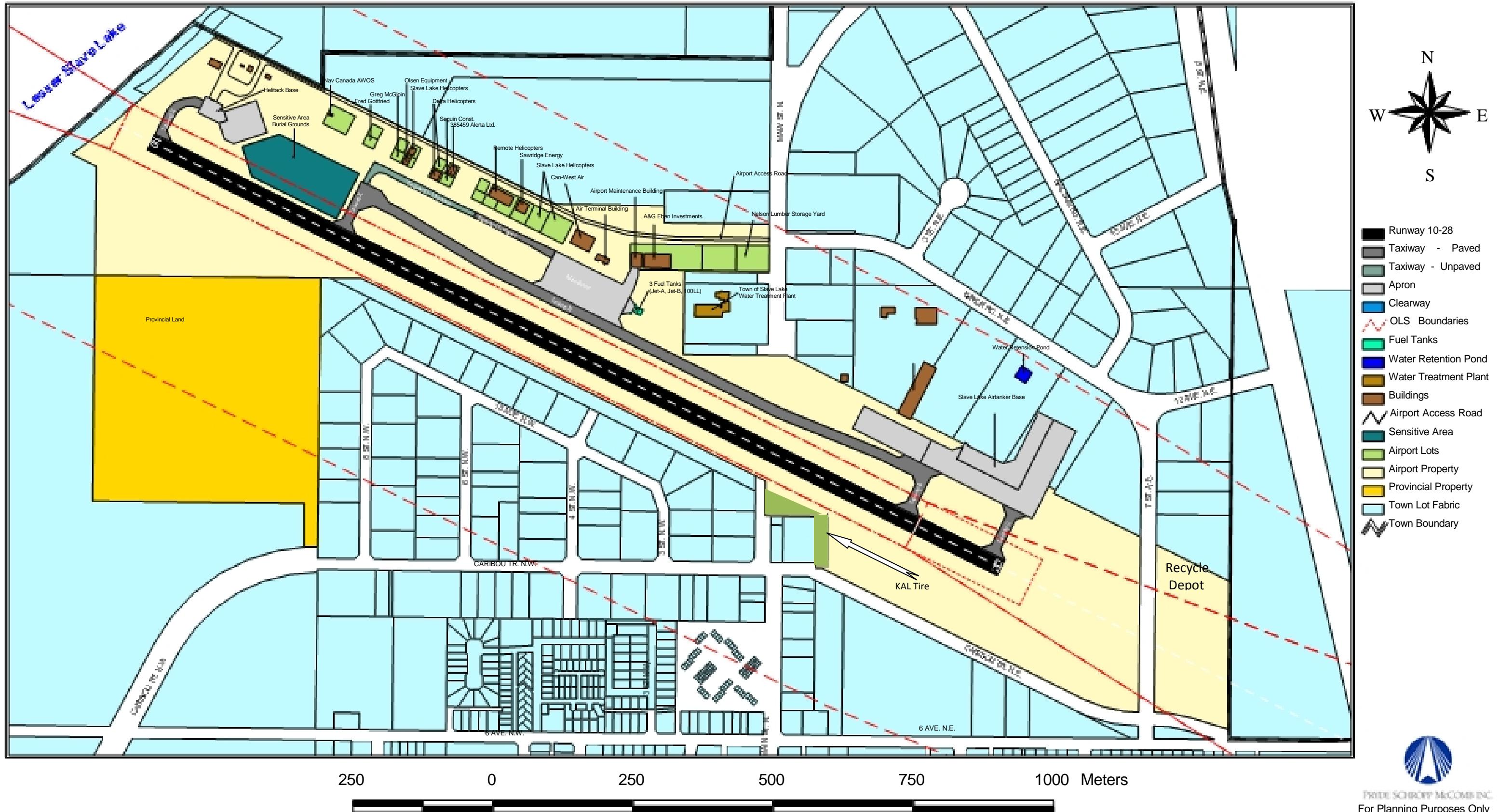
Extracted from the Town of Slave Lake
Land Use Bylaw #07-2000

PRINT SCIENTIFIC MEDICAL INC.

For Planning Purposes Only

Figure 4 - Airport Layout

Slave Lake Airport - Area Structure Plan



PRATT SCHROPP MCCOMB INC.
For Planning Purposes Only

Figure 5 - Potential Development Areas

Slave Lake Airport - Area Structure Plan

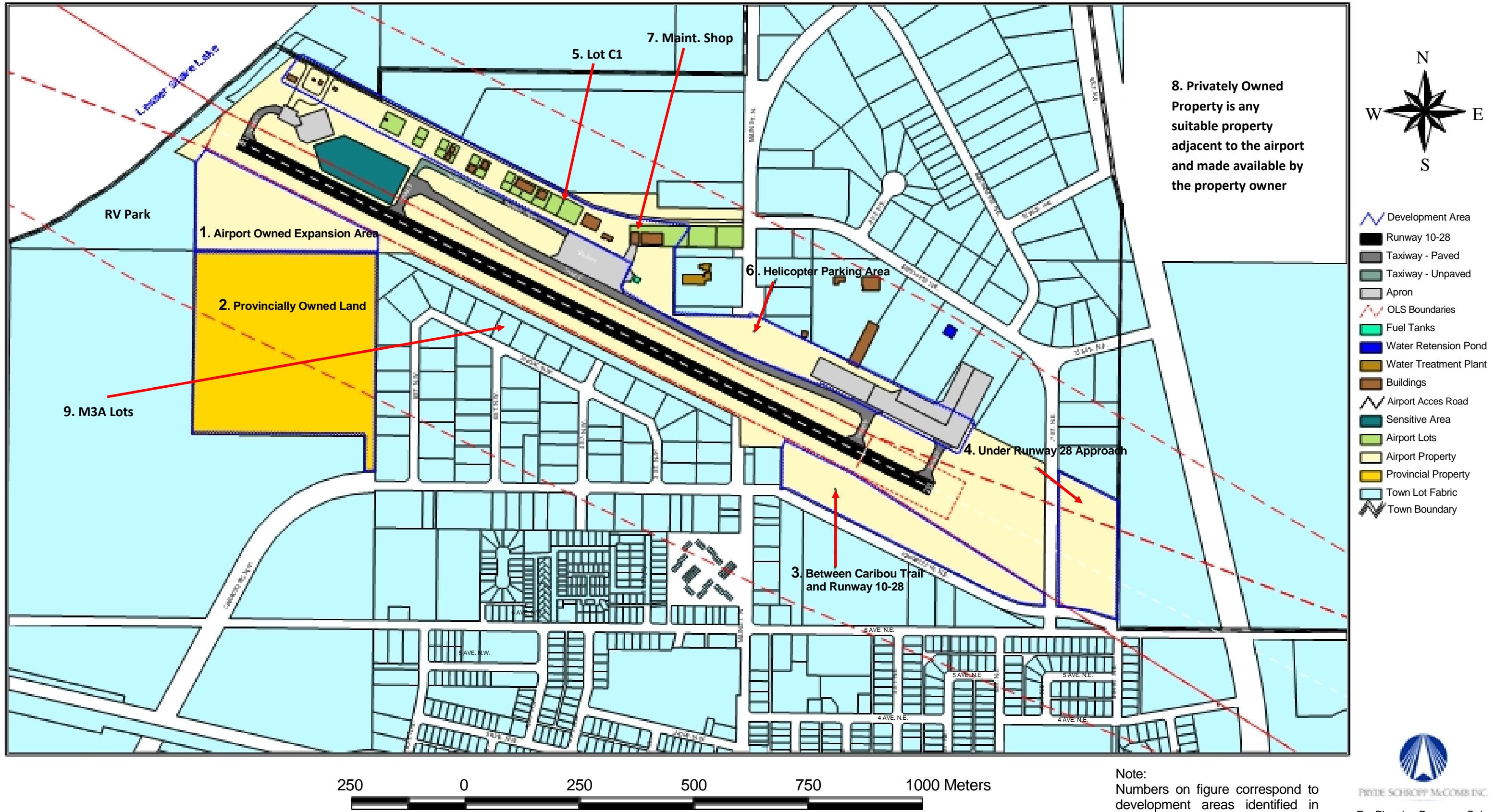


Figure 6 - OLS Based Building Height Limitations

Slave Lake Airport - Area Structure Plan

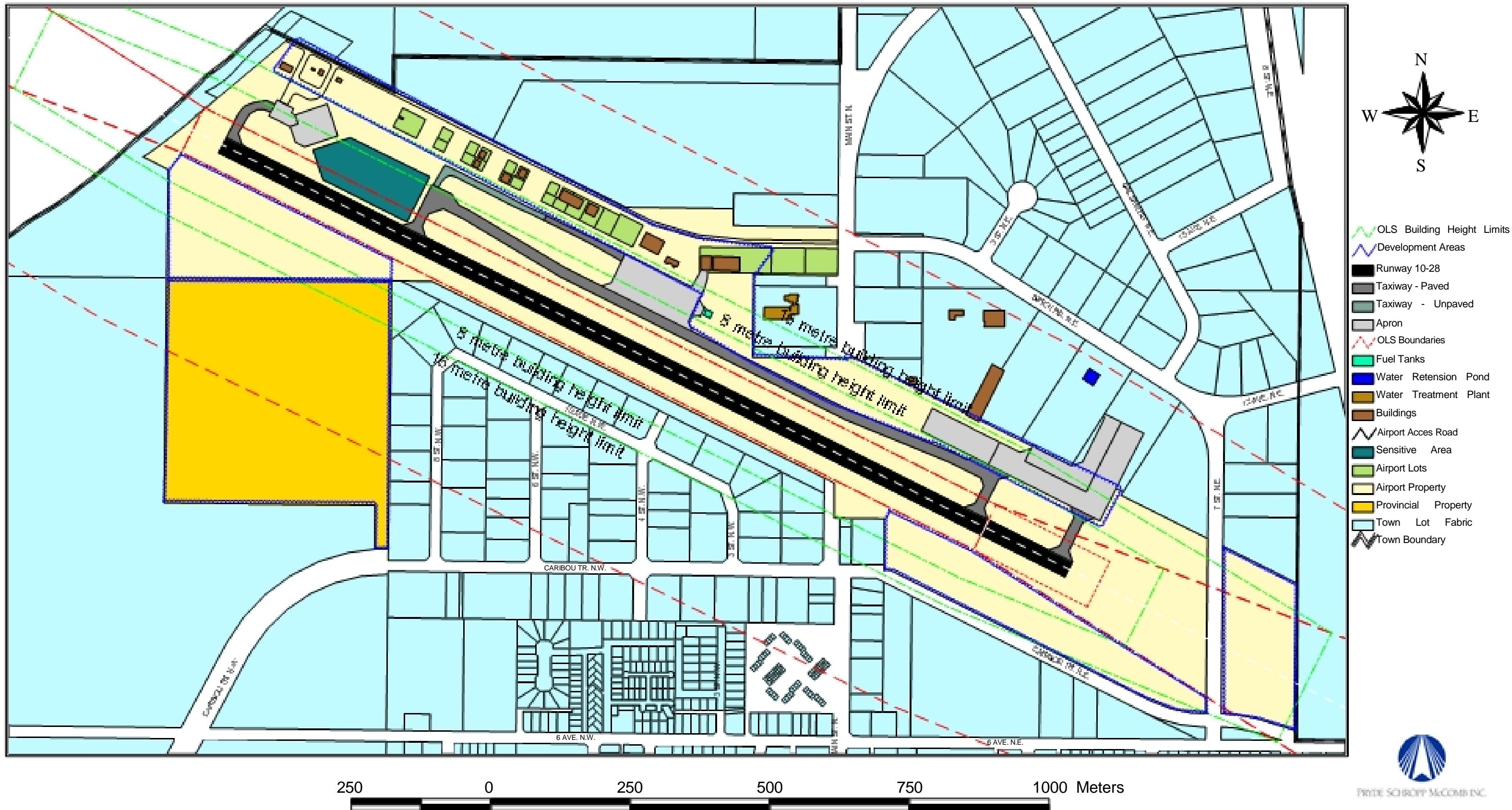


Figure 8 - Proposed Development

Slave Lake Airport - Area Structure Plan

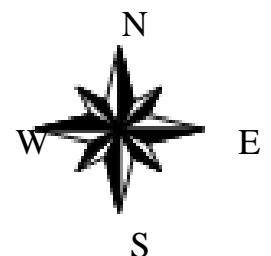
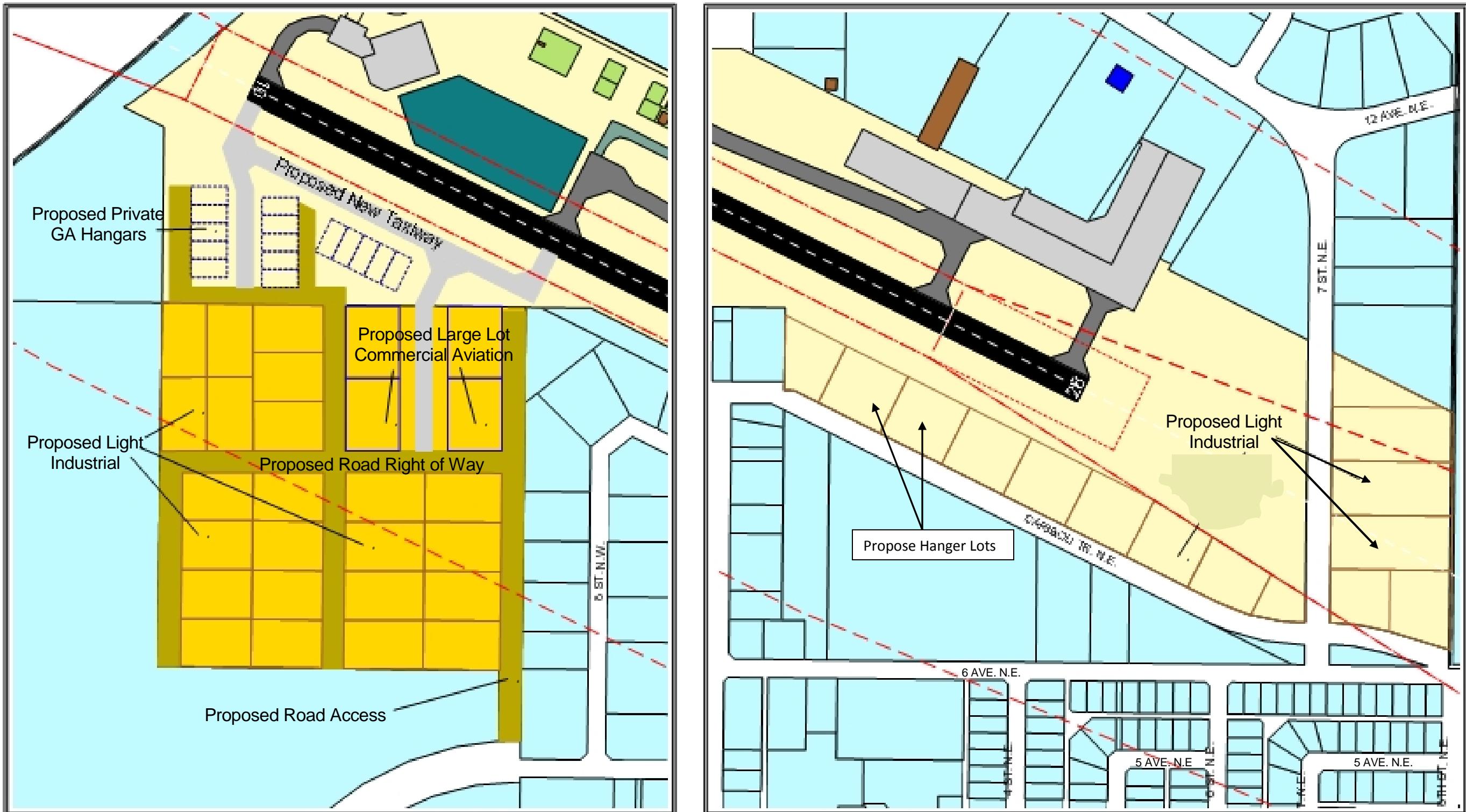


Table 1 – Runway Data

Runway	10	28
Lowest Landing Minima	568 AGL – 1 ¾ mile	568 AGL – 1 ¾ mile
Lowest Authorized Takeoff	½ Mile	½ Mile
PHYSICAL CHARACTERISTICS		
Pavement Load Rating (PLR)	10	10
Reference Code	3C / NI	3C / NI
True / Magnetic Bearing	116°/097°	296°/277°
Runway Dimensions	5569.39' x 100' (1697.55 m x 30.48m)	
Runway Slope	0.15%	0.15%
Runway Surface Type	Asphalt	Asphalt
Touchdown Zone Elevation	1907.0' (581.24m)	1911.6' (582.67m)
Threshold	Co-ordinates	N 55° 17' 46.53" W114° 47' 21.20"
	Elevation	1904.20' (580.40m) ASL
Displaced Threshold	Length	557.05' (169.79 m)
	Co-ordinates	N 55° 17' 24.92" W114° 46' 03.36"
	Elevation	1911.65' (582.67m)
Runway Strip	Dimensions	5963.09' x 295' (1817.55 m x 90 m)
	Surface Type	Grass
	Graded Area	5963.09 x 262.5' (1817.55m x 80m)
Stopway	Dimensions	N/A
	Surface Type	N/A
Clearway	Dimensions	499' x 295' (152m x 90m)
	Ground Profile	Level
Runway End Safety Area	Dimensions	N/A
	Surface Type	N/A
Declared Distances	TORA	5569.39 ft
	TODA	6068.39 ft
	ASDA	5569.39 ft
	LDA	5569.39 ft
		5012.34 ft