

REPEALED BY BY-LAW NO. 47/2022
JUNE 23, 2022

CONSOLIDATION UPDATE: APRIL 27, 2011

THE CITY OF WINNIPEG

AIRPORT VICINITY PROTECTION AREA SECONDARY PLAN BY-LAW
NO. 6378/94

**A By-law of THE CITY OF WINNIPEG to adopt
a secondary plan for the Airport Vicinity
Protection Area established by Plan
Winnipeg.**

THE CITY OF WINNIPEG, in Council assembled, hereby establishes the attached document as amended, entitled "Winnipeg Airport Vicinity Development Plan" attached to and forming part of By-law No. 6378/94 as a secondary plan.

amended 7020/97

1. This By-law shall be referred to as the "**Airport Vicinity Protection Area Secondary Plan By-law**".

added 8162/2002

DONE AND PASSED in Council assembled, this 25th day of May, A.D., 1994.

**ATTACHED TO AND
FORMING PART OF
BY-LAW NO. 6378/94**

**RECOMMENDATIONS
DECEMBER 15, 1993**

**with revisions
March 16, 1994**

**WINNIPEG AIRPORT VICINITY
DEVELOPMENT PLAN**

(AS AMENDED)



Winnipeg International Airport is our front door to the world.

"From an economic-development perspective, Airport operations are critically important to Winnipeg. Our central geographic location and 24 hour Airport operations are attractive advantages for many industries."

- *Winnipeg 2000 - An Economic Development Strategy*

The Next Step: Canada's New Transborder Gateway

"The opportunity for Winnipeg to become a major influence in the global transportation environment is totally feasible and attainable in a very short time frame. Such an opportunity will require the bold initiative of the private sector coupled with the support of all three levels of government. The opportunity is there for the asking; the opportunity should now be acted upon."

- *Sypher: Mueller - Feasibility Study for a Multi-Modal Transportation Park at Winnipeg, Canada*



WINNIPEG AIRPORT VICINITY DEVELOPMENT PLAN

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Interpretation

This Plan sets out policies and proposals for the Airport Vicinity Protection Area established by Plan Winnipeg. To the extent statements contained in this Plan involve the expenditure of public funds including the allocation of staff, space or equipment, or discretion of councillors in voting to establish, collect or allocate taxes, fees and other revenues - those statements are proposals as referred to in Section 585 of The City of Winnipeg Act.

Section 585 provides: "The adoption of a secondary plan by-law does not require council or any person, association, organization, or department or agency of the Crown to undertake a proposal in it, but no public work, undertaking or development within an area affected by a secondary plan by-law shall be inconsistent with the secondary plan by-law."

Where two or more policies set out in this Plan conflict or may conflict relative to any matter or thing, the council of the City of Winnipeg, the Committees of Council, and the officers of the City having jurisdiction shall follow and apply those policies so as to achieve what is in their judgment the best balance between or among those policies.

INTRODUCTION

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Economic development and the creation of meaningful jobs is vitally important to the future of Winnipeg. Winnipeg's economy has traditionally drawn its strength from its role as a major transportation centre. This relationship between the community's economy and the transportation industry remains strong and can continue as such provided thoughtful planning decisions are made today.

Transportation has always played a significant role in the growth and development of the City of Winnipeg. The confluence of the Red and Assiniboine Rivers was a natural meeting and trading place centuries ago, and the use of the rivers as transportation and trading corridors greatly assisted the development of early settlements in this area. Transportation sophistication grew from the establishment of cart and wagon trails through the completion of the transcontinental railroad. With each new transportation development came the opportunity for increased commercial activity for Winnipeg, and the ability of its citizens and businesses to forge and expand their links with other parts of the country.

The arrival of the C.P.R. trans-continental railway in the late 1800's established Winnipeg as the distribution and business centre for the prairies - Canada's gateway to the west. Today's transportation equivalent of the C.P.R. mainline is the City's Airport. Winnipeg International Airport is our front door to the world. It has distinct advantages over other international Airports in Canada. Winnipeg Airport does not suffer from congestion problems current in some of the larger Airports. Moreover, it is located on major international flight routes. And, most importantly, it operates 24 hours a day, without restrictions.

The restructuring of the transportation industry to meet the demands of the changing North American and global economy has resulted in the growing importance of the cargo industry and intermodal transportation systems. Additionally, the courier industry has also expanded to meet the changing needs of the business community. Because of its central location, the existence of an established transportation industry, and the ability of Winnipeg International Airport to meet the requirements of these industries, Winnipeg is well placed to capitalize upon these new opportunities. However, the window of opportunity may be extremely brief. The City must act quickly or the opportunity could be forever lost.

Winnipeg International Airport

The Winnipeg International Airport (YWG) is Canada's only centrally located 24 hour airport. Only 4.5 miles (7 km) from the city's downtown, it provides convenient access for Winnipeg's business and visitor traffic alike. YWG is Canada's longest serving international airport: it opened in 1928.

As Canada's only international airport between Toronto and Calgary, YWG offers a broad range of air passenger and cargo services including international carriers, commuter airlines, jet freight carriers, fixed base operators, and various charter operations. It serves in excess of 2.2 million passengers, over 140,000 aircraft movements, and handles over 130,000 tonnes of cargo annually.

Winnipeg's leaders have recognized the significance of the airport to the City's future. A visionary \$100 million expansion and facilities improvement initiative which began several years ago is helping ensure that YWG can handle increased passenger and commercial demand well into the next century. Priorities include improved trans-border air services and direct services to the U.K. and Europe, establishment of containerized cargo carrying capabilities as well as truck-air capabilities. Winnipeg is one of North America's important and major air gateways, due to its favourable central location relative to global flight paths.

Expectations



Today, people require that decisions made by government accurately reflect the needs of the community. Good decision-making depends on a solid understanding of these needs and an appreciation of meeting reasonable expectations. However, seldom are the expectations of one constituency aligned fully with the needs of another. This is true of the issues and concerns associated with the development of the Airport. The success of the planning process will depend on achieving a favourable balance among the various expectations.

A successful business sector is the key to economic prosperity for Winnipeg. Business produces the goods and services, and provides meaningful jobs that allow other aspects of the community to prosper. The International Airport is an important link between Winnipeg businesses and markets that now must be considered continental, and indeed, global. Business expects to have a 24-hour operating Airport. High-paying jobs, future investment and protection of this investment depends on it.

The local needs of the area residents vary considerably. However the residents have expressed reservations about increased noise and traffic problems associated with the development of the Airport and possible neighbourhood destabilization due to these factors. Area residents want neighbourhoods that exhibit a high standard of livability and they expect that noise and traffic problems will be addressed. Furthermore, they expect to be kept informed. Finally, everyone concerned expects sound management of the issues, and predictable results.



A.V.D.P. Boundary



The Airport Vicinity Development Plan (A.V.D.P.) boundaries are related directly to Noise Exposure Forecast contours. The 25 NEF contour approximates the outer limit of the A.V.D.P. area. The NEF configuration reflects the ultimate traffic volume at Winnipeg International Airport, and includes the potential for an additional runway to the northeast of the existing runway. Whenever possible, clear boundaries were chosen to avoid confusion. Major rights-of-way and individual property lines were selected in determining the location of the A.V.D.P. area. The Airport vicinity boundary will be reviewed and revised as necessary to reflect changes to the NEF contours.

Noise Exposure Forecasts



The principle concern for residents living in proximity to the Airport is the noise generated by the arrival and departure of aircraft. Transport Canada has adopted an internationally-accepted method called Noise Exposure Forecast (NEF) to measure tolerance to aircraft noise. Transport Canada introduced NEFs to encourage compatible land use planning in the vicinity of airports (Transport Canada Aviation Group, 1987). NEFs are a complex calculation based on the types of aircraft and the noise they make, their flight paths, as well as the time of day and frequency of their takeoffs and landings.

Modelling tolerance to aircraft noise is a concept employed throughout Canada, the United States and in Europe. NEF contour plots are made available to local governments for use in conjunction with Transport Canada's recommended land uses. These recommended land uses enable municipalities to approve compatible development within the noise contours.

Community Response Prediction to Noise Exposure Forecast (NEF Levels)	
RESPONSE AREA	RESPONSE PREDICTION*
1. (over 40 NEF)	Repeated and vigorous individual complaints are likely. Concerted group and legal action might be expected.
2. (35-40 NEF)	Individual complaints may be vigorous. Possible group action and appeals to authorities.
3. (30-35 NEF)	Sporadic to repeated individual complaints. Group action is possible.
4. (below 30 NEF)	Sporadic complaints may occur. Noise may interfere occasionally with certain activities of the resident.
* These community response predictions are generalizations based upon experience resulting from various noise exposure units used by other countries. For specific locations, the response may vary somewhat in accordance with existing ambient or background noise levels and prevailing social, economic and political conditions.	
Source: Transport Canada Aviation Group, June 1989.	

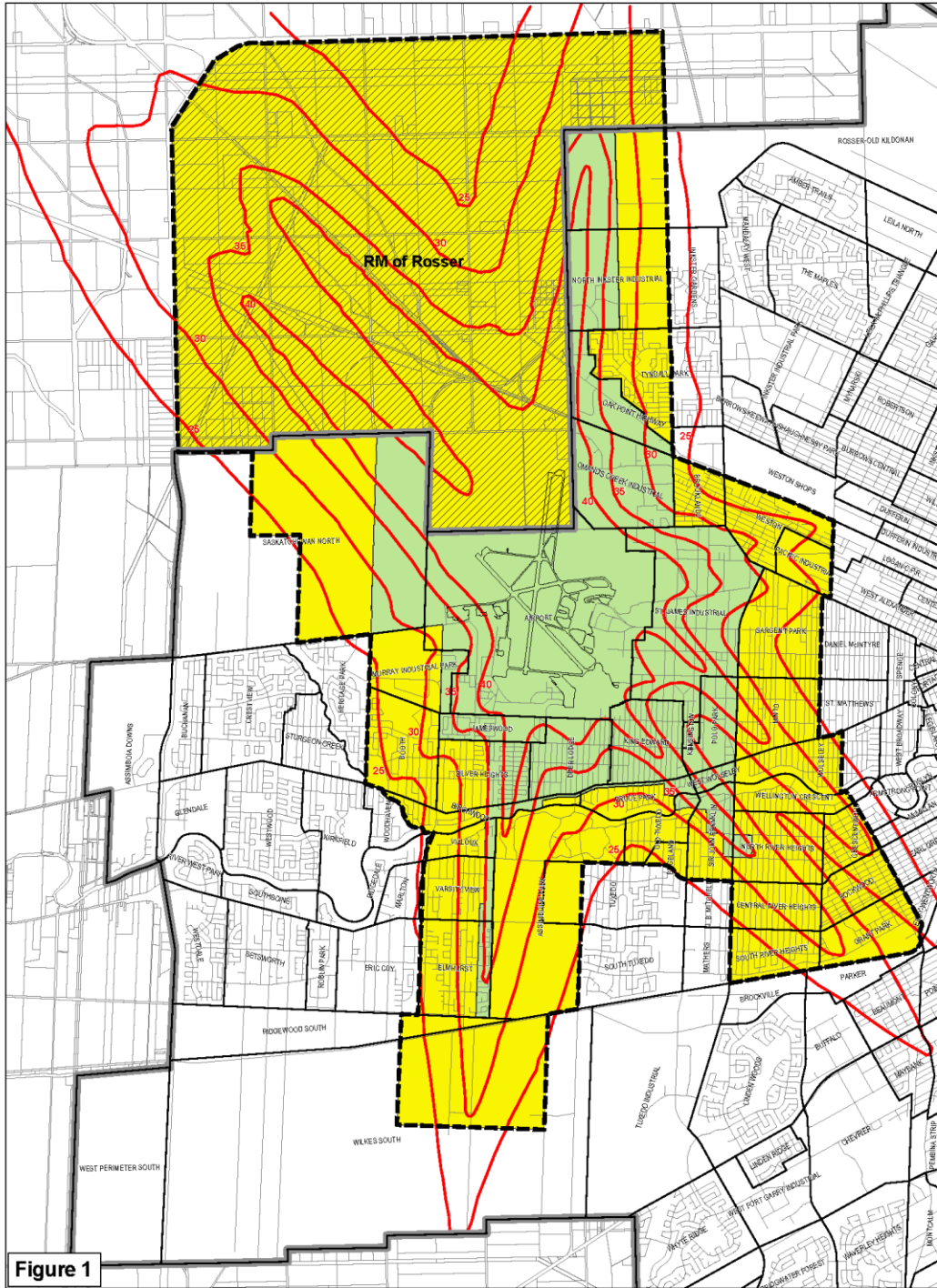
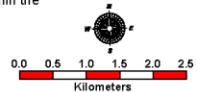


Figure 1

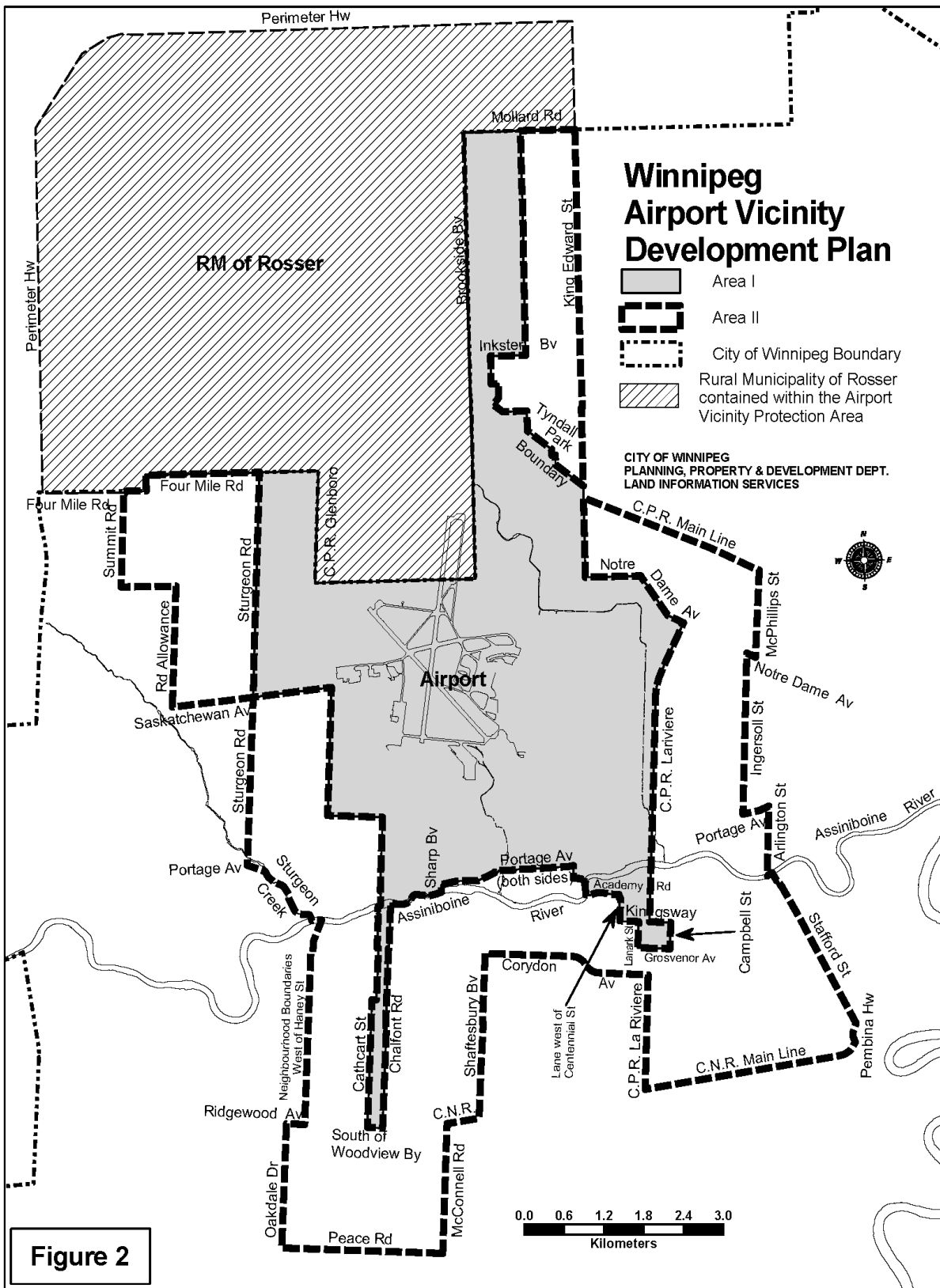
CITY OF WINNIPEG
PLANNING, PROPERTY & DEVELOPMENT DEPT.
LAND INFORMATION SERVICES

Winnipeg Airport Vicinity Development Plan Airport Vicinity Development Plan Boundaries

- Neighbourhood Characterization Boundaries
- 1995 Noise Exposure Forecast Contour
- City of Winnipeg Boundary
- Rural Municipality of Rosser contained within the Airport Vicinity Protection Area
- Area I
- Area II
- AVDP Boundary



amended 130/2010



amended 130/2010

Process



Strategic Planning Process

Planning for the Airport's future is not new. To ensure that past work was not ignored, research reports and studies were reviewed, and industry specialist and business representatives were consulted to provide an assessment of the opportunities for the development of the Airport and the surrounding area. A vision statement was articulated to reflect the potential of Winnipeg Airport. Issues were identified through public consultation involving the development of the Airport Master Plan, the preparation of an Economic Development Strategy for Winnipeg and the review of Plan Winnipeg. Workshop sessions and "Brown Bag" meetings were held to verify issues, to assign priorities and to provide solutions to the issues. Throughout the process there was a constant focus on validation to ensure that the issues which had been identified were relevant to attaining the vision, and that the objectives and strategies were realistic.

These steps represent a strategic planning process. Through this process, specific actions are identified to address key issues. Three major issues were identified, and if properly managed, will enable the economic potential of the Airport to be realized. The Airport Vicinity Development Plan sets in place the means for managing the three priority issues. To ensure that the plan, and its recommendations are implemented, the process provides for the endorsement of the Plan by the Council, an amendment to Plan Winnipeg, revisions to municipal by-laws and regulations, and the initiation of related immediate action.

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Strategic planning is a systematic way to manage change. It helps to integrate activities, and assures that a common purpose and a common sense of direction guides such activities.

The steps involved in this approach include:

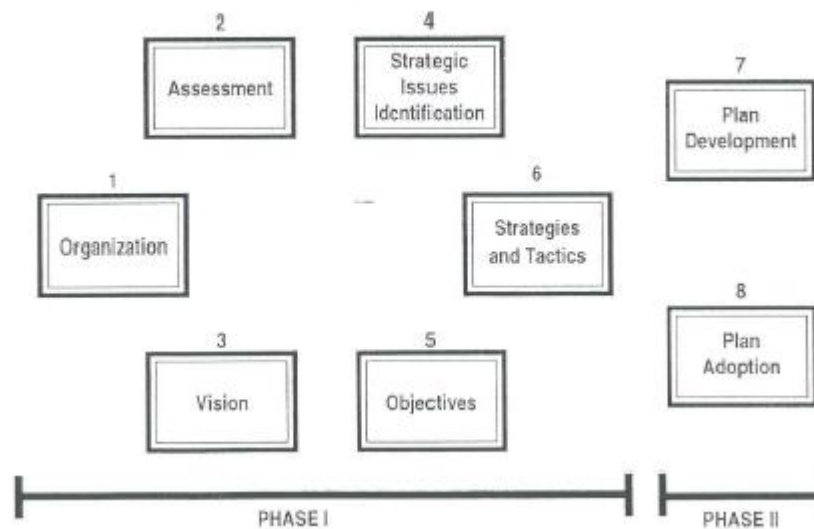
Phase I

- *Assessment* - assessing the external opportunities and threats together with internal strengths and weaknesses.
- *Vision Statement* - articulating a desired end state.
- *Issue Identification* - highlighting key issues that arise from the overall assessment and must be addressed in order to see the vision realized.
- *Objectives* - setting the direction.
- *Strategies and Tactics* - deciding precisely how the issues will be resolved.

Phase II

- *Plan Development* - drafting and preparing recommendations.
- *Plan Adoption* - endorsing the recommendations and authorizing implementation.

Strategic Planning Framework



Organization

Organizational Structure

STEERING COMMITTEE

The Airport Vicinity Development Plan (A.V.D.P) is driven by an Executive Steering Committee that is responsible for overall policy direction and decision-making. This committee is comprised of senior political representatives from the City of Winnipeg and the rural municipalities with Councillor George Fraser as the chair. The Committee reports to the City of Winnipeg Standing Committee on Planning and Community Services.

- Chairperson: Councillor George Fraser
(City of Winnipeg)
- Councillor Glen Murray
(Chairperson, Committee
on Planning and Community
Services, City of Winnipeg)
- Mayor Dave Lethbridge
(Chairperson, South
Interlake Planning Board/
Mayor of Stonewall)
- Councillor Jack Chataway
(R.M. of Rosser)

MANAGEMENT ADVISORY COMMITTEE

A Management Advisory Committee provides the Steering Committee with input and advice on direction and recommended actions. This Advisory Committee includes public and private sector representatives. It is chaired by Commissioner Tom Yauk, City of Winnipeg. The vice-chair is Mr. Lynn Bishop, General Manager, Winnipeg International Airport.

- Chairperson: Mr. Tom Yauk, (Commissioner
of Planning and Community
Services, City of Winnipeg)
- Vice-
Chairperson: Mr. Lynn Bishop, (General
Manager, Winnipeg
International Airport)
- Honourable Otto Lang,
(C.E.O., Centra Gas)
- Mr. Colin Taylor, (Past
Chairperson, Transportation
Forum, Winnipeg Chamber of
Commerce)
- Mr. Fred Fulcher, (Executive
Director, Winnipeg Local
Airport Authority)
- Colonel J.R.B. Proulx, (Wing
Commander, 17 Wing
Westwin, Manitoba)
- Mr. Klaus Thiessen,
(A/President, Winnipeg 2000)

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ADMINISTRATIVE SUPPORT GROUP

An Administrative Support Group comprised of City, Provincial, and Federal Government Staff will provide support to the Management Board and co-ordinate all resources.

ORGANIZATIONAL STRUCTURE

	ROLE	COMPOSITION
Executive Steering Committee	Sets overall policy direction for the plan	Includes senior political representatives from the City, and the Rural Municipality Is chaired by Councillor George Fraser
Management Advisory Board	Provides input and advice on direction and action	Includes public and private representatives Is chaired by Mr. Tom Yauk, Commissioner of Planning and Community Services and Vice-Chaired by Mr. Lynn Bishop, General Manager, YWG
Administrative Support Group	Delivers the process	Includes 14 individuals from the three levels of government

Assessment

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Research

An extensive amount of work has been carried out during the past 10 years which serves as background information for the Airport Vicinity Development Plan.

1. **Winnipeg Area Airports System Study**

In the 1970s, the Winnipeg Area Airport System Study (WAASS) reviewed future air transportation needs and concluded that Winnipeg International Airport would best serve the interests of its users by remaining at its present location. Alternatives were suggested for capacity enhancement. Throughout the 70s and early 80s these alternatives were subjected to an intensive public review, and were refined and reviewed in view of changing traffic forecasts. The 1984 YWG Master Plan represented the final evaluation of alternatives and recommended the establishment of a parallel runway if and when required.

2. **Winnipeg International Airport Master Plan**

The original YWG Master Plan was completed in September, 1984 and reinforced the significance of the Airport to the citizens of Winnipeg and the Province of Manitoba. The issues and concerns related to aircraft noise, noise management procedures, urban growth, compatible land use, environmental protection, and uncompromised aviation development. These issues were documented in conjunction with existing Airport land use, aviation forecasts, planned on-site development and the significance of air cargo/courier business to YWG's future economic development.

3. **YWG - Master Plan II**

The original Master Plan, while still valid, has been modified due to a scaled down demand for YWG services. Expansion and improvement of air terminal facilities and services has been undertaken, while the planning horizon for an additional parallel runway has been extended beyond the year 2000. The draft version of Master Plan II was completed in March, 1991 and approved in June 1993.

4. **Winnipeg Economic Development Strategy**

In 1990, City Council endorsed a report entitled "*Winnipeg 2000 - An Economic Strategy for Winnipeg*". A long-range Airport strategy designed to enhance the city's capability as a major hub for handling cargo and passengers was a critical component of the report.

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5. **Winnipeg International Airport Vision Statement**

The Winnipeg International Airport developed a vision document in 1992 which identified YWG as Canada's new transborder gateway to North America and beyond. In order to capitalize upon this vision, it was recommended that a strategy be developed to ensure the Airport's competitive advantage over the long run. Protection of unrestricted 24 hour operations was deemed as critical in maintaining the Airport's competitive advantage.

6. **Plan Winnipeg - Review '92**

Plan Winnipeg, the City of Winnipeg's long range development plan, identifies the unrestricted 24-hour protection of YWG operations and enhancement of the Airport's ability to provide passenger and cargo operations as vital. The Plan states that "it is important to recognize and support the Airport as a centre of industrial development." To accomplish this objective "the City shall prepare, implement and periodically review an Airport Vicinity Development Plan, in cooperation with the other levels of government, business, and the R.M. of Rosser." Plan Winnipeg received final reading in June 1993.

Critical Factors

The assessment provides a review of the critical factors influencing the operation and development of the Airport. Emphasis is placed on evaluating the forces which are strengths, weaknesses, opportunities or threats to the Airport's continued use and growth in the future. Six key factors emerge.

1. **Airline Industry Restructuring**

Restructuring/downsizing of the airline industry due to overwhelming losses encountered by airlines throughout North America provides opportunities for Winnipeg International Airport that must be capitalized upon now. The pursuit of more economical air transportation has become imperative for airlines throughout the continent and Winnipeg offers a cost-effective alternative to flights traditionally routed through central Canada.

2. **Central Geographic Location**

Winnipeg's central geographic location combined with the evolution towards global economies of scale resulting from reduced international trade barriers (i.e. Canada-US., FTA, NAFTA) provides YWG with an unprecedented opportunity. The city is centrally located between Europe, North America and the world's fastest growing economies on the Pacific Rim. By developing into an alternate trans-Atlantic gateway for Europe to access Western Canada and the United States, Winnipeg International Airport has the opportunity to become a major cargo and passenger hub. Winnipeg's strategic location at the centre of the world, relative to Europe and the western United States, gives YWG a substantial competitive advantage in terms of fuel savings over existing hubs in central Canada. Similar opportunities exist between Asia and the south-eastern United States.

3. **"Open Skies" Policy**

Liberalization of the existing trans-border air agreement between Canada and the U.S., known as "Open Skies", would result in economic opportunities for Winnipeg. Presently, Winnipeg is severely limited in its air route options to the United States. Such a new agreement would enable U.S. and Canadian carriers to fly from Winnipeg to new destinations in the U.S. based upon traffic demand, as opposed to treaty rights. This would increase air services and could allow Winnipeg to become an alternate, intermodal, gateway to North America. YWG must target specific routes such as Chicago, and Denver, which can be more economically served through Winnipeg. The

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existing air agreement between Canada and the United States works against Winnipeg, because it does not allow direct service to Denver and restricts the number of air carriers that can fly between Chicago and Winnipeg. By eliminating such restrictions, Winnipeg's transborder air services would increase, which in turn would have a positive impact on the local economy.

4. Intermodal Transportation

Intermodal transportation opportunities in the form of air/truck and truck/rail are rapidly changing traditional means of transporting goods to market. The cost effectiveness of the inter-modal shipment of goods combined with Winnipeg's geographic advantage clearly identify the economic advantages of locating a multi-modal transportation facility on/or adjacent to the Winnipeg International Airport. Winnipeg has competitive advantages in trucking as well as air transportation due to its centralized location. Cargo delivered by air to Winnipeg, can be re-routed by truck to virtually any North American destination within a 48 hour period. Strategic air and trucking firm alliances must be established for the purpose of strengthening Winnipeg's position in the cargo industry. As identified, shorter distances translate into cost savings. However, the key to pursuit of this advantage will be in providing carriers with some back haul opportunity.

5. Time Sensitivity

Time sensitivity of air-freight and the need for convenience has become a critical element in the communications, aerospace and health industries. All three of these industries have been identified as areas with strong growth potential in Winnipeg and are recognized as "the" growth industries of the 21st Century. Courier flights routed through Winnipeg can significantly reduce delivery times for companies producing time-sensitive goods within the city's regional manufacturing base.

6. Twenty-four Hour Airport Operations

Winnipeg also offers the overwhelming advantage of 24 hour Airport operations, a limiting factor at some major Airports which are currently forced to operate under regulatory curfews. Restricted operations, at these other airports, eliminates night time operations and reduces the total economic benefit by capping opportunities. Winnipeg Airport is the only International Airport in Canada, located adjacent to an urban built-up area, that has minimal operating restrictions and procedures for arrivals/departures.



Vision



Winnipeg International Airport - Canada's New Major Transborder Air Hub -

Winnipeg's strategic location at the geographic centre of North America has positioned the City as a transportation centre with excellent linkages to the rest of Canada and the United States. Winnipeg has the greatest number of transport terminals in Western Canada and it is the largest distribution centre between Vancouver and Toronto. And, Winnipeg is the only city between Vancouver and Thunder Bay served by both Canadian railroads with direct connections to the United States. The city is the headquarters of the grain industry in Canada and it has access to ocean ports through both Thunder Bay and Churchill.

Whereas Winnipeg developed as the "gateway to the west", the city is now entering into an era whereby it has the opportunity to capitalize on its competitive advantages by becoming a major international air hub. Winnipeg can become Canada's new transborder gateway. With the demise of transborder trade barriers stemming from the Canada-U.S. Free Trade Agreement, and the North American Free Trade Agreement, trading opportunities now exist on a north-south and international basis. Sustained economic growth for Winnipeg will depend upon the city's capability to respond to the new global economy. Winnipeg Airport can become our gateway to the continent and beyond.



Strategic Issues

1. Economic Development

Responsive Decision-Making
Investment
Major Street System

2. Land Use

Neighbourhoods
Portage Avenue Development
Airport East Side Development
Airport West Side Development
Airport North Side Development
Airport South Side Development

3. Noise Management

Noise Reduction
Communication

The strategic planning process requires that "strategic" issues be identified and prioritized. The process recognizes that not all issues can be addressed equally. The most important issues must be selected and action taken to address the priorities. A concerted effort has been made, throughout the A.V.D.P. planning process to validate, verify and prioritize the issues. A workshop (June 25, 1993) and follow-up luncheon meetings (throughout September, 1993) have been held together with discussions with the Steering Committee, to reach consensus on the strategic issues.

Objectives

- **The realization of the economic development opportunities associated with the Airport.** Winnipeg International Airport is a strong economic catalyst in the City that can stimulate the local economy.
- **The continuation of Winnipeg International Airport's status as an unrestricted 24-hour operation.** The ability to conduct 24 hour operations provides a competitive advantage for the Airport which must be safe-guarded in order to attract cargo and courier business.
- **The right land uses in the right locations.** The viability of the Airport and the realization of its full economic potential are premised upon compatible and complementary land uses surrounding Winnipeg International Airport.
- **The development of lands strategically located adjacent to the Airport.** Winnipeg International Airport can be an instrument of growth and economic development in the community only if the Airport serves as a centre of industrial development.
- **The establishment of community support for maintaining the economic viability of the Airport.** Heightened awareness of the economic significance of the Airport to Winnipeg, and continued protection of its competitive advantages, are necessary to realize its full potential.
- **The protection of area neighbourhoods from the impact of expanded activities at Winnipeg Airport.** The needs of area residents must be addressed and a high standard of "livability" must be ensured for all area neighbourhoods.

Focused Action

1. Economic Development

Responsive Decision Making:

Decisive action to capitalize on the economic potential of the airport.

Investment:

A business plan to enhance and focus public and private sector investment in airport-related industry and commerce.

Major Street System:

Street improvements aimed at improving airport access and cross-airport connections.

2. Land Use

Existing Neighbourhoods:

Stability of residential neighbourhoods impacted by airport operations and related air and vehicular traffic.

Portage Avenue:

Balancing redevelopment pressures with safe and efficient airport operations.

Airport East Side:

Redevelopment and upgrading aimed at incubating airport-related businesses and support functions.

Airport West Side:

Municipal servicing and improved street linkages in anticipation of potential multi-modal transportation facilities.

Airport North Side:

On-going communication and joint-action with the R.M. of Rosser in areas of mutual concern involving the airport.

Airport South Side:

Liaison with 17 Wing Winnipeg (CFB Winnipeg) for managed area and transportation planning.

3. Noise Management

Noise Reduction:

Advances in air traffic control and aircraft engine technology.

Communication:

Strengthening lines of communication between the airport and community stakeholders, especially area residents.



Economic Development

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Many Winnipeggers are unaware of the major significance of the Winnipeg International Airport to the economy of the city and the province of Manitoba. Direct, indirect and induced activities contribute about 5,500 jobs to the City of Winnipeg. Revenue/sales dollars associated with Airport operations place Winnipeg Airport in the top twenty firms in Manitoba. The Airport contributes approximately \$19 million in provincial taxes and \$5.5 million in municipal taxes. The Airport also represents over 2% of the provincial Gross Domestic Product (Transport Institute, University of Manitoba, 1989).

The Airport has distinct competitive advantages. It is centrally-located, positioned on major international flight routes, and most importantly, it operates 24 hours a day, without restrictions. Intermodal transportation, time-sensitive air freight, cargo and courier operations, and associated future opportunities depend on the Airport's competitive advantages. These components of the aviation industry have enjoyed significant growth in the recent past and exhibit high potential for the future.

Restricted operations at the Airport, occasioned by curfews, would almost completely eliminate night time operations. Furthermore, day time restrictions would reduce the total economic benefits by capping or eliminating opportunities. Sensitive and intelligent land use planning initiatives are necessary to ensure that incompatible development, in the vicinity of the Airport, does not jeopardize existing operations or future opportunities. Measures must also be taken to create the "environment" to attract business and industry that would maximize the opportunities associated with the Airport. Lack of commitment to plan long term and to foster industrial and business development will result in lost economic activity and failure to capitalize on the Airport as an economic asset.





**Issue:
Economic Development**

Responsive Decision-Making

Winnipeg International Airport is a strong economic catalyst in the City. The Airport can attract high value-added, technology oriented Industries that can stimulate the local economy, provide meaningful and well paying jobs, and help rebuild the City’s languishing tax base. Industry analysts indicate that these industries offer potential for Winnipeg and that there currently exists a short-term “window of opportunity”. However, there are competing jurisdictions elsewhere in Canada and the United States vying for the

same industries. Action must be taken now or the opportunity may be lost forever. Responsive decision-making and focused action is required.

The ability to act quickly and precisely is only the initial part of responsive decision-making. Dedication to long-range planning, fulfillment of expressed commitments and the ability to react to changing economic conditions, all are necessary to realize the potential of the Winnipeg International Airport.

NO.	ACTION	Timing			Implementing Agency
		One to Two Years	Next Five Years	Beyond Five Years	
1.	maintain the existing A.V.D.P. committees to coordinate, on an interim basis, the management and implementation of the Plan.	X			City of Winnipeg, Province of Manitoba, Transport Canada, Winnipeg 2000, Local Airport Authority, R.M. of Rosser
2.	provide for a logical transition of responsibility to a designated agency or authority (i.e. Winnipeg 2000, Local Airport Authority) to manage all aspects of Airport-related development.	X			Steering and Management Committees
3.	act quickly, using aggressive and bold action to capitalize on Winnipeg Airport’s strategic advantages, and pursue Airport-related infrastructure and industrial development.		X		Designated Authority (i.e. Winnipeg 2000, L.A.A.)



NOTES:

Issue:
Economic Development

Investment

Economic development is the process of creating wealth. It is the transformation of ideas and resources into products and services for which there is a market and profit potential. This development occurs within a free market economy and is driven by the profit motive. Profit induces firms to innovate, stimulating investment, output and employment (Price Waterhouse, 1990). From this perspective, Winnipeg Airport is a product to be sold in a market place where companies are seeking competitive locations and advantages.

Winnipeg's economic development strategy identifies the Airport as a key economic asset that must be fully exploited in order to take advantage of available opportunities. Full exploitation of this "asset" involves more than the development of on-site facilities at the Airport. Private sector investment is needed for the establishment of new industries and the redevelopment of obsolete

buildings and under-utilized space in existing industrial locations. And, public funds are required to extend services and upgrade infrastructure to accommodate potential economic growth. However, private or public investment will not be made on a "hope and a prayer". There must be a market and profit potential for private entrepreneurs and there must be community consensus to enable public monies to be allocated in anticipation of longer term return.

A "Business Plan" for the A.V.D.P. area would provide a focus to all future development initiatives, and justification for private and public investment. Such a plan would ensure a concerted approach by all stakeholders, and encourage City interests to work together in strategic alliances. A Business Plan also would provide security and predictability for investors and entrepreneurs.

NO.	ACTION	Timing			Implementing Agency
		One to Two Years	Next Five Years	Beyond Five Years	
1.	prepare an integrated business plan that targets Airport related industry and development and coordinates all current efforts relating to economic development within the A.V.D.P. zone.	X			Winnipeg 2000, Transport Canada, L.A.A., City of Winnipeg, R.M. of Rosser
2.	establish economic development incentives and initiatives designed to encourage Airport-related economic development opportunities and the redevelopment of industrial areas in proximity to the Airport.		X		City, Province, Federal Governments
3.	commit to long-range budgeting for Airport-related projects and programs, and accelerate and fund infrastructure improvements through the five-year capital program.		X		City of Winnipeg
4.	target Airport-related industrial development within the A.V.D.P. zone through an aggressive promotional program.		X		Winnipeg 2000, L.A.A.
5.	develop programs to retain existing transportation-related businesses associated with the Airport.		X		City, Province, Federal Governments
6.	pursue intergovernmental support for economic development of the Airport through bilateral and tri-lateral agreements.	X			City, Province, Federal Governments
7.	initiate discussions and pursue support for the establishment of a "Free-Trade Zone" at the Winnipeg Airport.	X			City, Province, Federal Governments, L.A.A., Winnipeg 2000, Transport Canada, Private-sector



NOTES:

Issue:
Economic Development

Major Street System

The major street system is an important component of the local economy, and necessary for the support of business and industry in Winnipeg. However, the development of this system and associated decisions relating to truck routes, weight limits and street restrictions, have focused primarily on servicing residential needs.

At present the street system servicing the Airport is limited in scope. Those facilities providing access to the Airport, such as Saskatchewan Avenue, have operating restrictions which limit the hours the route can be used for trucking, or like Kenaston Boulevard, are congested and operate beyond capacity during peak periods. Other potential routes, such as Ferry Road, remain "closed". These street system limitations can become as damaging to Airport related industries and cargo and courier companies as a curfew on the Airport itself.

Developing the potential of the Winnipeg Airport will rely on the adequacy of the transportation system to access the Airport and to provide unrestricted connections between the Airport and existing or proposed industrial and commercial areas within the City. Consideration of improvements to the system, and the financial implications of these improvements will be necessary.

Currently, the City is undertaking a transportation planning initiative, called TransPlan. In view of the increased economic activity to be developed in association with the Airport, the City must consider, as part of the TransPlan process, the phased construction of an integrated transportation system that would provide immediate benefit to the Airport and adjacent industrial areas.

NO.	ACTION	Timing			Implementing Agency
		One to Two Years	Next Five Years	Beyond Five Years	
1.	become actively involved in the TransPlan planning process to influence decisions that support Airport-related priorities with respect to transportation infrastructure improvements and new developments including the development of a secondary transportation plan for the Airport.	X			Transport Canada, Winnipeg 2000, L.A.A., Business Sectors
2.	prioritize and build the regional street system in accordance with approved municipal plans to improve Airport access. Immediate consideration should be given to the following: i. Route 90 (Kenaston Blvd.); and ii. Saskatchewan Avenue (assess various alignment options)		X		City of Winnipeg
3.	accelerate regional street infrastructure development within A.V.D.P. zone to promote Airport-related economic growth, specifically, authorize a design/public consultation process for Route 90 improvements.	X			City of Winnipeg
4.	consider and implement a variety of "small improvements" to the transportation system that will improve traffic flow in the A.V.D.P. area.	X			City of Winnipeg
5.	develop a comprehensive transportation educational program at the University of Manitoba and Red River Community College to train the future workforce.		X		University of Manitoba, Red River Community College



NOTES:

Land Use

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A balanced approach of maintaining established neighbourhoods, encouraging appropriate redevelopment of existing industrial and commercial areas, and providing for new economic development opportunities is necessary to address competing interests and to establish long-term planning priorities for the Airport Vicinity Area. Residents are concerned about increased noise and traffic problems associated with expanded development activity at the Airport. Investors and entrepreneurs want assurances that necessary steps will be taken to promote the continued economic viability of the Airport. Planning solutions for Winnipeg Airport must involve the provision of services and the protection of investment that will enhance the Airport as a catalyst for economic development, and these solutions must address the concerns of area residents. Everyone involved expects sound land use management with predictable results.



Issue:
Land Use

Neighbourhoods

Neighbourhoods are the building blocks of the City. Through their diversity of character they contribute to the city's vitality. Planning efforts in the vicinity of the Airport must focus attention on area neighbourhoods and recognize the important role they play both locally and to the City as a whole. The key is to build upon the strength of the neighbourhoods and the commitment that area residents have to them.

There are a variety of neighbourhoods within the A.V.D.P. area. Some may be characterized as aging or deteriorating, while others are new or emerging neighbourhoods. Certain neighbourhoods need little more than to be maintained and allowed to develop on their own. Others are deemed to be

declining, and may require specific measures to ensure their continued viability. The maintenance and revitalization of existing neighbourhoods is the City's first priority in meeting its responsibility for community development. The means of protecting existing neighbourhoods from disruption caused by noise, and truck traffic associated with increased activity at the Airport must be given due consideration. Acknowledging the possible destabilization forces at work in area neighbourhoods, and the unique needs of residential areas located adjacent to the Airport is an important first step. High standards of livability and service must be promoted. The intent in area neighbourhoods is to bolster stability, and encourage tenure and commitment.

NO.	ACTION	Timing			Implementing Agency
		One to Two Years	Next Five Years	Beyond Five Years	
1.	maintain the character and bolster stability of existing neighbourhoods through a neighbourhood management approach - characterize and classify all neighbourhoods on the basis of age and condition of housing. Area Types <ul style="list-style-type: none"> ▪ Emerging Area ▪ Stable Area ▪ Conservation Area ▪ Rehabilitation Area ▪ Major Improvement Area ▪ Redevelopment Area - develop and initiate programs, based upon classification, to meet neighbourhood needs		X		City of Winnipeg
2.	promote the replacement, repair and residential upgrading of single-family housing in all neighbourhoods	X	X	X	City of Winnipeg
3.	The City shall follow Noise Exposure Forecast (NEF) contours, adjusted as required to achieve development (zoning) district boundaries and by and under applicable development (zoning) by-laws and other land use controls shall regulate the use of land and buildings within the AVPA as follows: i) within Area I no new residential development shall be permitted (subject to statutory non-conforming rights and any related variance); but, existing dwellings may be replaced if destroyed or demolished. Subject to any required rezoning or other change in land use controls. Exceptions for minor residential infilling in existing and established residential areas, may be approved; <i>amended 7/20/97</i> ii) subject to any required zoning or other change in land use controls, within Area II new single-family dwellings may be approved and new multiple residential dwellings may be approved up to 85 units per hectare (35 units per acre) and approved above that density by conditional use approval. iii) within the AVPA compliance with CMHC standards (New Housing and Airport Noise, revised 1981), interpreted and extended as set out in Appendix II shall be required for all new housing including all replacement and infill, multiple and single-family housing. develop an information brochure to apprise potential homeowners of the extent of the A.V.D.P. area and its land use implications.	X			City of Winnipeg
4.		X			WREB, City of Winnipeg

Winnipeg International Airport



NOTES:

**Issue:
Land Use**

Portage Avenue Development

The 25 NEF contour includes within it a major portion of Portage Avenue frontage. It is here that changes to current land use regulations are most likely to be required. Consequently, it is likely that significant controversy and conflict will be generated. The key to the successful resolution of the land use issue will be striking the proper balance between the competing interests.

Recent residential land development proposals draw attention to the need to better manage land use and development along Portage Avenue. However, better management first requires an

appreciation of the complexity of the development issues. The simple solution is to restrict residential development. This response is directed to reducing the likelihood of complaints about aircraft noise from new residents. Yet the long-term view would indicate that the redevelopment of the Portage Avenue frontage is both necessary and desirable. What is required is to define the appropriate form of redevelopment in a manner that is sensitive to the subtleties of the issue.

NO.	ACTION	Timing			Implementing Agency
		One to Two Years	Next Five Years	Beyond Five Years	
1.	<p>The City shall follow Noise Exposure Forecast (NEF) contours, adjusted as required to achieve development (zoning) district boundaries and by and under applicable development (zoning) by-laws and other land use controls shall regulate the use of land and buildings within the AVPA as follows:</p> <p>i) within Area I no new residential development shall be permitted (subject to statutory non-conforming rights and any related variance); but, existing dwellings may be replaced if destroyed or demolished. Subject to any required rezoning or other change in land use controls. Exceptions for minor residential infilling in existing and established residential areas may be approved; <i>amended 7/20/97</i></p> <p>ii) subject to any required zoning or other change in land use controls, within Area II new single-family dwellings may be approved and new multiple residential dwellings may be approved up to 85 units per hectare (35 units per acre) and approved above that density by conditional use approval.</p> <p>iii) within the AVPA compliance with CMHC standards (New Housing and Airport Noise, revised 1981), interpreted and extended as set out in Appendix II shall be required for all new housing including all replacement and infill, multiple and single-family housing .</p>	X			City of Winnipeg



NOTES:

**Issue:
Land Use**

East Side Development

Courier operations have increased significantly in the past several years at Winnipeg International Airport and this industry represents potential for economic growth in the City. The major courier function, as well as the passenger processing facilities, are located on-site at the Airport, at the east side. The focus for the courier business will continue to be east of the Airport and this activity provides an opportunity for redevelopment in the St. James Industrial area.

The St. James Industrial area is the largest and most diverse industrial complex in Winnipeg with activity dating back over fifty years. The area continues to be an attractive location for both industrial and commercial businesses. Care must be taken to ensure that commercial redevelopment does not increase property values

making them too high for industrial users. Also, transportation issues, relating to access and traffic congestion are concerns.

Addressing these issues, and other concerns requires an ability to organize and implement a broad agenda that works toward achieving the objectives of a variety of interests in the area. Quality area management which is lead by the private sector is essential, and is without a doubt, the most critical ingredient for continued success.

NO.	ACTION	Timing			Implementing Agency
		One to Two Years	Next Five Years	Beyond Five Years	
1.	establish an Industrial Improvement Zone for the St. James Industrial Area to manage local issues, including long-range planning, economic development, civic improvements and area promotion.	X			City of Winnipeg, Province of Manitoba
2.	address the immediate transportation needs and access requirements of the St. James Industrial area industries and businesses, including the following: i) improving the connections between the industrial areas east and west of the Airport; ii) upgrading Route 90 (Kenaston Blvd.); iii) building the Charleswood Bridge; iv) improving access to Downtown by clearly defining an image route to the City's central business district; v) investigating the extension of public access on Ferry Road; vi) fulfilling past commitments (build what has been planned and supported in the past).		X	X	City of Winnipeg



NOTES:

**Issue:
Land Use**

West Side Development

Land lying west of the Airport largely is undeveloped, unserviced and currently in agricultural use. Concern has been expressed that inappropriate development of these lands may jeopardize the future operations of Winnipeg Airport. Industrial and commercial land uses which are compatible with Airport operations and complementary to Airport-related industries are viewed as the preferred or most appropriate type of development for this area.

There is recognized potential for new industrial and commercial development associated with Winnipeg Airport. The rapid growth in the air cargo industry presents a number of opportunities that relate to the transfer of international and inter-modal cargo (Sypher, Mueller, 1990). However, there is neither the space nor the infrastruc-

ture required for inter-modal transfers on-site. Inter-modal facilities may best be accommodated on land immediately west of the Airport.

Servicing constraints make this land the most expensive to develop within the City of Winnipeg. Front-end costs to develop the property, to full urban standards are prohibitive. Furthermore, there is limited street access from the area to the Airport and east side operations. Connections to other industrial areas within the City also are inadequate.

Focused governmental involvement in the development of this potential industrial area, either through partnerships, incentives or other special measures, may be required.

NO.	ACTION	Timing			Implementing Agency
		One to Two Years	Next Five Years	Beyond Five Years	
1.	prepare a concept plan for an industrial area west of the Airport that would provide a strategy for the development of the area, and address land use, servicing and marketing issues.	X			City of Winnipeg, Landowners
2.	convene regular meetings with area landowners, business representatives and government officials to facilitate the development of the concept plan and to discuss partnership opportunities and implementation.	X			City of Winnipeg
3.	undertake an engineering study to examine cost-effective alternatives to service the west side.		X		City of Winnipeg, Landowners
4.	pursue intergovernmental support for the development of the "Airport West Side" through bilateral and trilateral agreements.		X		City, Provincial, Federal Governments
5.	maintain industrial and rural policy area classifications designated in Plan Winnipeg, Plate A, as amended from time to time.	X			City of Winnipeg



NOTES:

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Issue:
Land Use

North Side Development

The area outside the City limits immediately to the north and northwest of the Airport is under the jurisdiction of the Rural Municipality of Rosser. Rosser's civic by-laws, long-range planning efforts and municipal decisions reflect its commitment to sound land use management. The R.M. of Rosser prepared, in 1982, the Winnipeg International Airport Adjacent Land Use Study, North-Northwest Sector, and adopted its recommendations. The recommendations provide for compatible land use development. During the intervening years, the Rural Municipality has minimized land use conflicts with Airport operations.

The City of Winnipeg and the Rural Municipality of Rosser share not only a common boundary with the Airport and the impact of Airport operations, but they also share a commitment to fostering the continued economic viability of Winnipeg International Airport. Collaboration and cooperation between the two municipalities is required in order to produce a plan for the Airport vicinity. The extent of the A.V.D.P. boundaries, the need for improvements to regional roadways, and the regulation of land use within the Airport's vicinity need to be discussed and jointly resolved.

NO.	ACTION	Timing			Implementing Agency
		One to Two Years	Next Five Years	Beyond Five Years	
1.	invite the R.M. of Rosser to participate in TransPlan discussions. Immediate consideration should be given to the following: Sturgeon Road/Inkster Boulevard Saskatchewan Avenue Headingley By-pass (R.M. of Headingley, Province) Logan/Selkirk Avenue	X			City of Winnipeg
2.	pursue on-going communication and joint action in areas of mutual concern involving the Airport	X	X	X	City of Winnipeg, R.M. of Rosser
3.	address drainage concerns involving natural watercourses (i.e. Truro Creek, Omand's Creek)	X	X	X	City of Winnipeg, R.M. of Rosser
4.	invite the R.M. of Rosser to participate in any land use planning efforts where there is a joint interest, specifically where that interest relates to commercial/industrial development along Route 90	X	X	X	City of Winnipeg, R.M. of Rosser



NOTES:

Issue:
Land Use

South Side Development

17 Wing Winnipeg (also known as CFB Winnipeg) is comprised of the former Fort Osborne Army Barracks and RCAF Station Winnipeg. 17 Wing is one of the principal users of the Airport, and as such it depends on a 24-hour operating airfield facility for its continued presence in Winnipeg. The Base is one of the country's largest, employing over 3,700 personnel, including 1,000 local civilians. 17 Wing is home of Air Command Headquarters which oversees all air operations for the Canadian Forces and five important military schools. The Base is the fourth largest employer in the City and it directly injects more than \$210 million annually into the local economy. With additional contracts worth almost \$800 million, the National Defence contribution to the local economy exceeds \$1 billion.

17 Wing has two principal locations - the north site and the south site. The south site is home to the 2nd Battalion Princess Patricia's Canadian Light

Infantry. The north side is located immediately adjacent to the Airport, and is the dominant land use on the south side. The Ministry of Transport owns and operates the airfield, while 17 Wing owns and operates the military ramp and two taxiways. Some of the Ministry of Transport facilities, such as the Crash Fire Rescue Service, are located on 17 Wing property.

Other issues that affect or impact the operation of the Base are area transportation plans, specifically the future alignment of Silver Avenue and the interim use of land dedicated for its extension and the transfer of ownership of the Airport to a Local Airport Authority. Civic Interest lies in the conveyance of rights-of-way (streets, sewers, pavement) to the City on a portion of Base-owned land, the management of military aircraft noise and its impact on local neighbourhoods, and the future of properties and housing leased by the Base for married quarters.

NO.	ACTION	Timing			Implementing Agency
		One to Two Years	Next Five Years	Beyond Five Years	
1.	conclude negotiations to enable the conveyance of rights-of-way on certain Base-owned land, currently under discussion, to the City of Winnipeg	X			City of Winnipeg, 17 Wing
2.	lease City-owned land, dedicated for the future extension of Silver Avenue, to the Base on an interim basis for use in the Air Force Heritage Park	X			City of Winnipeg, 17 Wing
3.	initiate discussions with all involved parties with respect to the future use and development/ redevelopment of housing currently leased for married quarters (over 300 single-family dwellings involved; lease expires in 1997)	X			City of Winnipeg, 17 Wing
4.	involve 17 Wing in discussions relating to local area and transportation planning and the continued management of military aircraft noise. (see Noise Reduction, pg. 49)	X			City of Winnipeg, 17 Wing
5.	involve 17 Wing in discussions relating to any changes to Winnipeg International Airport affecting flight operations for military aircraft. (See Noise Reduction, pg. 49)	X			Transport Canada, 17 Wing
6.	involve 17 Wing in discussions relating to improvements to Route 90 and possible impact to south side facilities.		X		City of Winnipeg, 17 Wing
7.	involve south-side industries in discussions relating to area and transportation planning	X			City of Winnipeg, Private Sector



NOTES:

Noise Management

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The level and type of aviation activity at the Winnipeg International Airport have created a noise impact on neighbouring communities. The Airport is the focal point of commercial aviation in the Province. A variety of aircraft operate from this facility, ranging in size from small private aircraft to commercial jet airliners. Increased activity associated with new cargo opportunities and inter-modal facilities and services may heighten the impact of noise on the surrounding neighbourhoods.

Noise management is critical to the future development of the Airport and its continued 24 hour operations. The operation of the Airport must be compatible with neighbouring residential communities, while remaining as a viable facility for Airport users. Successful management of noise depends upon the cooperation of everyone involved in aircraft operations. Noise mitigation initiatives, promotion of noise reduction measures, attention to the concerns of residents, and continuous dialogue and communication with area residents are required.



NOTES:



Issue:
Noise Management

Noise Reduction

Community reaction to airport generated noise is predictable. Excessive noise is not tolerated by the community, and changes in the regular occurrence or pattern of noise throughout the day can cause immediate public criticism. Noise reduction and patterned regularity must be sought through the encouragement of thoughtful practices as well as through the adoption of regulating measures.

Noise exposure can be objectively quantified with noise contours, and specific development limitations and requirements can be imposed using the contours as the basis for determining noise problems. These measures are effective in making decisions about new developments.

However, to address noise problems in existing built-up areas, other supportive actions are necessary. Procedures designed to minimize excessive aircraft noise and thereby achieve greater compatibility between aircraft noise levels and affected neighbourhood communities have already been implemented, thanks to the cooperation of Airport and Air Traffic Control staff working closely with air carriers, the Department of National Defence (CFB Winnipeg) and neighbourhood groups. In addition, citizen and technical committees meet regularly with airport management to recommend and consider additional efforts to reduce the overall impact of noise on the surrounding communities. These committees have been instrumental in bringing about significant changes.

NO.	ACTION	Timing			Implementing Agency
		One to Two Years	Next Five Years	Beyond Five Years	
1.	maintain strict controls on engine run-ups, including day time use of remote locations on the airfield and night time prohibitions in virtually all cases;	X			Transport Canada, 17 Wing, Carrier Industry
2.	ensure assignment of calm wind runway preferences such that most night time aircraft arrivals are from the north and west, and departures to the north and west;	X			Transport Canada, 17 Wing, Carrier Industry
3.	maintain assigned departure flight tracks to ensure climb outs are over non residential areas where possible;	X			Transport Canada, 17 Wing, Carrier Industry
4.	maintain assigned climb profiles to allow aircraft to attain higher altitudes more quickly;	X			Transport Canada, 17 Wing, Carrier Industry
5.	manage runway rotations where winds permit, to more equitably split traffic over residential areas.	X			Transport Canada, 17 Wing, Carrier Industry
6.	measure and evaluate the effectiveness of all procedures.	X	X	X	Transport Canada, 17 Wing, Carrier Industry
7.	recognize the R.M. of Rosser for its contribution in accommodating aircraft arrivals and departures from the north and west and keep avenues open for future discussions on this issue.	X	X	X	City of Winnipeg, R.M. of Rosser, Transport Canada, Carrier Industry



NOTES:

Issue:
Noise Management

Communication

Good communication is fundamental to the success of the Airport Vicinity Development Plan, and it is essential specifically to the management of aircraft noise and its impact. Effective communication is integral to good management. To be effective, the messages must be clear, honest, and consistent. A comprehensive communication plan is necessary in order to successfully address this issue.

It is important that information, decisions and the outcome of events be communicated to the public not only because their ongoing support is vital to the continued viability of the Airport, but because of their inherent right to know about circumstances that affect them. Information is a

resource that must be shared. Area residents must understand the context and rationale for decisions, and both the positive and negative implications of decisive action. Communicating effectively demonstrates trust and respect and helps to build community alliances and loyalty. Committing to a high standard of communication requires a significant investment of time and the adequate allocation of resources. The benefit will be great, but the challenge should not be underestimated.

NO.	ACTION	Timing			Implementing Agency
		One to Two Years	Next Five Years	Beyond Five Years	
1.	develop a comprehensive communication program that provides for the following: i) an assessment and evaluation of the Noise Committee, including a review of its role, responsibilities and communication objectives; ii) the translation of technical information into more commonly understood language and concepts for distribution to the public; iii) opportunities to listen to and hear public complaints and criticism; iv) an understanding of local area residents' concerns and the ways and means of meeting their reasonable expectations; v) an explanation of anticipated airplane activity levels; vi) relations with the media; and vii) publication of new information and its distribution; viii) dialogue with City of Winnipeg and the R.M. of Rosser.	X			Transport Canada, L.A.A.
2.	work continuously with the residential community to resolve issues and concerns immediately.	X	X	X	Transport Canada



NOTES:

Performance

Performance is the ability to execute effective action. Demonstrated performance means that results are achieved according to plan. By not adhering to a plan, actions may be ineffective, contradictory or counterproductive. There may be a high level of activity and hard work but little practical return is generated. "Busy work" becomes confused with results.

Traditionally, planning efforts have produced an abundance of plans, projects and programs. However, seldom is the effort seen through to completion before a new urgent priority is identified and work begins in a different direction. What ultimately characterizes winning planning efforts is the ability to demonstrate performance over the long term. In these instances successive actions generate momentum to a point where the plan assumes a life of its own and performance becomes assured.

Successful performance involves two essentials: unwavering focus and, fulfillment of commitments. Every effort has been made to focus attention on a limited number of "strategic imperatives" - the things that must get done. These represent the focus. Priority actions have been outlined, and when completed, these actions represent commitments to be fulfilled through follow-up actions.

However, there must be a "first step" - a series of key activities that will generate momentum and lead to further action. As a "first step", it is recommended that these initiatives be undertaken:

1. **Amend Plan Winnipeg** as described in Part 1. This can be initiated by motion of City Council and requires public hearings.
2. **Revise existing by-laws** as described in Part 2. This can be initiated by motion of City Council and requires public hearings.
3. **Initiate immediate action** as described in Part 3. These can be assigned priorities as follows:
 - i) designate an agency or authority to oversee all aspects of Airport-related development;
 - ii) prepare both an operating plan (defining available resources) and a business plan (identifying opportunities and investment strategies);
 - iii) initiate a secondary transportation plan for the Airport vicinity;
 - iv) begin discussions on a Free Trade Zone;
 - v) influence the five-year capital budget process; and
 - vi) prepare a concept plan for the "Airport West Side".



**Part 1:
Performance**

Plan Winnipeg

Plan Winnipeg recognizes the economic importance of the Winnipeg International Airport and promotes the Airport as a centre of industrial development. The Plan is the most important document prepared by the City. It is a long-term plan that establishes direction for the City and the steps that need to be taken along the way. It requires that an Airport Vicinity Development Plan be prepared and endorsed by City Council.

In addition, legislation recently passed by the Province of Manitoba, requires that an "Airport vicinity protection area" be designated in a Plan Winnipeg by-law amendment. Such changes to the Plan, and others, are necessary to clarify the original intent and to ensure that the policy statements become more closely tied to specific actions.

NO.	ACTION	Timing			Implementing Agency
		90 days	180 days	1 st year	
1.	<p>Amend Section F, Airport Development and Protection, Chapter 2 (Economic Development) as follows:</p> <p>a. Delete "2F-02 PREPARE AIRPORT VICINITY DEVELOPMENT PLAN" and replace with the following: 2F-02 PREPARE AIRPORT VICINITY DEVELOPMENT PLAN The City shall prepare, endorse and periodically review an Airport Vicinity Development Plan (AVDP) in cooperation with the other levels of government, business and the R.M. of Rosser to recognize the City has no jurisdiction to regulate the operations of the Winnipeg Airport but may through proper land use plans and controls:</p> <p>i) promote the appropriate use and development of land in the vicinity of the Airport, and the Airport, in ways which will fully realize the value of the Airport as an economic asset and catalyst;</p> <p>ii) ensure that land uses in the vicinity of the Airport are compatible with and will not be unreasonably affected by the expected and desirable continuing of 24 hour operation of the Airport;</p> <p>iii) regulate or prohibit land uses in the vicinity of the Airport which are incompatible with noise levels unavoidably associated with 24 hour airport operation despite improving technology and airport/industry noise reduction programs.</p> <p>iv) establish development control measures to protect land uses by appropriate design and construction mitigating the impact of aircraft noise levels.</p> <p>b. DELETE 2F-04</p> <p>c. RENUMBER 2F-03 TO 2F-06</p> <p>d. ADD THE FOLLOWING POLICIES: 2F-03 DESIGNATE AIRPORT VICINITY DEVELOPMENT PLAN BOUNDARIES - THE AVPA The City shall designate for inclusion in the Airport Vicinity Development Plan all those neighbourhoods or portions thereof significantly affected by Airport related noise, illustrated as Areas I and II on Plate A.1 - the Airport Vicinity Protection Area (AVPA).</p> <p>2F-04 REGULATE LAND USE WITHIN THE AVPA The City shall, within the limits of its jurisdiction, regulate land uses within the Airport Vicinity Protection Area in order to maintain compatible land use relationships.</p> <p>2F-05 DEVELOPMENT (ZONING) BY-LAW FOR AVPA The City shall following Noise Exposure Forecast (NEF) contours, adjusted as required to achieve development (zoning) district boundaries and by and under applicable development (zoning) by-laws and other land use controls shall regulate the use of land and buildings within the AVPA as follows:</p> <p>i) within Area I no new residential development shall be permitted (subject to statutory non-conforming rights and any related variance); but, existing dwellings may be replaced if destroyed or demolished, subject to any required rezoning or other change in land use controls. Exceptions for minor residential infilling in existing and established residential areas may be approved; <i>amended 7020/97</i></p> <p>ii) subject to any required rezoning or other change in land use controls, within Area II new single-family dwellings may be approved and new multiple-residential dwellings may be approved up to 85 units per hectare (35 units per acre) and approved above that density by conditional use approval;</p> <p>iii) within the AVPA compliance with CMHC standards (New Housing and Airport Noise, revised 1981), interpreted and extended as set out in Appendix II shall be required for all new housing including all replacement and infill, multiple and single-family housing.</p>	X			City of Winnipeg, Province of Manitoba

Winnipeg International Airport



NOTES:

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**Part 2:
Performance**

Municipal By-laws

ZONING

Local Zoning regulations primarily are directed at controlling land use and its intensity, by classifying individual properties into one of a number of zoning districts. The basic rules for each district described in the regulation provide for uniform treatment of all properties located within that district. Zoning actions will be needed namely, adding new zoning districts to the zoning regulations to accommodate compatible development.

BUILDING CODE

Building code provisions can be used to provide acceptable indoor noise environments. They can ensure that minimum sound level reductions are provided by specifying minimum performance standards for buildings or for building elements, or setting design specifications that will provide the required sound level reductions. Amendments can address the noise-reduction requirements for public buildings, and residential structures by considering design and construction standards for walls, windows, doors and roofs.

NO.	ACTION	Timing			Implementing Agency
		90 days	180 days	1 st year	
1.	specific revisions to the zoning by-laws and the Winnipeg Building Code are included in Appendix I and II respectively.		X		City of Winnipeg



NOTES:

**Part 3:
Performance**

Immediate Action

The primary purpose of any plan is to influence action. When the action reflects the direction intended, the plan is said to be successful. In order to fulfill the intentions outlined in the plan, a connection must be made between the intentions and the action taken by the implementing

agencies, including the City of Winnipeg. Only through a commitment to these initiatives can the plan be realized to its full extent and in a manner matching the expectations it has created. The plan's impact must be obvious and immediate.

NO.	ACTION	Timing			Implementing Agency
		90 days	180 days	1 st year	
1.	maintain the existing A.V.D.P. committees (mandate and roles as defined) to coordinate, on an interim basis, the management and implementation of this Plan.	X			City of Winnipeg, Province of Manitoba, Transport Canada, Winnipeg 2000, Local Airport Authority, R.M. of Rosser
2.	provide for a logical transition of responsibility to a designated authority or agency to manage all aspects of Airport-related development. Steering Committee to recommend to Council an appropriate authority or agency to oversee all Airport-related development initiatives.			X	Steering and Management Committees
3.	define involvement of participating agencies and commit available human and financial resources to undertake immediate planning and research efforts, and to assist in the implementation of this Plan (operating plan).	X			City of Winnipeg, Province of Manitoba, Transport Canada, Winnipeg 2000, Local Airport Authority, R.M. of Rosser
4.	prepare an integrated plan that identifies and targets Airport-related economic development opportunities and outlines an investment strategy (business plan).		X		Steering and Management Committees
5.	initiate a secondary transportation plan for the Airport vicinity as an immediate action to address transportation-related concerns. Consideration should be given to the following: i) Route 90 ii) Saskatchewan Avenue iii) access to the Airport iv) east/west links v) minor system improvements (i.e. light synchronization) vi) liaison with R.M. of Rosser			X	City of Winnipeg
6.	begin discussions on the feasibility of establishing an Airport Free Trade Zone.		X		Winnipeg 2000, Local Airport Authority, City of Winnipeg, Transport Canada, Private-sector
7.	focus Council on the significance of the Airport and influence the five-year capital budget process to commit funds for Airport-related infrastructure development projects and programs		X		City of Winnipeg, Steering and Management Committees
8.	prepare a concept plan for an industrial area, west of the Airport that would provide a strategy for the development of the area, and address land use, servicing and marketing issues.		X		Steering and Management Committees, City of Winnipeg, Landowners



NOTES:

Appendix I



Appendix I

Residential Airport Zoning Districts

I. Within the 35 NEF contour boundary adjusted as required to achieve development (zoning) district boundaries all single and two-family zoning districts shall be amended:

1. To rename all single and two family residential districts by adding (A-35) to their existing zoning designation.
2. To limit housing development to current densities in those areas determined to be most affected by airport operations; subject to Subsection 3(c).
3. To allow only the following new residential development:
 - a) new/redevelopment of single and two family dwellings on existing lots-of-record in accordance with existing zoning designations;
 - b) development of single and two family dwellings as a replacement for dwellings existing on the date of this by-law, subsequently destroyed or demolished;
 - c) minor residential infilling subject to any required zoning variance;
 - d) *repealed 7020/97*

Within the 35 NEF contour boundary adjusted as required to achieve development (zoning) district boundaries, all multiple family zoning districts shall be amended:

1. To rename all multiple family districts by adding (A-35) to their existing zoning designation.
 2. To limit housing development to current densities in those areas determined to be most affected by airport operations.
 3. To allow only new residential development of multiple family dwellings as replacement for dwellings existing on the date of this by-law, but subsequently demolished or destroyed; up to the maximum number of dwelling units on a lot not exceeding that number of units existing on the date of that amendment.
- II. Between the 25 and 35 NEF contour boundaries adjusted as required to achieve development (zoning) district boundaries all multiple residential zoning districts shall be amended:
1. To rename all multiple family districts by adding (A-25) to their existing zoning designation.
 2. To restrict housing development to current densities in those areas determined to be most affected by airport operations.
 3. To limit the maximum number of dwelling units permitted in each zoning district to that permitted by the existing zoning district or 85 units per hectare (35 units per acre), whichever is lesser.

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4. Where the number of units permitted by the existing zoning designation exceeds 85 units per hectare (35 units per acre), it shall be subject to conditional use approval, but shall not exceed the number of units permitted by that zoning designation.

III. Within the boundary of the Airport Vicinity Development Plan, all residential zoning districts shall be renamed by adding (A) to their existing zoning designations.

Appendix II



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Appendix II (These pages replace pages 67 - 74 in the original By-law)

EXTERIOR ACOUSTIC INSULATION

Section 1. Title

Subsection 1.1. Title. This By-law may be cited as the "AIRPORT VICINITY ACOUSTIC INSULATION BY-LAW".

Section 2. Application

Subsection 2.1. Scope. This By-law applies to *buildings* that are allowed to be constructed, subject to acoustic insulation requirements, within an airport vicinity protection area established by an *AVPA regulation*.

Subsection 2.2. Work. All work required by this By-law shall be carried out in accordance with the Manitoba Building Code, the Winnipeg Building By-law, and the Winnipeg Electrical By-law.

Subsection 2.3. Powers. The Designated Employee shall be responsible for the administration and enforcement of this By-law, and in this regard shall have the same powers as detailed in the Winnipeg Building By-law for the Authority Having Jurisdiction.

Subsection 2.4. Definitions. Unless otherwise expressly provided or unless the context requires, words and expressions in this By-law have the same meaning as the same words and expressions in the Manitoba Building Code and the Winnipeg Building By-law.

- *Acoustic Insulation Factor* means a number that is used as a measure of the reduction in the level of aircraft noise provided by the assemblies forming the exterior envelope of a *building*.

- *AVPA regulation* means an Airport Vicinity Protection Area regulation under the City of Winnipeg Act that establishes an airport vicinity protection area.

- *Noise contour* means the value of the noise exposure forecast or the noise exposure projection at a *building* site as determined from an *AVPA regulation*.

Section 3. Design

Subsection 3.1. General

3.1.1. Design. In the application of Tables 3.1.A. to 3.1.E., the number of components forming the exterior portion of a room or space envelope shall be the total of all the types of exterior elements or assemblies that form the room or space including windows, doors, etc. The component area shall be the combined area of those elements or assemblies.

3.1.2. Acoustic Insulation Factor

(1) The *building* shall be designed and constructed so that the *acoustic insulation factor* for each component of the exterior envelope of every room or space used for sleeping in
(a) *institutional occupancies*, and
(b) *residential occupancies*
shall not be less than the value derived from Table 3.1.A.

(2) The *building* shall be designed and constructed so that the *acoustic insulation factor* for each component of the exterior envelope of
(a) every living room, dining room, recreational room, and all other rooms of a similar nature, in *residential occupancies*, and
(b) every classroom and all other rooms of a similar nature shall not be less than the value derived from Table 3.1.B.

(3) The *building* shall be designed and constructed so that the *acoustic insulation factor* for each component of the exterior envelope of
(a) every kitchen, bathroom laundry room, and all other rooms of a similar nature, in *residential occupancies*, and
(b) every private office, conference room, meeting room and all other rooms of a similar nature shall not be less than the value derived from Table 3.1.C.

(4) The *building* shall be designed and constructed so that the *acoustic insulation factor* for each component of the exterior envelope of general office areas, reception areas, and all other rooms and spaces not included in Sentences (1) to (3) is not less than the value derived from Table 3.1.D.

3.1.3. Multiple Factors

(1) If one or more components of the exterior envelope of a *building* have an *acoustic insulation factor* that is more than the value required by Sentences 3.1.2(1) to (4) the *acoustic insulation factor* for one or more other components of the exterior envelope of the *building* may be less than the value required by Sentences 3.1.2(1) to (4) if

- (a) the algebraic increase in transmitted sound power is not positive, and
- (b) Table 3.1.E. is used to redistribute the *acoustic insulation factor* requirements for components whose *acoustic insulation factor* deviates from the value required by Sentences 3.1.2.(1) to (4).

Subsection 3.2. Ventilation

3.2.1. Mechanical Ventilation

(1) In *buildings* located on a site at which the *noise contour value* is 25 or more, *dwelling units* and *suites* used for *residential occupancy* shall be ventilated with a mechanical ventilation system that shall include a fresh air inlet duct that

- (a) has a minimum diameter of 150 mm,
- (b) is insulated,
- (c) has a regulating damper that does not conflict with the requirements of Article 9.33.1.10. of the *code*, and
- (d) conducts outside air to the *return duct*.

(2) If the *noise contour value* at a *building site* is more than 30, the mechanical ventilation system required by Sentence (1) shall be designed and installed in such a way that an *owner* or occupant of a *dwelling unit*, or *suite* used for *residential occupancy* need not make changes to the structure or dimensional changes to the ventilation system in order to install an air-conditioning system.

Subsection 3.3. Typical Assemblies

3.3.1. Values for Building Components. Tables 3.3.A. to 3.3.D. may be used to determine the *acoustic insulation factor* for some typical construction materials and assemblies, including windows, doors, exterior walls and roofs.

Table 3.1.A.
Forming Part of Sentence 3.1.2.(1)

Acoustic Insulation Factor for Each Component of the Exterior Envelope of Rooms and Spaces Used for Sleeping																	
Number of Components forming Exterior Portion of Room or Space Envelope	Noise Contour at Building Site																
	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	over 40
1	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	43
2	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	46
3	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	48
4	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	49
5	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	50
6	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	51
Column 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18

Table 3.1.B.
Forming Part of Sentence 3.1.2.(2)

Acoustic Insulation Factor for The Exterior Envelope of Living Rooms, Dining Rooms, Recreational Rooms, Classrooms, etc.																	
Number of Components forming Exterior Portion of Room or Space Envelope	Noise Contour at Building Site																
	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	over 40
1	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	38
2	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	41
3	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	43
4	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	44
5	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	45
6	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	46
Column 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18



Table 3.1.C.
Forming Part of Sentence 3.1.2.(3)

Acoustic Insulation Factor for The Exterior Envelope of Kitchens, Bathrooms, Laundry Rooms, Etc., Private Offices, Conference Rooms, Meeting Rooms, Etc.																	
Number of Components forming Exterior Portion of Room or Space Envelope	Noise Contour at Building Site																
	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	over 40
1	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	33
2	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	36
3	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	38
4	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	39
5	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	40
6	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	41
Column 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18

Table 3.1.D.
Forming Part of Sentence 3.1.2.(4)

Acoustic Insulation Factor for The Exterior Envelope of General Offices, Reception Areas and Other Rooms and Spaces Not Included Under Tables 3.1.A. to 3.1.C.																	
Number of Components forming Exterior Portion of Room or Space Envelope	Noise Contour at Building Site																
	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	over 40
1	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	28
2	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	31
3	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	33
4	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	34
5	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	35
6	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	36
Column 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18

Table 3.1.E.
Forming Part of Sentence 3.1.3.(1)

Redistribution of Acoustic Insulation Factors					
Component Acoustic Insulation Factor From Tables 3.3.A. to 3.3.D. Minus Acoustic Insulation Factor Derived from Tables 3.1.A. to 3.1.D.	Total Number of Components				
	2	3	4	5	6
	Percentage Change in Total Transmitted Sound Power				
10 or more	-45	-30	-22	-18	-15
9	-44	-29	-22	-18	-15
8	-42	-28	-21	-17	-14
7	-40	-27	-20	-16	-13
6	-37	-25	-19	-15	-12
5	-34	-23	-17	-14	-10
4	-30	-20	-15	-12	-11
3	-25	-17	-12	-10	-8
2	-18	-12	-9	-7	-6
1	-10	-7	-5	-4	-3
0	0	0	0	0	0
-1	13	9	6	5	4
-2	29	20	15	12	10
-3	50	33	25	20	17
-4	76	50	38	30	25
-5	108	72	54	43	36
Column 1	2	3	4	5	6

Table 3.3.A.
Forming Part of Article 3.3.1.

Acoustic Insulation Factor for Various Types of Window Glazing													
Acoustic Insulation Factor		Interpane Spacing, mm											
		Single Glazing Thickness, mm	Double Glazing					Triple Glazing					
			2mm and 2mm glass	3mm and 3mm glass	4mm and 4mm glass	3mm and 6mm glass	6mm and 6mm glass	3mm, 3mm and 3mm glass	3mm, 3mm and 6mm glass				
Window Area as a Percentage of Total Floor Area of Room or Space													
4	5	6	8	10	13	16	20	25	32	40	50	63	80
35	34	33	32	31	30	29	28	27	26	25	24	23	22
36	35	34	33	32	31	30	29	28	27	26	25	24	23
37	36	35	34	33	32	31	30	29	28	27	26	25	24
38	37	36	35	34	33	32	31	30	29	28	27	26	25
39	38	37	36	35	34	33	32	31	30	29	28	27	26
40	39	38	37	36	35	34	33	32	31	30	29	28	27
41	40	39	38	37	36	35	34	33	32	31	30	29	28
42	41	40	39	38	37	36	35	34	33	32	31	30	29
43	42	41	40	39	38	37	36	35	34	33	32	31	30
44	43	42	41	40	39	38	37	36	35	34	33	32	31
45	44	43	42	41	40	39	38	37	36	35	34	33	32
46	45	44	43	42	41	40	39	38	37	36	35	34	33
47	46	45	44	43	42	41	40	39	38	37	36	35	34
48	47	46	45	44	43	42	41	40	39	38	37	36	35
49	48	47	46	45	44	43	42	41	40	39	38	37	36
50	49	48	47	46	45	44	43	42	41	40	39	38	37
Column 1		2	3	4	5	6	7	8	9				

Notes to Table 3.3.A.:

- (1) If the calculated percentage window area is not presented as a column heading, the nearest percentage column in the table should be used.
- (2) *Acoustic Insulation factor* data listed in the table are for well-fitted weather stripped units that can be opened. *The acoustic insulation factor* values apply only when windows are closed. For windows fixed and sealed to the frame, add 3 to the *acoustic insulation factor* given in the table.
- (3) If the interpane spacing or glass thickness for a specific double-glazed window is not listed in the table, nearest listed value should be used.
- (4) The *acoustic insulation factor* ratings for 9mm and 12mm glass are for laminated glass only, for solid glass subtract 2 from the *acoustic insulation factor* values listed in the table.
- (5) If the interpane spacings for a specific triple-glazed window are not listed in the table, use the listed combined spacings that are nearest the actual combined spacing.
- (6) The *acoustic insulation factor* data listed in the tables are for typical windows, but details of glass mounting, window seals, etc. may result in slightly different performance for some manufactured products. If laboratory sound transmission loss data (conforming to ASTM test method E-90) are available, these may be used to calculate the *acoustic insulation factor*.
- (7) For easy reference, glazing dimension may be written in the form 2(100) to denote 2mm glass (100mm space) 2mm glass.

Table 3.3.B.
Forming Part of Article 3.3.1.

Acoustic Insulation Factor for Exterior Wall Assemblies											
Type of Exterior Wall	Percentage of Exterior Wall Area to Total Floor Area of Room or Space										
	16	20	25	32	40	50	63	80	100	125	160
EW1	39	38	37	36	35	34	33	32	31	30	29
EW2	41	40	39	38	37	36	35	34	33	32	31
EW3	44	43	42	41	40	39	38	37	36	35	34
EW4	47	46	45	44	43	42	41	40	39	38	37
EW1R	48	47	46	45	44	43	42	41	40	39	38
EW2R	49	48	47	46	45	44	43	42	41	40	39
EW3R	50	49	48	47	46	45	44	43	42	41	40
EW5	55	54	53	52	51	50	49	48	47	46	45
EW4R	56	55	54	53	52	51	50	49	48	47	46
EW6	58	57	56	55	54	53	52	51	50	49	48
EW7 or EW5R	59	58	57	56	55	54	53	52	51	40	49
EW8	63	62	61	60	59	58	57	56	55	54	53
Column 1	2	3	4	5	6	7	8	9	10	11	12

Notes to Table 3.3.B.:

- (1) If the calculated percentage of wall area is not presented as a column heading, the nearest percentage column in the table should be used.
- (2) The common structure of walls EW1 to EW5 is composed of 12.7mm gypsum board, vapour barrier, and 38 x 89mm studs with 50mm (or thicker) mineral wool or glass fibre batts in the inter-stud cavities.
- (3) EW1 denotes exterior wall as in Note (2), plus sheathing, plus wood siding or metal siding and fibre backer board.
EW2 denotes exterior wall as in Note (2), plus rigid insulation (25 - 50mm), and wood siding or metal siding and fibre backer board.
EW3 denotes simulated mansard with structure as in Note (2), plus sheathing, 38 x 89mm framing, sheathing, and asphalt roofing material.
EW4 denotes exterior wall as in Note (2), plus sheathing and 20mm stucco.
EW5 denotes exterior wall as in Note (2), plus sheathing, 25mm air space, 100mm brick veneer.
EW6 denotes exterior wall composed of 12.7mm gypsum board, rigid insulation (25 - 50 mm), 100mm back-up block, 100mm face brick.
EW7 denotes exterior wall composed of 12.7mm gypsum board, rigid insulation (25 - 50 mm), 140mm back-up block, 100mm face brick.
EW8 denotes exterior wall composed of 12.7mm gypsum board, rigid insulation (25 - 50 mm), 200mm concrete block.
- (4) R signifies the mounting of the interior gypsum board on resilient clips.
- (5) An exterior wall conforming to rainscreen design principles and composed of 12.7mm gypsum board, 100mm concrete block, rigid insulation (25 - 50mm), 25mm air space, and 100mm brick veneer has the same *acoustic insulation factor* as EW6.
- (6) In exterior wall described in EW1 with the addition of rigid insulation (25 - 50mm) between the sheathing and the external finish has the same *acoustic insulation factor* as EW2.



Table 3.3.C.
Forming Part of Article 3.3.1.

Acoustical Insulation Factor for Roof-Ceiling Assemblies	
Roof-Ceiling Combination	Acoustic Insulation Factor
C1	41
C1R or C1D	44
C2 or C1DR	47
C3	49
C2D	50
C2DR	52
Column 1	2

Notes to Table 3.3.C.:

- (1) C1 denotes 12.7mm gypsum board, 75mm (or thicker) insulation batts, flat roof joist and beam construction, built-up roofing.
C2 denotes 12.7 mm gypsum board, 75mm (or thicker) insulation batts, typical wood roof truss with ventilated attic, sheathing and asphalt roofing.
C3 denotes paint finish, 150mm concrete slab, 50mm (or thicker) rigid insulation, built-up roofing.
- (2) D signifies the addition of a second layer of 12.7mm gypsum board.
R signifies mounting the gypsum board on wood strapping or resilient clips.
DR signifies the addition of a second layer of 12.7mm gypsum board mounted on resilient clips.
- (3) Wherever possible, ventilation openings to attic spaces should be locations not directly exposed to aircraft noise.

Table 3.3.D.
Forming Part of Article 3.3.1.

Acoustic Insulation Factor for Exterior Doors									
Type of Exterior Door	Percentage of Total Exterior Door Area to Total Floor Area of Room or Space								
	4	5	6.3	8	10	12.5	16	20	25
D1	30	29	28	27	26	25	24	23	22
D2	34	33	32	31	30	29	28	27	26
D3	36	35	34	33	32	31	30	29	28
D4	37	36	35	34	33	32	31	30	29
D5 or D1 - sd	38	37	36	35	34	33	32	31	30
D2 - sd	41	40	39	38	37	36	35	34	33
D3 - sd	43	42	41	40	39	38	37	36	35
D4 - sd	44	43	42	41	40	39	38	37	36
D5 - sd	45	44	43	42	41	40	39	38	37
D3 - D3	48	47	46	45	44	43	42	41	40
D5 - D5	50	49	48	47	46	45	44	43	42
Column 1	2	3	4	5	6	7	8	9	10

Notes to Table 3.3.D.:

- (1) If the calculated percentage door area is not presented as a column heading, the nearest percentage column in the table should be used.
- (2) All exterior doors must be fully weatherstripped.
- (3) D1 denotes 44mm hollow-core wood door (up to 20% of area glazed).
D2 denotes 44mm glass-fibre reinforced plastic door with foam or glass-fibre insulated core (up to 20% of area glazed).
D3 denotes 35 mm solid slab wood door.
D4 denotes 44 mm steel door with foam or glass-fibre insulated core.
D5 denotes 44 mm solid slab door.
- (4) sd denotes storm door of wood or aluminum with openable glazed sections. The *acoustic insulation factor* values apply when the glazed sections are closed.
- (5) Except as noted specifically above, doors shall not have inset glazing.



Appendix III

**(Copies of the original are on file in the
office of the City Clerk)**