Amended By
By-Law 1744-09

BY-LAW NO. 1388-97

OF THE

CITY OF WETASKIWIN

IN THE PROVINCE OF ALBERTA

A BY-LAW TO ADOPT THE CITY OF WETASKIWIN AIRPORT AREA STRUCTURE PLAN.

WHEREAS pursuant to the Municipal Government Act, Chapter M-26.1, R.S.A. 1994, as amended, the Council of the City of Wetaskiwin may by by-law adopt an Area Structure Plan.

AND WHEREAS, pursuant to the Municipal Government Act, Chapter M-26.1, R.S.A. 1994, as amended, Council has deemed it expedient and proper to adopt an Area Structure Plan to provide framework for subsequent sub-division and development in and within close proximity of the Wetaskiwin Airport and to ensure it is carried out in an orderly fashion.

NOW THEREFORE, the Municipal Council of the City of Wetaskiwin duly assembled hereby enacts as follows:

1. That this By-law shall be cited as the City of Wetaskiwin Airport Area Structure Plan By-law.

2. That the Airport Area Structure Plan of the City of Wetaskiwin attached hereto as Schedule "A" forms part of this By-law.

3. That this by-law may be amended from time to time following the same procedures outlined in the Land Use By-law for Land Use By-law amendments.

4. This By-law shall come into full force and effect on the date of the final passing thereof.

READ a first time this 8 day of Dec, A.D. 1997

MAYOR

CITY CLERK

READ a second and third time this 12 day of Jan, A.D. 1998

MAYOR

CITY CLERK

Area Structure Plan
Wetaskiwin Regional Airport

Being Schedule A of Bylaw 1388-97

Contents

Maps

Wetaskiwin Regional Airport
Area Structure Plan

Background

The Regional Airport Authority's Development and Marketing Plan (May 1997) envisages the airport expanding to meet three market opportunities:

- hangars on subdivided, owned lots for private owners;
- accommodation for aviation-related businesses; and
- spin-off from Canada's Aviation Hall of Fame and the Reynolds-Alberta Museum, situated immediately west of the airport.

To serve these markets, the Authority plans to extend the existing runway to 5,000 feet (1,525 metres) to serve larger aircraft up to Code 3 designation. The land required for runway extension is privately owned but the owner is prepared to make it available. The Authority intends to subdivide existing hangars and create lots for sale to both private pilots and aviation-related businesses, and to create new lots. Land use controls will be needed within the airport to ensure that these lots are not taken over by non-aviation uses. Land use offsite will also have to be controlled to ensure that incompatible uses are excluded from the area.

This Area Structure Plan takes the Authority's broad goals and shows specific development proposals including

- detailed future land uses, roads, and utility corridors;
- proposals for subdivision and the staging of development;
- suggestions as to how development costs should be borne by the various players; and
- proposed controls on land use necessary to protect flight operations and to exclude non-aviation uses on the airport lands.

Design Constraints

This Area Structure Plan must take into account a number of constraints on design imposed by topography, pre-existing development, and provincial and local government policies.

Drainage: The land generally drains from north to south (Map 4). The elevation of the terminal building is 2,505 ft and the south end of the airport is about 2,492 feet, a fall of 13 feet in just over half a mile, an average grade of about 0.5%. This compares favourably with the 0.4% grade required for a sanitary sewer line, meaning that the entire site is serviceable by gravity into the City's deep sewer main located a quarter of a mile south of Highway 13. (All elevations are given in feet because the best available ground-controlled contours are in feet.)

That part of SW 15 lying west of the runway slopes from north-west to south-east and is also serviceable by sewer although the on-site gradient is lower.

It may not possible to bring gravity sewer to areas north and west of the present terminal building by sanitary sewer. Detailed engineering work will settle the question, but we recommend that this work be delayed until a decision is made on the level of servicing desired for the airport.

Highway access: At present the only paved access to the airport is 45/47 Avenue, which runs half a mile through an established residential area. Residents have made it clear they will fight any development, especially industrial development, which significantly increases traffic on this road. The City's draft Municipal Development Plan deals with this concern by proposing that 60 Street be developed north from Highway 13 to 47 Avenue, providing both truck access and a right-of-way for a sewer line. When 60 Street is built, 45/47 Avenue can be closed to truck traffic, and through traffic can be discouraged by stop signs at 57 Street and 60 Street.

In the longer term, 60 Street can be extended further north to 50 Avenue, giving truck access to Highway 2A.

Overhead power lines: Transalta Utilities have a main transmission line running through SE 15. The cost of moving this line is so high that it must be regarded as permanent, and roads and lot lines must be designed around it.

Buried water line: A City water line runs along the boundary between SE and SW 15, and no buildings can be constructed over it.

Height limits: The height of structures is limited as shown on Map 5. Height limits are zero within 250 feet (76m) of the centre line of the runway, and rise in a 1:7 gradient at right angles to the runway. A 25 foot (6.7m) high hangar must therefore be located at least 300 feet (91m) from the runway centre line. A 40 foot (12.2m) high hangar, the highest likely to be needed for Code 3 aircraft, must be set back 405 feet (123m).

Crosswind runway: Airport users have on occasion spoken about a crosswind runway to complement the present SE-NW runway. It would be used by aircraft based at or visiting the Reynolds-Alberta Museum. A 2,000 foot grass strip would be sufficient. The suggested location is along the north side of the Museum quarter.

Figure 5A shows how a strip here relates to surrounding buildings. The main limitation is the existing Aviation Hall of Fame building, which is 13 metres (43 feet) high. It would also be necessary to limit the height of buildings, masts, etc along 47 Avenue (Airport Road).

A grass strip in this location makes it impossible to bring a road in to the Reynolds-Alberta Museum from the north, but apart from this, the decision to build or not to built does not affect the designs shown in this Area Structure Plan.

Buffering existing residences: Residents along 45/47 Avenue from 57 Street to 60 Street now enjoy a rural setting. This will change as land to the south and west is developed. We recommend that visual barriers (possibly a berm or tree planting) be installed on the south side of these lots to clearly separate them from industrial and airport uses.

Servicing Standards

All development at the airport must pay its own way; neither the City nor the Airport Authority is willing to subsidize it. This Area Structure Plan therefore proposes the lowest standard of servicing compatible with safety and marketability.

Roads: In order to keep costs to a minimum, we recommend that roads in the industrial area be built on a rural cross-section, with ditches instead of curb-and-gutter and buried storm sewers. This requires a 24m (80 ft) right of way.

Pavement is optional. It makes the development more attractive but adds substantially to the cost. The best choice is probably to build gravel roads and offer paving later as a local improvement at the property owners' expense.

Power lines are assumed to be buried in all new areas, because poles and overhead lines are dangerous in industrial areas.

Sewer service: Owners of existing hangars have said that municipal sewer service to individual hangars is an unnecessary luxury. Sanitary needs can be met by chemical toilets or pump-out tanks. The Regional Health Authority confirms that this is acceptable.

However, sewer service must be provided to industrial lots east of 60 Street, and to the commercial-sized hangar lots west of the runway. This should be a condition of subdivision approval.

Water service: Municipal water service is valuable because it gives better fire protection, which in turn has two advantages: it reduces insurance rates, and it allows buildings to be constructed closer together. The rule is that distances between buildings must be *doubled* if fire protection is inadequate. In industrial areas (which includes airports) the required spacing is 90 metres (295 feet) between hydrants. This Area Structure Plan assumes that municipal water will be supplied to all new industrial areas.

However, municipal water will not be provided to present hangar areas unless the owners request it and pay for it as a local improvement. Some hangar owners require water on a seasonal basis (for example, for crop spraying) but this can be provided by private lines from wells or other buildings without the municipality being involved.

Proposed Design

A generalized development plan is shown on Map 6, with details of each area shown on Maps 7 to 11. The main points are as follows.

Existing hangars will be subdivided so that sitting tenants who wish to do so may purchase them. The proposed layout is shown on Map 7. Subdivision will also create about a dozen vacant lots for sale. The size of the lots will vary widely as the lot lines must accommodate existing development. As far as possible they will follow existing leases. The minimum lot will be about 15 metres (50 feet) wide by 30m (100 feet) deep, giving an area of 450 m2 (4,844 sq ft).

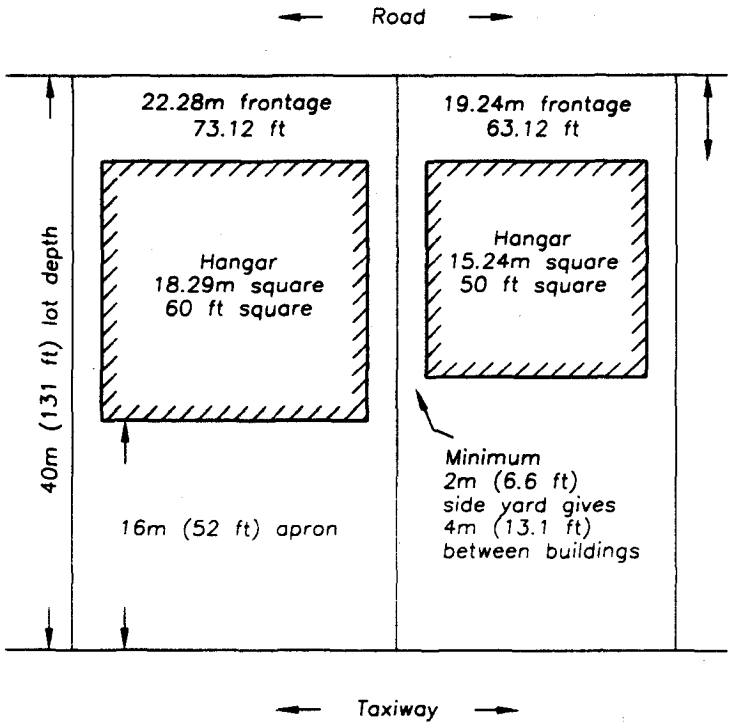
Wetaskiwin Regional Airport
Area Structure Plan

Map 8

Minimum lots to accommodate
50 foot (15m) and 60 foot (18m) hangars
showing setbacks and fire separation
with two hour fire rating on side walls

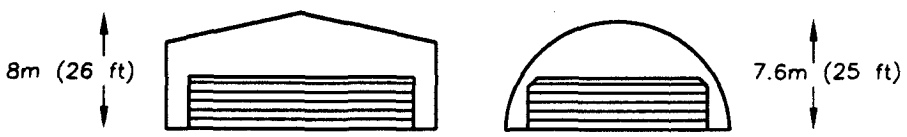
One hour fire rating increases
required side yard to 7.5m (25 ft)

Required yards are doubled if
fire response is slow or otherwise inadequate



Fire code requires 4m setback: increase to 6m (20 ft) for parking

Note:
If a hangar contains less than 340 litres (75 gallons) of fuel, side yard requirements may be reduced



Elevation of typical 60 ft (18m) hangar at same scale

Elevation of typical 50 ft (15m) hangar at same scale

Hangar elevations supplied by PGA Architects

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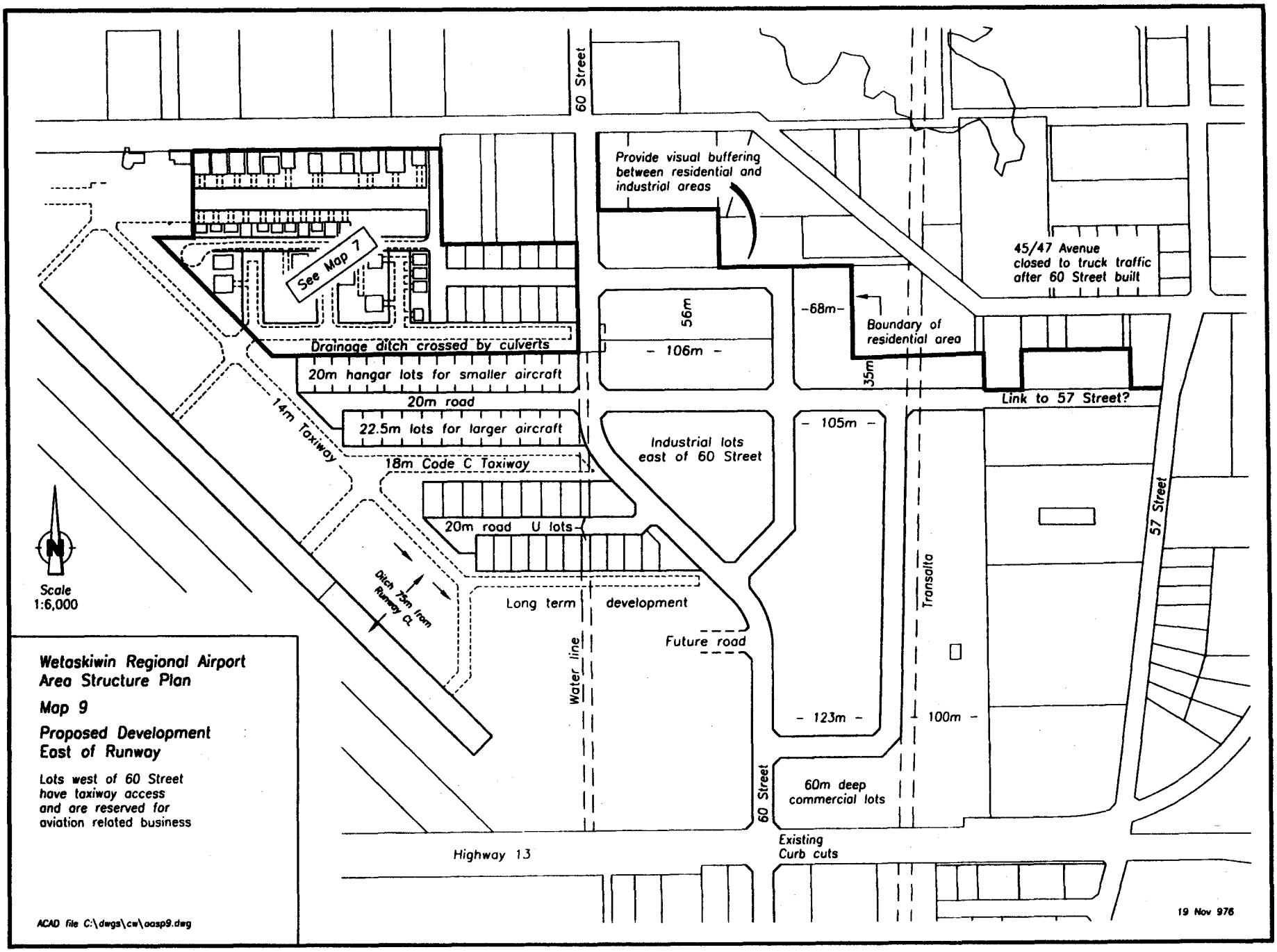

Wetaskiwin Regional Airport
Area Structure Plan

Map 9

Proposed Development East of Runway

Lots west of 60 Street have taxiway access and are reserved for aviation related business

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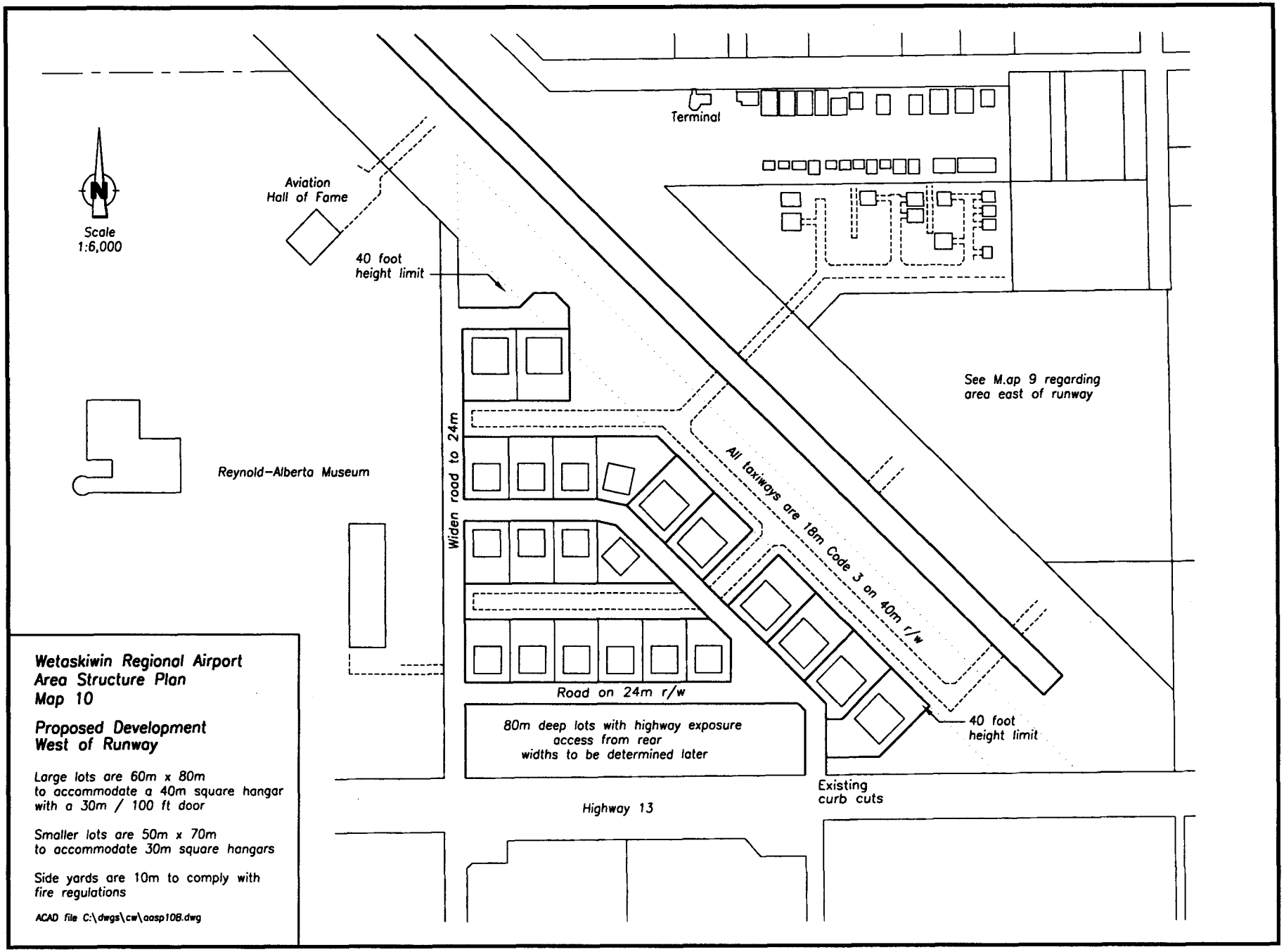

Terminal
Aviation
Hall of Fame
Scale
1:6,000
40 foot
height limit
See M.ap 9 regarding
area east of runway
Reynold–Alberta Museum
Widen road to 24m
All taxiways are 18m Code 3 on 40m r/w
Road on 24m r/w
80m deep lots with highway exposure
access from rear
widths to be determined later
40 foot
height limit
Existing
curb cuts
Highway 13
Wetaskiwin Regional Airport
Area Structure Plan
Map 10
Proposed Development
West of Runway
Large lots are 60m x 80m
to accommodate a 40m square hangar
with a 30m / 100 ft door
Smaller lots are 50m x 70m
to accommodate 30m square hangars
Side yards are 10m to comply with
fire regulations
ACAD file C:\dwgs\cw\aasp10B.dwg

The north row of hangars appears to encroach slightly on to the service road adjacent to 47 Avenue. If this suspicion is confirmed by survey, we recommend that a small area of the road be closed and consolidated with the lots prior to sale. This can be done as part of the subdivision, and need not add to the cost.

Many of the existing buildings are closer together than is allowed under the building and fire codes, but according to the City's building inspector they will be grandfathered and this need not prevent subdivision.

All lots will have access to a public road on one side, and to a taxiway on the other side. The taxiways must be consolidated in title with the airport to guarantee access in perpetuity. Both the taxiways and the roads will vary in width to accommodate existing hangars. Two short lengths of road can be no wider than 10 metres (33 feet) between existing hangars, but this will be adequate if parking is controlled. The main (existing) east-west road will have a 20 metre (66 foot) right of way. Taxiway rights-of-way will be a minimum of 20 metres, sufficient for a Code B taxiway, and the main east-west taxiway will be put into a 24 metre right of way, sufficient for Code C.

New private hangars will be located east and south of the existing ones. The existing south taxiway will be extended east into the Coltrex property, creating seven hangar lots, as shown on Map 7. Later, new roads and taxiways will be run west from 60 Street, as shown on Map 9. Most new hangar lots will be 21 metres wide and 40 metres deep (840 m2, 9,042 sq ft), to allow for building code fire separation, vehicle parking at the front, and aircraft parking between the hangar and the taxiway. Some lots may be wider to accommodate larger hangars. Again, the taxiways will remain part of the airport property.

Some of these hangars will have access to Code B taxiways, with a minimum 10.5 metre (30 foot) pavement on a 24 metre (80 foot) right of way. The rest will have access to a Code C taxiway with an 18 metre (60 foot) paved surface on a 40 metre (130 foot) right of way. The mix of large and small hangars will depend on market demand.

Aviation related businesses requiring larger lots will be accommodated west of the runway as shown on Map 10. All lots will have taxiway access. Two sizes of lot are shown. The large lots are 60 by 80 metres (200 by 260 feet), or just over an acre in size. They can accommodate a 40 metre square hangar with a 30 metre (100 foot) opening. This is the largest hangar needed, given the weight limits which restrict the use of the airport by bigger aircraft. There are also some slightly smaller lots, 50 by 70 metres (160 by 230 feet), to accommodate 30 metre (100 foot) square hangars.

Note that one taxiway crosses an internal road. This will require some form of traffic control backed by a bylaw to set out which user has right of way.

Lots for non-aviation light industrial uses will be created in SE 15, with access off 60 Street. The existing lots facing on to 57 Street are assumed to remain as is, although for emergency access a future road connection is pencilled in, subject to the owner's agreement, north of the present Reynolds Aviation Museum lot.

Highway Commercial lots are an option along Highway 13, both east and west of the runway. Lots are shown 80 metres (262 feet) deep; widths can be adjusted to fit the needs of clients. Lots will be accessed from behind, so no front service road is needed.

The area north west of the present terminal, along the future runway extension, will probably be developed last of all because it is the furthest away from services. At that time it can be used either for private hangars or for aviation-related small lots, depending on the demand at the time. Detailed design work should be deferred until then, but it is useful to agree on road alignments at this time so that future rights of way can be protected.

Phasing of Development

Map 6 shows the recommended phasing of development. ***The first phase*** is the subdivision of existing hangars on about 13 acres for sale to sitting tenants. No new roads or utilities are constructed in this phase, giving very low development costs. Estimated costs are shown in Table 1.

In the second phase of development, the existing south taxiway is extended east across the Coltrex lot to 60 Street, and "Coltrex Road" is built connecting 60 and 61 Street. The costs of development include 200 metres of taxiway and 150 metres of road.

A water main is already in place along the quarter line and it will be necessary to install a six or eight inch line along Coltrex Road with hydrants as required by fire codes. Optionally, the water line can be continued west to provide service and fire protection to existing hangars, then looped back to the main in 47 Avenue .

The third phase is the creation of new hangar lots to the south, with road access from 60 Street. Again, roads and taxiways are the main expense, plus some earthmoving to accommodate a drainage ditch. A water line must be installed in the east-west road.

The fourth phase is the completion of 60 Street down to Highway 13. This opens up 50 acres of land east of 60 Street for industrial development. It also enables 45/47 Avenue to be closed to truck traffic. Because of the extra traffic load, 60 Street should be paved at the time of construction.

Water and sewer service should be mandatory for this phase of development.

Depending on demand, it is possible that Phase 4 could be started from the south, with full water and sewer services, before Phase 3 is built.

The fifth phase is development west of the runway. The design shown on Map 10 shows about 40 developable acres. Full water and sewer service will be needed.

Finally, 30 acres of land north and west of the present airport buildings are developed for hangars, aviation-related industry, and possibly residential uses with taxiway access.

Sources of Development Funding

Senior governments have no programs in place for subsidizing the development of regional airports. This should not prevent the Airport Authority from working at the political level, but that is outside the scope of an Area Structure Plan.

The City of Wetaskiwin has adopted a user-pay policy for land development, and will not subsidize development costs. Every development must pay its own way. However, there are several ways the City can help.

First, the City may identify some work as of ***general benefit*** to the municipality, and pay for it out of general revenues. Construction of 60 Street has a large general benefit component because it will form part of the arterial road system identified in the Transportation Study and Municipal Development Plan, and will remove truck traffic from 45/47 Avenue. This justifies a substantial City contribution to the cost of construction.

A second way the City can help is by arranging for servicing to be paid by ***local improvement.*** The City borrows the money from the Alberta Municipal Finance Corporation and repays it over time, usually 20 years, at a rate of interest usually lower than a developer can get. The costs are apportioned on an area or front-foot basis, and the annual payments are added to the municipal taxes paid on each parcel which benefits. The developer's share of 60 Street construction might be financed like this. It is worth noting that lot owners like

local improvement financing because it turns a capital cost into an expense which is deductible for tax purposes.

Finally, the cost of development will be affected by its timing. When the Reynolds-Alberta Museum was built, the Alberta government paid the cost of water and sewer lines. These were oversized to meet foreseeable demand in the area, and the oversize costs are recoverable on a per-hectare basis under bylaw 1291-94. However, the agreement with the province expires in 2001, and no levies are payable on development started after that date.

Land Use Controls

Airport land use controls fall into two parts: offsite and onsite.

Onsite controls: The land within the airport itself must be restricted to aviation-related uses. If this is not done, aviation-related uses may be squeezed out. In the past this has not been an issue in Wetaskiwin because the City owns all the land, and the terms of the leases control its use. However, as lots are sold, the Authority will lose this power.

Restrictive covenants can be used to retain a degree of control over land even after it has been sold, but they need to be policed and enforced, often by going to court. Because of the cost, covenants are not recommended as the primary control mechanism. However, they can provide a useful back-up, independent of the municipality, because individual landowners have the right to enforce. West Central can provide examples of covenants.

Whether or not covenants are used, the City must control land use on the airport under its land use bylaw.

The airport itself, and the privately owned land to the south-west, are currently classified Direct Control. Every development application must be approved by Council. This is a slow and clumsy process. This zoning should be replaced immediately by a new Airport classification which will give fast approval to aviation-related land uses while restricting non-aviation-related uses.

The area proposed for runway expansion (NE 16-46-24-4) is now in the County of Wetaskiwin, and land use is controlled by the County's land use bylaw 95/54. The land is classified as Agricultural, and airport operations are not protected in any way. Fortunately the present owner is fully aware of the long term plans of the Airport Authority, so changing this bylaw is not a high priority. It can be deferred until the County next updates its bylaw.

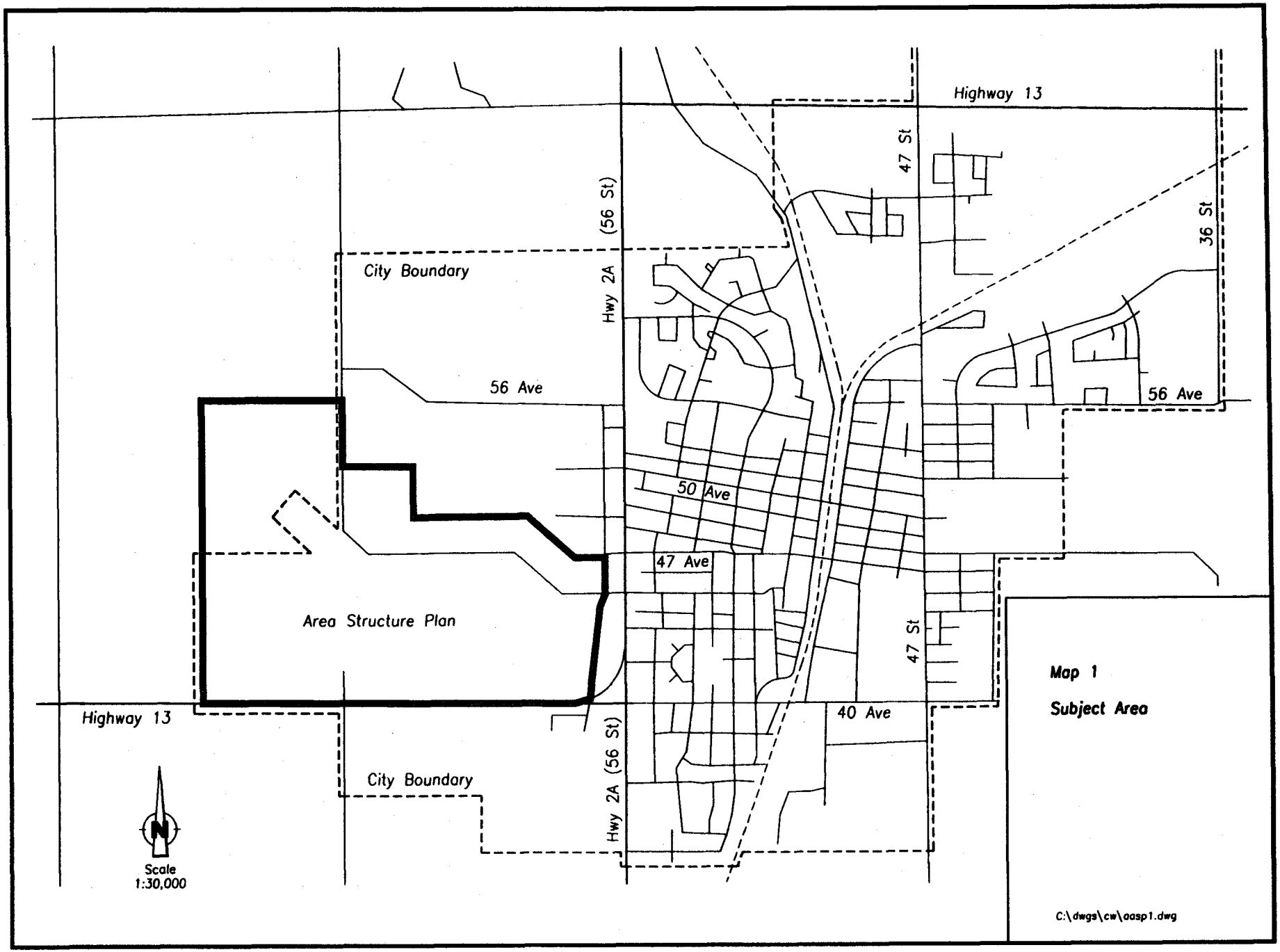
Offsite controls: It is also necessary to control land use surrounding the airport.

First, the safety of flight operations must be guaranteed. This means restricting the height of buildings, forbidding activities that interfere with navigation and communication, and eliminating land uses that might attract birds.

Second, land uses that are adversely affected by airport operations must be kept well away. The best example is noise-sensitive uses such as housing. If this is not done, there will be pressure from neighbours to restrict operations, or even to close the airport. Again, these controls must extend well outside the airport perimeter.

In the past, the Alberta Government provided for Airport Vicinity Protection Area (AVPA) Regulations which dealt with height and land use issues. The regulations were drafted with local input but enforced by the provincial government. Since the repeal of the Planning Act in 1995, AVPAs have been discontinued for all except Edmonton and Calgary International Airports. The municipal land use bylaw is now the only practical means of controlling off-site land use.

The City's existing land use bylaw controls the use of land outside the airport perimeter. It regulates the height of buildings and uses of land. No changes are required at this time, but the height limits will change when the runway is extended.


Highway 13
47 St
36 St
(56 St)
Hwy 2A
City Boundary
56 Ave
50 Ave
47 Ave
40 Ave
Area Structure Plan
Highway 13
City Boundary
Hwy 2A (56 St)
47 St
56 Ave
N
Scale
1:30,000
Map 1
Subject Area
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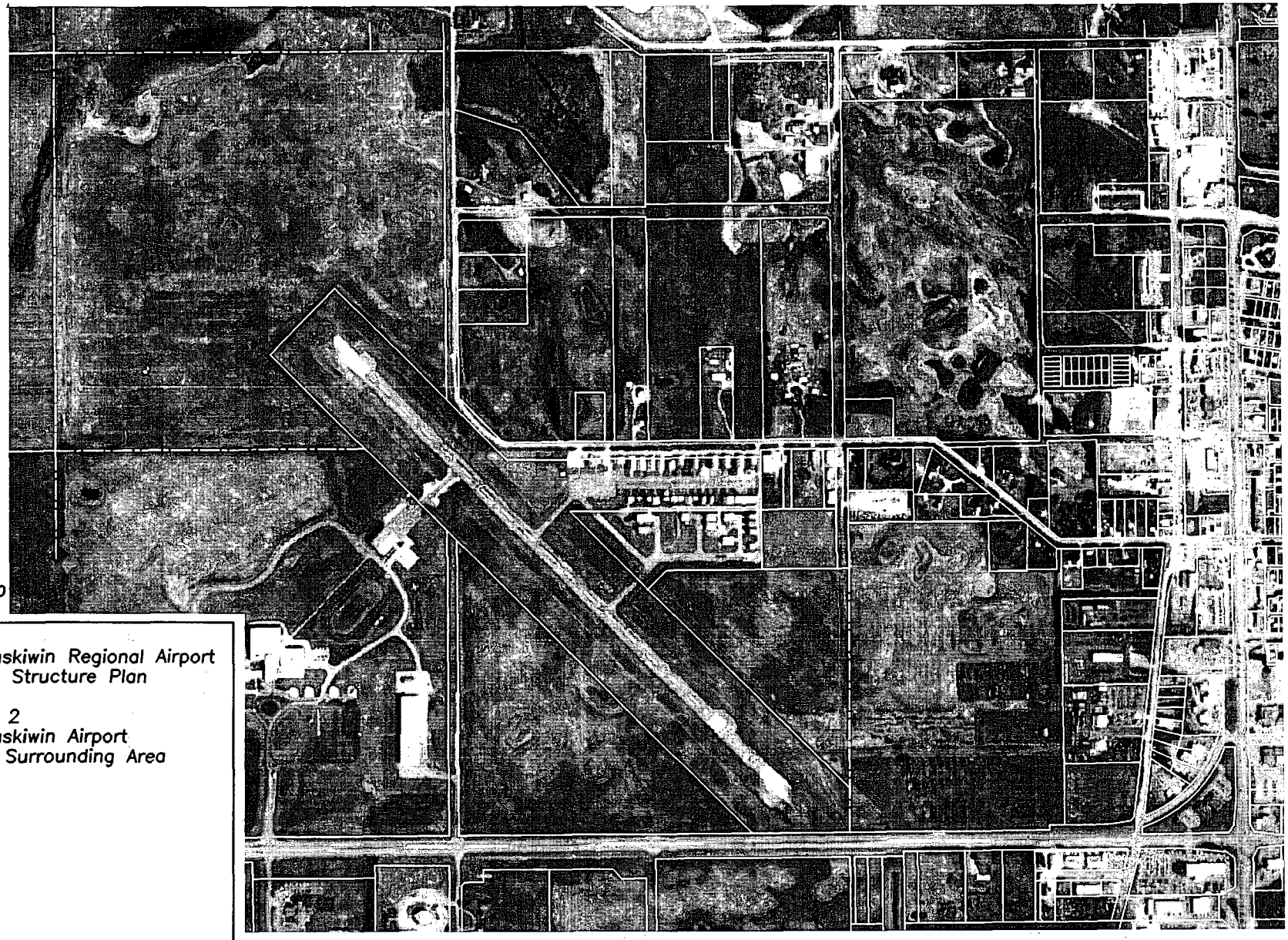

Scale
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Wetaskiwin Regional Airport
Area Structure Plan

Map 2
Wetaskiwin Airport
and Surrounding Area

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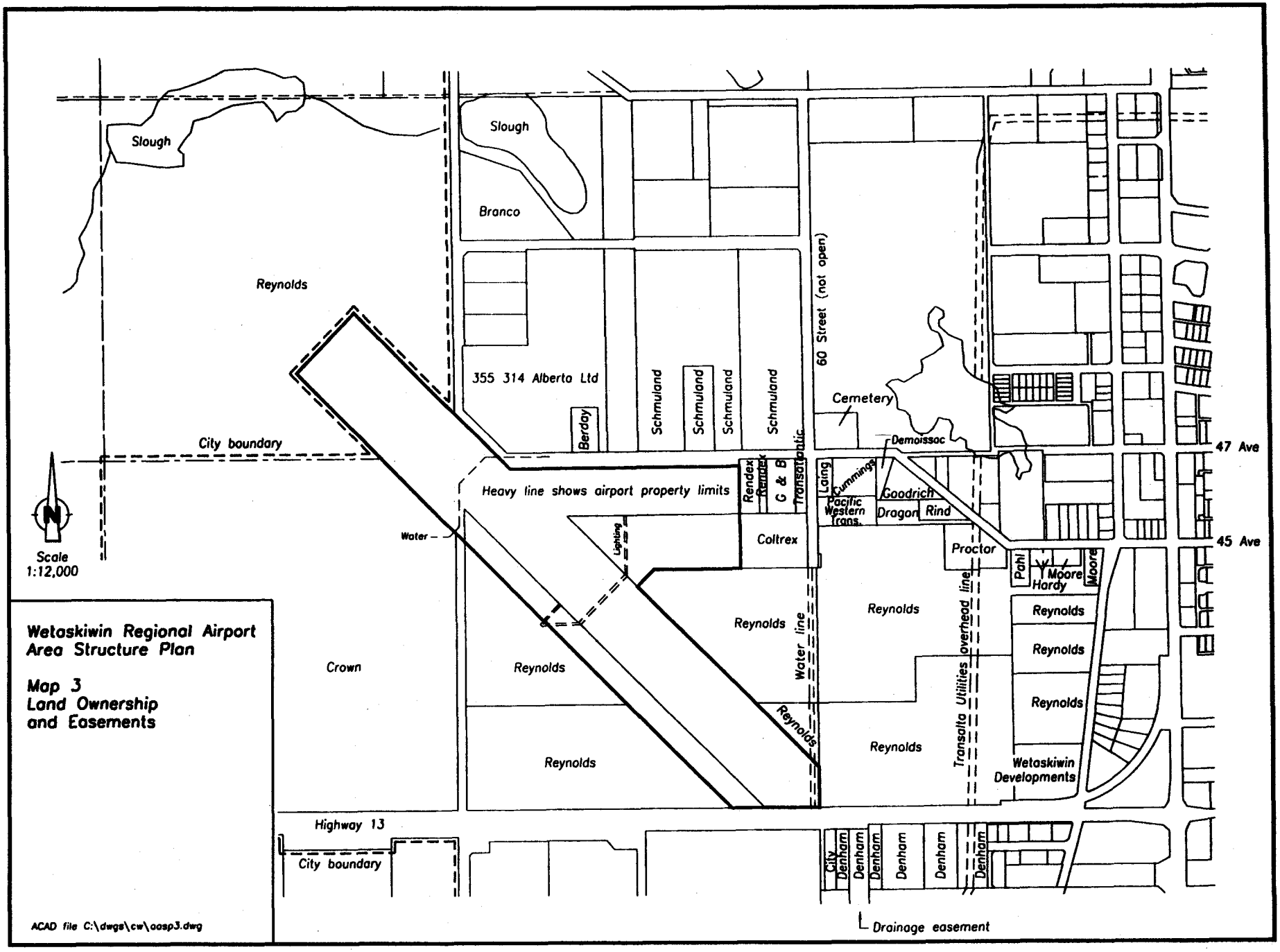
Slough
Slough
Branco
Reynolds
355 314 Alberta Ltd
Berday
Schmuland
Schmuland
Schmuland
Schmuland
60 Street (not open)
Cemetery
Demoissac
47 Ave
45 Ave
City boundary
Heavy line shows airport property limits
Rendex
Rendex
G & B
Transalta
Laing
Cummings
Pacific Western Trans.
Goodrich
Dragon
Rind
Water
Lighting
Coltrex
Proctor
Pahl
Moore Hardy
Moore
Scale 1:12,000
Wetaskiwin Regional Airport Area Structure Plan
Map 3 Land Ownership and Easements
Crown
Reynolds
Reynolds
Reynolds
Water line
Reynolds
Reynolds
Transalta Utilities overhead line
Reynolds
Reynolds
Reynolds
Reynolds
Wetaskiwin Developments
Highway 13
City boundary
City
Denham
Denham
Denham
Denham
Denham
Denham
Drainage easement
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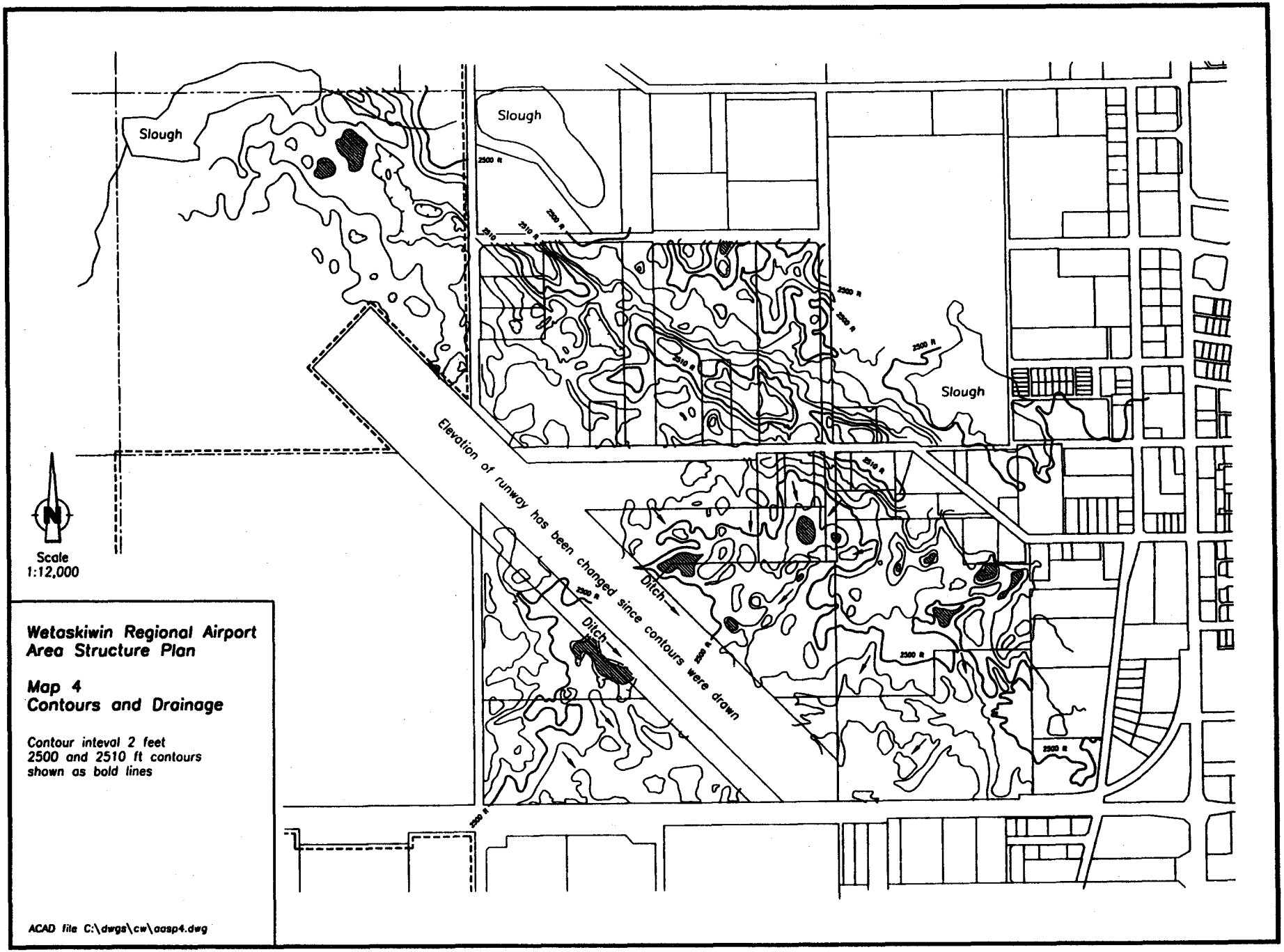

Wetaskiwin Regional Airport
Area Structure Plan

Map 4
Contours and Drainage

Contour inteval 2 feet
2500 and 2510 ft contours
shown as bold lines

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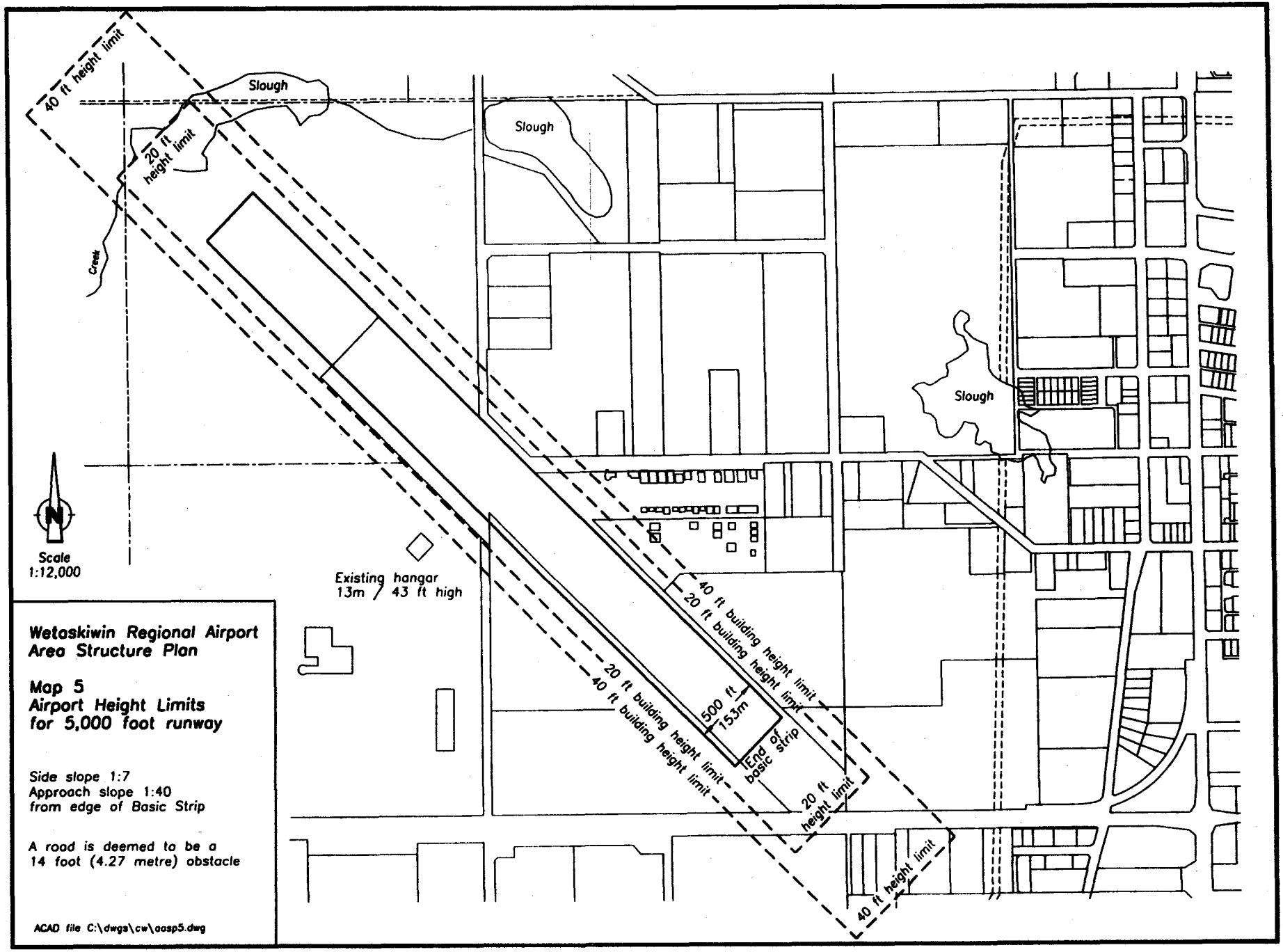
40 ft height limit
Slough
20 ft height limit
Creek
Slough
Slough
N
Scale
1:12,000
Existing hangar
13m / 43 ft high
40 ft building height limit
20 ft building height limit
20 ft building height limit
40 ft building height limit
500 ft
153m
End of basic strip
20 ft height limit
40 ft height limit
Wetaskiwin Regional Airport
Area Structure Plan
Map 5
Airport Height Limits
for 5,000 foot runway
Side slope 1:7
Approach slope 1:40
from edge of Basic Strip
A road is deemed to be a
14 foot (4.27 metre) obstacle
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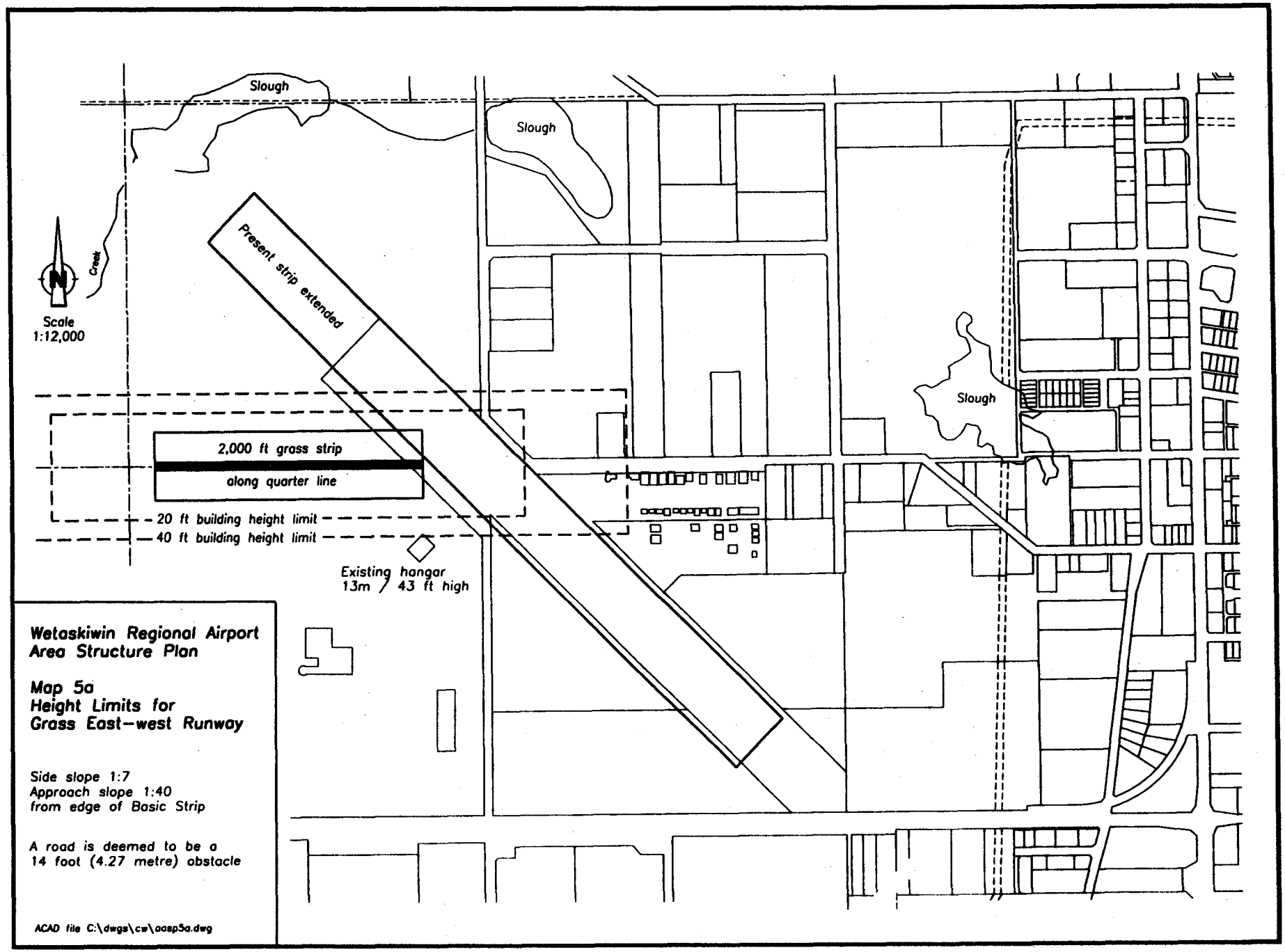
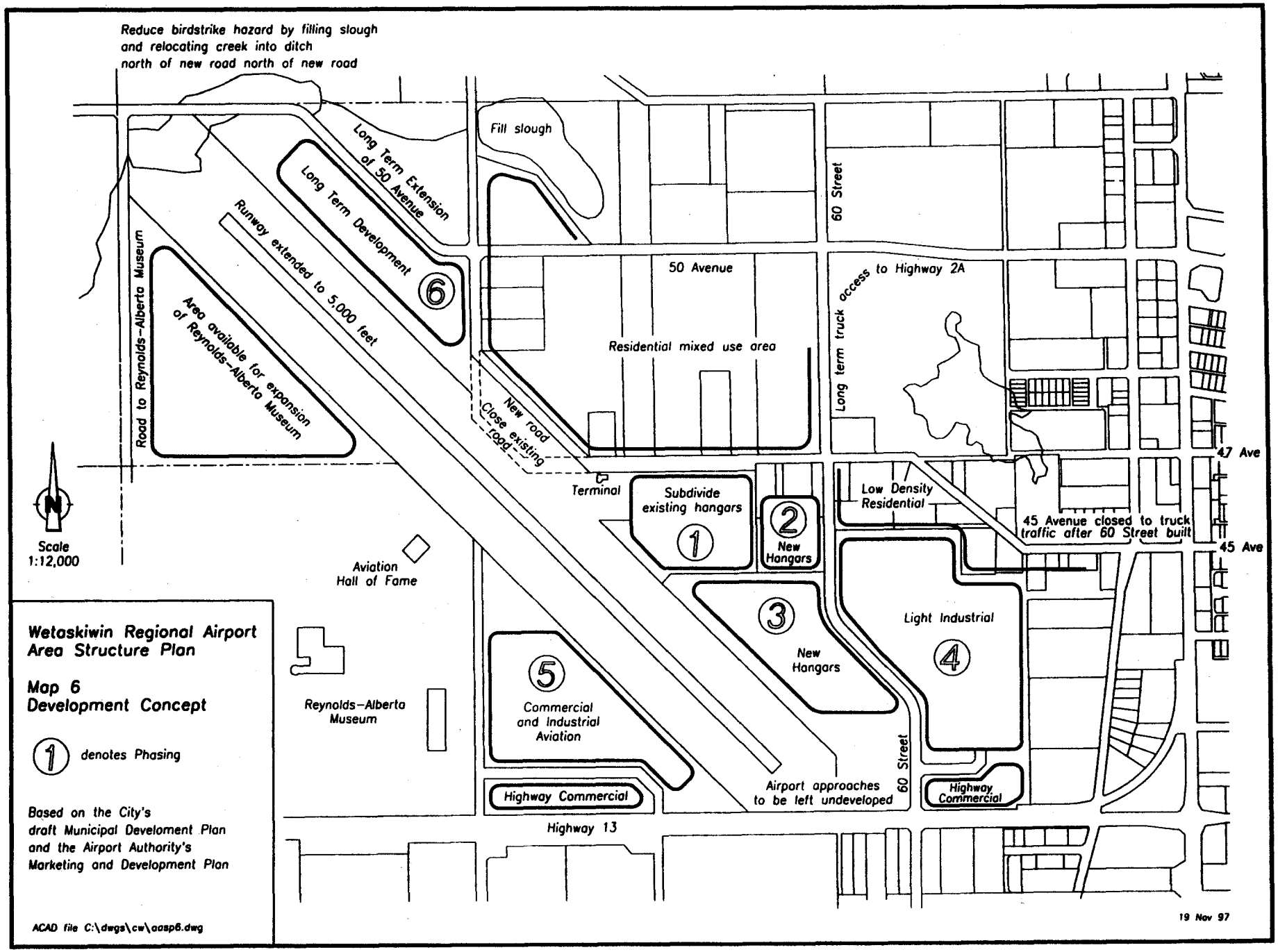
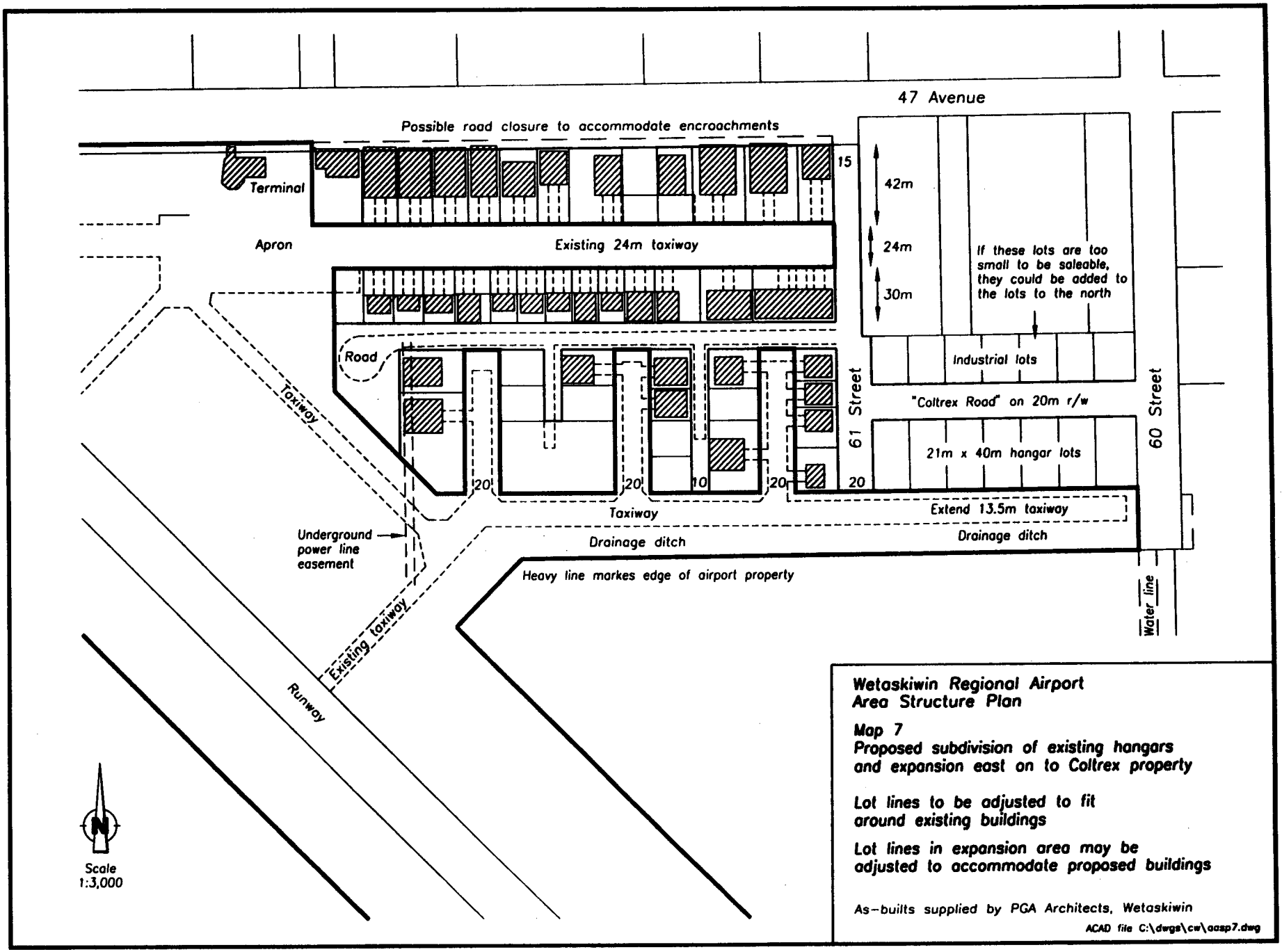

Slough
Slough
Slough
Present strip extended
Creek
N
Scale
1:12,000
2,000 ft grass strip
along quarter line
20 ft building height limit
40 ft building height limit
Existing hangar
13m / 43 ft high
Wetaskiwin Regional Airport
Area Structure Plan
Map 5a
Height Limits for
Grass East-west Runway
Side slope 1:7
Approach slope 1:40
from edge of Basic Strip
A road is deemed to be a
14 foot (4.27 metre) obstacle
ACAD file C:\dwgs\cw\aasp5a.dwg


Reduce birdstrike hazard by filling slough and relocating creek into ditch north of new road north of new road
Fill slough
Long Term Extension of 50 Avenue
Long Term Development
6
Runway extended to 5,000 feet
Road to Reynolds-Alberta Museum
Area available for expansion of Reynolds-Alberta Museum
60 Street
50 Avenue
Residential mixed use area
Long term truck access to Highway 2A
New road
Close existing road
Terminal
Subdivide existing hangars
1
2
New Hangars
Low Density Residential
47 Ave
45 Avenue closed to truck traffic after 60 Street built
45 Ave
Scale 1:12,000
Aviation Hall of Fame
3
New Hangars
Light Industrial
4
5
Commercial and Industrial Aviation
Reynolds-Alberta Museum
Highway Commercial
Airport approaches to be left undeveloped
60 Street
Highway Commercial
Highway 13
Wetaskiwin Regional Airport Area Structure Plan
Map 6
Development Concept
1 denotes Phasing
Based on the City's draft Municipal Develoment Plan and the Airport Authority's Marketing and Development Plan
ACAD file C:\dwgs\cw\aasp6.dwg
19 Nov 97


47 Avenue
Possible road closure to accommodate encroachments
Terminal
Apron
Existing 24m taxiway
15
42m
24m
30m
If these lots are too small to be saleable, they could be added to the lots to the north
Industrial lots
"Coltrex Road" on 20m r/w
21m x 40m hangar lots
61 Street
60 Street
Road
Taxiway
20
20
10
20
20
Taxiway
Extend 13.5m taxiway
Underground power line easement
Drainage ditch
Drainage ditch
Heavy line markes edge of airport property
Water line
Existing taxiway
Runway
N
Scale 1:3,000
Wetaskiwin Regional Airport
Area Structure Plan
Map 7
Proposed subdivision of existing hangars and expansion east on to Coltrex property
Lot lines to be adjusted to fit around existing buildings
Lot lines in expansion area may be adjusted to accommodate proposed buildings
As-builts supplied by PGA Architects, Wetaskiwin
ACAD file C:\dwgs\cw\aasp7.dwg