CITY OF WINDSOR ANNEXED AREA MASTER PLAN STUDY

UPDATED EMPLOYMENT PROJECTIONS

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4.1 INTRODUCTION

The City of Windsor's economy is strongly influenced by the automotive industry with a large proportion of its workforce employed directly or indirectly by that sector. As an industry, it tends to require substantial amounts of contiguous space (land and buildings) for the primary manufacturing facilities as well as land in good proximity for related suppliers of parts, etc. If sufficient land is unavailable for new plants or spin-off businesses, opportunities to expand this sector of the economy are missed and associated growth for the City of Windsor is curtailed. While the importance of the automotive industry to the City of Windsor cannot be overstated, it is equally important that sufficient land in appropriate locations be available for non-automotive uses and industry to promote diversification and stability in the local economy.

The need for new, serviced industrial land has been identified by the City of Windsor, the Ministry of Municipal Affairs and Housing and the Windsor-Essex County Development Commission. The annexed land presents significant opportunities for future industrial growth given its proximity to the airport, railway lines and Highway 401. New industry that requires large, unencumbered tracts of land with access to various means of transportation is likely to be attracted to this area for future development. By allocating sufficient lands for long-term industrial and related development, the City and Windsor-Essex County Development Commission will be better able to promote Windsor as a preferred location for new investment.

4.2 APPROACH

Determination of land requirements for industrial and other employment uses (e.g. – retail / commercial, office, etc.) was undertaken in the following manner:

- Review of documents and studies regarding industrial / employment strategies and policies for the City of Windsor to review the potential implications that they might have on land needs requirements;
- Review of land consumption / absorption data provided by the City of Windsor and Windsor – Essex County Development Commission;
- Review of recent trends / inquiries related to large scale manufacturing uses that would be likely to locate in the City of Windsor;
- Analysis of population projection data prepared by the City of Windsor in context with labour force characteristics and translation of that data into employment projections and land / space requirements by general sectors.

It should be noted that the employment projections component of the Windsor Annexed Lands Master Planning Study was not intended to provide a detailed economic analysis or strategy. It is based on information, reports and trends available from Statistics Canada data, the City of Windsor, the Windsor-Essex Development Commission and other readily available sources.

4.3 TRENDS AND ASSUMPTIONS

4.3.1 Employment and Labour Force Trends

Employment in the City of Windsor is dominated by the automotive industry. It is estimated that one in five jobs is directly or indirectly dependent on the automotive sector.[1] A review of available data and reports revealed that approximately 28% of the region's labour force in 1996 was employed by the manufacturing sector, with the automotive industry directly employing 34% of that manufacturing labour force. Data from 2001 substantiates the continued dominance of that sector, with manufacturing continuing to comprise approximately 28% of Windsor's experienced labour force, as shown in Table 4.1.

A comparison of 1991 and 1996 data provided for the Windsor-Essex region[2] also indicated that the Windsor labour force is very similar to the region's labour force and that there has been relatively little change in the composition of the labour force since 1996.

[1] Windsor-Detroit International Trade Gateway Analysis Strategy Report.

[2] Windsor-Essex Regional Analysis Working Report, September 2001.

Table 4.1

CITY OF WINDSOR EXPERIENCED LABOUR FORCE BY SECTOR

Sector	1996	% (1996)	2001	% (2001)
Agriculture / Forestry	640	0.65%	480	0.46%
Mining / Oil and Gas	205	0.21%	130	0.12%
Utilities	1,790	1.83%	510	0.49%
Construction	4,760	4.85%	4,765	4.55%
Manufacturing	26,350	26.87%	29,030	27.69%
Wholesale Trade	2,845	2.90%	2,615	2.49%
Retail Trade	11,770	12.00%	11,315	10.79%
Transportation and Warehousing	2,220	2.24%	3,740	3.57%
Information and cultural industries	n/a	n/a	1,155	1.10%
Finance and insurance	1,940	1.98%	2,280	2.17%
Real estate & retail & insurance	1,405	1.43%	1,280	1.22%
Professional / scientific / technical	n/a	n/a	4,415	4.21%
Management of companies	n/a	n/a	70	0.07%
Administrative & support	5,010	5.11%	4,035	3.85%
Educational services	6,000	6.12%	5,835	5.57%
Health care & social assistance	9,530	9.72%	9,140	8.72%
Arts / entertainment / recreation	n/a	n/a	4,730	4.51%
Accommodation / food services	8,245	8.41%	9,495	9.06%
Other Services	9,150	9.33%	4,400	4.20%
Public Administration	3,195	3.26%	3,170	3.02%
Industry - not applicable	3,035	3.09%	2,250	2.15%
Total Experienced Labour Force	98,100		104,845	
Employed Labour Force 15 & Over	89,275		97,040	
Participation Rate	62.1%		63.5%	
Unemployment Rate	9.0%		7.5%	

Source: Statistics Canada

Statistics Canada data shows that the overall labour force participation rate (male and female combined) in Windsor was 63.5% in 2001, with an employment rate of 58.8%.[3] The total number of employed persons grew by approximately 8.7%

[3] The distinction between 'participation rate' and 'employment rate' is as follows: Participation rate refers to the labour force (employed and unemployed) in the week prior to the census; Employment rate refers to the number of persons actually employed in the week prior to the census. Both rates are expressed as a percentage of the total population age 15 years of age and over.

between 1996 and 2001, continuing a healthy trend that has been in place since 1991. These figures provide a clear indication that the population growth that occurred in Windsor since 1996 was able to find work over that same period. Participation in the labour force has continued to remain relatively stable since the 2001 census based on other data estimates as shown in Table 4.2.

Table 4.2

ESTIMATED LABOUR FORCE PARTICIPATION– CITY OF WINDSOR

Sector	2001	2002	2003	2004	2005	2006 (to date)
Participation Rate (Male)	71.7%	70.5%	70.7%	72.2%	74.6%	74.2%
Participation Rate (Female)	54.5%	55.3%	55.5%	57.0%	58.2%	58.4%

Source: Financial Post Markets – Canadian Demographics as supplied by Windsor-Essex Development Commission.

Manufacturing is expected to remain the largest employment sector over the twenty year planning horizon. General employment stability was predicted by various sources, with some growth anticipated in the manufacturing and automotive sector over the short term, although there has been some periodic slowing of the automotive sector since 2003. However, for the purposes of determining employment growth projections and associated land area requirements, it is assumed that the relative proportion of workers by industry sector will remain generally the same as existed at the time of the 2001 census.

4.3.2 Industrial Land Consumption

An investigation of the average amount of land that is absorbed on an annual basis also provides information to assist in determining trends associated with land requirement needs for industrial and associated uses. Information obtained from the Windsor-Essex County Development Commission regarding land absorption since the mid-1990s is summarized in Table 4.3.

Table 4.3

INDUSTRIAL LAND ABSORPTION RECORD (APPROXIMATE)

Year	Land Absorption (ha)	Year	Land Absorption (ha)
1993	18.2	1998	27.1
1994	15.2	1999	52.2
1995	16.5	2000	45.3
1996	15.7	2001	21.9
1997	39.2	2002	22.3
Average – 27.4 ha (67.7 acres)			

Source: Windsor-Essex County Economic Development Commission

The estimated amount of land absorbed for industrial purposes in the City of Windsor increased between 1998-2002, averaging approximately 34 hectares (84 acres) per year. This is a substantial increase from the previous 5-year period, which saw an average of approximately 21 hectares (52 acres) per year absorbed. This was indicative of new development as well as expansion within the automotive sector and other industries. No additional data regarding industrial land absorption was available for 2003 to 2005 regarding industrial land absorption. However, according to the Windsor – Essex County Development Commission, there was only approximately 20 hectares (50 acres) of serviced, uncommitted industrial land available to meet the needs of future growth and diversification in 2003. This had declined further by 2006 to approximately 3 hectares (8 acres)[4]. Some additional designated, unserviced land does exist within the former City of Windsor boundaries but the size of these land parcels is generally considered insufficient by the Development Commission to attract any significant industrial or business park development. In some cases, servicing of potentially available lands would also be difficult. Discussions with commercial realtors who work in the Windsor area confirmed that there is a relatively strong demand for serviced industrial land and buildings at the present time, but that there is little supply to meet the demand.

The potential for increasing industrial development and associated land demand is further strengthened by the recent completion of the Brighton Beach power plant, which provides greater security for uninterrupted power in the Windsor area. This is a critical need for large-scale industrial facilities. As a result, it is anticipated that the demand for industrial land may be stronger in the future so long as a serviced supply is available.

Another indicator of the strength of industrial and related sectors is building permit activity. Recent statistics provided by the Building Division confirm that there has been generally strong activity in the industrial, commercial and institutional sectors,

[4] Personal communication, Roman Dzus – August 22, 2006

as shown in Table 4.4. Although a noticeable reduction in building permit activity occurred in the industrial sector occurred in 2003 and 2004, there was an increase in the government /institutional sector. Part of the decline in the industrial sector may be attributed to both the lack of industrial land availability, as well as a sluggish North American automotive sector.

Table 4.4

BUILDING PERMIT SUMMARY – DOLLAR VALUE (MILLIONS)

Type of Space	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Industrial	$33	$96	$57	$40	$120	$44	$47	$23	$21	$45
Commercial	$67	$213	$38	$74	$42	$102	$68	$86	$51	$52
Gov't. / Institutional	$10	$55	$34	$58	$25	$27	$151	$62	$83	$87
TOTAL	$110	$364	$129	$172	$187	$173	$266	$171	$155	$184

Source: Infrastructure Services Building Unit / Building Department Annual Reports (1998 through 2005)

The importance of the industrial sector and its level of investment in Windsor over the longer term is also demonstrated by the following statistics[5]:

- Total industrial construction / development between 1985 and 2005 has added approximately 11.2 million square feet to industrial space allocation in the City of Windsor;
- Total building area devoted to the industrial sector in the City of Windsor is approximately 53 million square feet;
- Annual total industrial investment beyond 'bricks and mortar' has been in the $1 billion range since 1991.

4.3.3 Large Scale Manufacturing Enterprises and Special Needs

Because Windsor plays such a key role in the Ontario and national economy, particularly as it relates to the automotive sector, it is important to look beyond just the historical trends as they relate to industrial land consumption. Key points identified by various studies prepared for the Windsor-Essex County Development Commission underscore this need.

- The Ford Centre of Excellence in Manufacturing (FCEM) at St. Clair College is expected to have a positive impact on the manufacturing sector as it will train employees that are needed to service the primary industry in Windsor[6].

[5] Figures provided by Windsor-Essex County Development Commission
[6] Windsor –Essex Regional Analysis

With a skilled and available workforce, new plants / industry are more likely to establish in the Windsor area creating increased demand for industrial lands.

- Growth in jobs related to Windsor's exports expanded by approximately 87% between 1990-1997 and is expected to double over the next decade provided that there is sufficient infrastructure development in the region.[7] Key growth industries are automotive, machinery and electronic equipment.
- Employment in machine, tool, die and mold (MDTM) shops doubled between 1991 and 1999 and is a strong component of the automotive business development strategy.[8]
- Greater stability is forecast in the automotive industry as a result of the macro-environment with fewer drastic fluctuations.[9]
- Overall prosperity in the automotive sector is expected to create opportunities to attract new parts manufacturing and machine, tool and die investment.[10]

While studies indicate that the prospects for a new "greenfield" automotive manufacturing plant in Windsor may be limited before 2010, it is also stated that it is highly likely that new assembly plants will be constructed in North America within the next ten years[11]. This has in fact occurred, with a new plant by Toyota to be constructed just outside of Woodstock. This underscores the importance of having sufficient land available so that Windsor can be considered for future manufacturing facilities, should further automotive plants be considered in Ontario.

Based on these strategies and policies, additional information was obtained regarding the typical area of land area that has been utilized / required for newer, state-of-the art automotive manufacturing facilities and is summarized in Table 4.5. This data reveals that the average amount of land consumed for such development is approximately 500 hectares.

[7] Windsor-Detroit International Trade Gateway Analysis Strategy Report
[8] Automotive Sector Strategic Plan
[9] Ibid
[10] Ibid
[11] Ibid

Table 4.5

TYPICAL LAND REQUIREMENTS FOR NEW MAJOR AUTOMOTIVE MANUFACTURING FACILITIES

Company	Location	Area	
		Hectares	Acres
Toyota	San Antonio, TX	809	2,000
Toyota	Georgetown, KY	526	1,300
Toyota	Princeton, Ind	469	1,160
Toyota	Cambridge, ON	162	400
Honda	Lincoln, Ala	546	1,350
Nissan	Smyna, TN	315	778
Mercedes Benz	Pooler, GA	607	1,500
BMW	Spartanburg, SC	364	900
Hyundai	Montgomery, Ala	648	1,600
Toyota	Woodstock, ON	405	1,000
Average		**485**	**1,200**

The potential for large scale manufacturing facilities would also have a significant impact on employment in the City of Windsor. It is estimated that a new plant such as Daimler Chrysler would create approximately 1,000 jobs in the assembly plant with a further 1,500 positions created for parts and suppliers. This figure is supported by the job projections for the new Toyota plant in Woodstock, which is expected to generate 1,300 jobs initially directly in the plant. It is also estimated that every one of these direct jobs results in approximately four "spin-off' jobs[12]. As a result, the construction of a large scale manufacturing facility (automotive related or similar) has the ability to create a total of approximately 12,500 direct and indirect new jobs in the City and surrounding area.

Although more recent information from the Conference Board of Canada suggests that the North American auto industry is facing a number of challenges as a result of a lack of pent-up demand, increasing competition and higher production costs, employment was still expected to increase by 0.7 to 1.2% annually from 2006 to 2008 for most sectors of the automotive and automotive parts manufacturing industry.[13]

Other specialized employment / land needs that should be considered in the Windsor context relate to opportunities presented for multi-modal facilities. Information obtained from Canadian Pacific Railway revealed that there is considerable interest

[12] Windsor – Essex County Development Commission.

[13] Conference Board of Canada. Canada's Auto and Auto Parts Industry Industrial Outlook. Summer 2004.

and preliminary planning on the part of CP to establish new rail facilities in conjunction with any new large scale manufacturing facilities that located in Windsor. These long-term plans, intended to capitalize on the proximity of the rail line to the airport, major highway routes (i.e. – Highway 401, EC Row Expressway, Lauzon Parkway) and existing and potential industrial lands, would offer significant opportunities for efficient multi-modal transportation.

Specific components of a multi-modal facility would likely include an automotive compound, marshalling yard, box car facility, inter-modal area, expressway product area, etc. It is CP's intent to partner with the trucking industry to increase the efficiency and cost-effectiveness of both modes of transportation. CP has estimated that the land requirements for such a facility would be approximately 200 hectares (500 acres), however, these requirements are somewhat flexible and likely could be reduced if the facility was planned in conjunction with a specific manufacturing / industrial enterprise. Key aspects that would be required for this type of multi-modal facility would be as follows:

- Large tract of unencumbered land with a relatively long configuration to allow for the large turning radii that is required for railways;
- Close proximity to airport and major highway corridors;
- Good separation from residential or other sensitive land uses;
- As few highway / street crossings as possible.

A range of transportation infrastructure improvements and better integration of various transport modes has been identified as being important to facilitate anticipated increases in trade flows at the Windsor/Detroit gateway[14]. The long-term, multi-modal vision proposed by CP Rail is one component of a larger strategy that can help address some of these gateway-related transportation needs.

The City of Windsor is currently undertaking a high-level study relating to rail rationalization and a multi-modal facility, to examine its economic feasibility. As that initial study is not expected to be complete until early 2007, no specific recommendations can be integrated with the Windsor Annexed Area Master Plan. However, consideration should be given to identifying appropriately located and sized lands to facilitate potential multi-modal opportunities in the future.

4.3.4 Location of Employment

Windsor plays a significant role as an employment centre for residents within the City itself, as well as for many people who live outside the municipality but who work in

[14] Transportation Economics & Management Systems, Inc. Windsor-Detroit International Trade Gateway Analysis Strategy Report, March 2000.

the City. This factor should be considered when generating employment projections and associated land area requirements. Analysis undertaken in 2001 revealed that approximately 70% of the jobs within the Windsor- Essex area are located in the City of Windsor. At that time, it was determined that 108,535 jobs existed in the City of Windsor in 1996 as compared to a labour force that numbered approximately 82,000. This resulted in a "jobs/labour force ratio" of 1.32 in 1996.[15] In other words, the equivalent of an additional one-third of Windsor's labour force worked in the City but did not reside within its boundaries. This is particularly evident in some municipalities (LaSalle and Tecumseh) where over 70% of the labour force is employed within the City of Windsor.

Updated place of work data compiled by the Windsor Essex Development Commission from Statistics Canada data revealed that approximately 111,410 persons with a "usual place of work" worked in Windsor, an increase of approximately 3,000 since 1996. This results in a jobs/labour force ratio of approximately 1.31, very similar to 1996 . With the inclusion of those who work at home and those who do not have a 'usual place' of work, the total number of jobs in Windsor is estimated to be approximately 118,740. It should also be noted that the place of work data does not include employees who reside in the United States but work in Windsor so the actual jobs/labour force ratio may be slightly higher. The 'jobs/labour force' ratio is also expected to be relatively stable in the future given that a larger proportion of jobs are expected to be created in the City of Windsor (65%) than in the County (35%)[16].

Table 4.6

ESTIMATED EMPLOYMENT AND JOBS / LABOUR FORCE RATIO

	1996*	**2001****
Labour Force (with usual place of work))	82,000	84,955
Total Jobs in Windsor	108,535	111,410
Ratio	1.32	1.31

Notes:

*Source – Windsor – Essex Regional Analysis, 2001

** Source – Windsor Essex Development Commission, Statistics Canada 2001 data.

Figures exclude transient workers, those who work at home, those who work outside Canada and jobs filled by people living outside of Canada.

4.4 EMPLOYMENT PROJECTIONS

Employment projection estimates for the twenty year planning period have been determined by two methods.

[15] Ministry of Municipal Affairs and Housing, Windsor-Essex Regional Analysis Working Report, 2001 (page 45).
[16] Ministry of Municipal Affairs and Housing, Windsor-Essex Regional Analysis Working Report, 2001 (page 48).

- Activity Rate Projection Method
- Employment Growth Rate Projection Method

4.4.1 Activity Rate Projection Method

The activity rate projection method is outlined in the Projection Methodology Guideline document provided by the Ontario government. It relies on the determination of an activity rate for a given municipality that is then applied to the projected population and relies on place of work data. Employment projections based on activity rates were included in the Development Charges Background Study (Hemson Consulting 2004) and assumed that the activity rate would increase gradually over time with total employment by 2026 forecasted to be 150,117 an increase of approximately 28,000 over the 2001 to 2026 period.

Table 4.7

EMPLOYMENT PROJECTIONS – ACTIVITY RATE METHOD

ACTIVITY RATE BASIS		
	2001	**2026**
Total Population	208,602	243,055
Estimated Employment	122,000	150,117
Activity Rate	58.5%	61.8%
Total New Employment	**28,117**	

Source: Development Charges Background Study, Hemson Consulting Ltd., July 2004

4.4.2 Employment Growth Method

Future employment projections were also prepared based on three scenarios reflecting different growth rate assumptions. To determine potential growth rate scenarios, Statistics Canada data between 1981 and 2001 was reviewed and average annual growth rates calculated over five, ten and twenty year periods as shown in Table 4.8. These growth rates ranged from just under minus 1 percent to nearly 2 percent per year.

Table 4.8

EMPLOYMENT GROWTH RATES

	1981	1986	1991	1996	2001
Employed Labour Force 15 & Over	79,820	87,730	83,080	89,275	97,495
Average Annual Growth Rate Over 5 Year Period		1.98%	-1.06%	1.49%	1.84%
Total Employment Growth Rate – 1991 - 2001			17.35%		
10 Year Average Annual Employment Growth Rate (1991-2001)			1.74%		
Total Employment Growth Rate – 1981 - 2001			22.14%		
20 Year Average Annual Employment Growth Rate (1981-2001)			1.11%		

Source: Statistics Canada data

As recent studies predict greater stability in the automotive and manufacturing sectors in Windsor as a result of the macro-environment with fewer drastic employment fluctuations as have occurred in the past, the growth rate scenarios assumed for employment projections are as follows:

- Low growth scenario assumes an annual growth rate of 0.5%. This is slightly above the poorest ten year average of approximately 0.4% between 1986 and 1996.
- Medium Growth scenario assumes a 1.0% annual growth rate, approximately reflecting the twenty year average;
- High growth scenario assumes an annual growth rate of 1.75%, reflecting the ten year average between 1991 and 2001.

These rates are all below employment growth rate forecasts provided for Windsor by the Conference Board of Canada for the 2003 to 2005 timeframe, which ranged from 1.9 to 2.2 percent. It should also be noted that the average annual employment growth rate of 1.84 percent that was achieved between 1996 and 2001 nearly doubled the City's previous high case scenario assumption of 1.0 percent[17]. As the various scenarios are assumed to remain constant over the twenty-year planning period, there must be some recognition that economic conditions and employment growth rates fluctuate over time as a result of unpredictable national and international factors. Consequently, the growth rate scenarios provided above are intended to reflect a relatively conservative approach. It is also assumed that the proportion of employees by labour force sector will remain generally consistent with those found in 2001 for the purposes of estimating land needs.

[17] The Vision in Action: Employment Analysis, October 1996 report assumed growth rates of 0.5%, 0.75% and 1.0% for the low, medium and high case employment growth scenarios.

Applying these rates to the 2001 employed labour force, as adjusted to account for the jobs/labour force ratio, results in additional employment growth ranging from approximately 14,795 to 60,493 new jobs in Windsor as shown in Table 4.9. Full calculations are provided in Appendix 1.

Table 4.9

EMPLOYMENT GROWTH PROJECTIONS (TOTAL EMPLOYMENT)

Employment Scenario	Annual Increase	2001 Employed	2026 Estimate	# of New Jobs
Low Growth	0.50%	111,410	126,205	14,795
Medium Growth	1.00%	111,410	142,876	31,466
High Growth	1.75%	111,410	171,903	60,493

Source: 2001 base data reflects Statistics Canada place of work data provided by Windsor-Essex Development Commission

4.5 EMPLOYMENT PROJECTION ADJUSTMENTS

Prior to determining land needs requirements for industrial, commercial and related lands, the projected employment figures were adjusted to reflect factors related to type of work, place of work, workplace expansions / intensification, etc. These adjustments were undertaken to acknowledge that different types of employment require differing amounts of land per employee due to the specific nature of the work. As well, not all new jobs created will require additional land area to be provided.

4.5.1 Employment Categories

The projected employment growth has been further subdivided into the following categories, consistent with those categories previously defined by the City of Windsor and the Ministry of Municipal Affairs and Housing:

- Primary jobs – includes those jobs related to agriculture and the resource industry;
- Employment land jobs – includes those jobs related to manufacturing, construction, trades, transport, utilities and wholesale fields of work;
- Population jobs - includes those jobs associated with education, health, finance, business, government, arts and culture, recreation, food, personal services and similar occupations.

Based on a review of industry sector and more detailed occupational data provided by Statistics Canada, the projected employment growth is expected to be split into these categories as shown in Table 4.10. It should also be noted that information provided by the City of Windsor indicated that approximately 25% of the ‘employment land’ jobs would be further defined as ‘heavy’ industrial jobs such as automotive industries. The remaining 75% are defined as ‘medium’ or ‘light’ industrial jobs, such as tool and die, mold making, parts suppliers and other forms of low to moderate intensity manufacturing and have different land needs requirements than the heavy industry forms.

Table 4.10

FUTURE EMPLOYMENT BY GENERAL CATEGORY

		2026					
	%	**Low**		**Medium**		**High**	
		Total	New	Total	New	Total	New
Primary Jobs	0.6	734	86	831	183	1,000	352
Employment Land Jobs	38.8	48,946	5,738	55,411	12,203	66,669	23,461
Population Jobs	60.6	76,525	8,971	86,633	19,079	104,234	36,680
Total	**100.0**	126,205	14,795	142,876	31,466	171,903	60,493

4.5.2 Place of Work Adjustments

Statistics Canada data indicates that the vast majority of the labour force works at a ‘usual place’ (e.g. – plant, office, store, institution, etc.). A small proportion works at home and still others work outside of Canada. According to the 2001 census, approximately 2.7 percent of the labour force living in Windsor worked at home. Previous studies prepared in 1996 by the City of Windsor indicated that home employment ranged from 1.8% to 2.2% between 1981 and 1991 and assumed that an average of 2 percent of the population worked at home. More recent data indicates that this proportion has increased, as shown in Table 4.11, although there has been a slight decline between 1996 and 2002. The increased proportion of ‘at-home’ workers since 1991 may be indicative of greater flexibility in the workplace and technological advances that facilitate telecommuting, however, it is apparent that these levels have fluctuated to some extent over the past twenty years.

Table 4.11

WORK AT HOME LABOUR FORCE

	1981	1986	1991	1996	2001	2001 Adjusted
Employed Labour Force	93,275	102,303	104,920	89,275	97,495	118,740
Work at Home	1695	2254	2252	2,645	2,635	2,635
% 'At-Home' Workers	1.8%	2.2%	2.1%	3.0%	2.7%	2.2%
20 Year Average	2.4%					

As the data provided by the Windsor Essex Development Commission for the number of jobs actually existing in Windsor already excludes those who work at home, no adjustments are made to the employment projections generated for the purposes of determining land need requirements.

It is also noted that approximately 5 percent of the labour force works outside of Canada. This factor was also taken into consideration in the place of work data provided by the Windsor Essex Development Commission when determining the jobs/labour force ratio and no further adjustments are considered necessary.

4.5.3 Major Office / Downtown Office Workers

For those jobs identified as 'population' jobs, it is reasonable to expect that some of them will be accommodated within the downtown core where major office uses are located. In 2003, the City of Windsor estimated that approximately 15% of all jobs in the City were located within the downtown core, which translates to a total of approximately 16,700 jobs. The vast majority of these are assumed to be 'population jobs' related to business services, retail, government / institutional, entertainment, etc. rather than those associated with the employment land (i.e. – industrial) category. This represents approximately 25% of all 'population' jobs. The most recent significant influx of additional office workers to downtown occurred in 2002, with the relocation of DaimlerChrysler Canada's head office to Riverside Drive. Based on our background review and discussions with the WEDC and the City, there have been no significant increases in downtown employment since that time. As a result, it is assumed that approximately 25% of the future 'population jobs' will also be located in the downtown core over the planning period and will not require additional land area to accommodate them.

4.5.4 Intensification Adjustment

It is anticipated that a certain proportion of new jobs will be accommodated within existing office / industrial buildings, lands that are underdeveloped (e.g. – plant expansions, etc.) and remnant vacant parcels throughout the City that are available for industrial, commercial and office development . Previous projections assumed that approximately 2% of new jobs would be accommodated in this manner. There is no information available that indicates a need to revise this figure, therefore the employment growth projections have been adjusted to reflect this assumption.

The foregoing allowances result in adjusted employment projections as shown in Table 4.12 and 4.13 for the three scenarios. It should be noted that the adjustments made for intensification are assumed to be dispersed through all industry sectors, therefore have been deducted from the total employment growth that is anticipated to require additional land base to accommodate future needs.

Table 4.12

SUMMARY OF ADJUSTED PROJECTIONS FOR NEW EMPLOYMENT (2026)

	Low	Medium	High
Total Projected Additional Employment	14,795	31,466	60,493
Workplace Intensification (2%)	296	629	1,210
Major Office Workers (25% of Population Jobs)	2,198	4,674	8,987
Projected Employed Population Requiring Land*	**12,301**	**26,162**	**50,297**

Note – Numbers may not add precisely due to rounding

Table 4.13

SUMMARY OF ADJUSTED PROJECTIONS BY TYPE OF EMPLOYMENT (2026)

	LOW	MEDIUM	HIGH
Primary Jobs	84	179	345
Employment Land Jobs - Heavy	1,406	2,990	5,748
Employment Land Jobs - Light	4,217	8,969	17,244
Population Jobs	6,594	14,023	26,960
TOTAL	**12,301**	**26,162**	**50,297**

4.6 CONCLUSIONS AND RECOMMENDATIONS SUMMARY

- The City of Windsor plays a dominant role, regionally, provincially and nationally, with regard to the automotive sector and as an international trade gateway. The importance of this role must be taken into consideration when determining land needs requirements for future employment and industry.
- Despite a slowdown in the automotive sector over the previous two years, and an unemployment rate higher than both the provincial and national averages, Windsor has experienced strong economic performance in recent years, outperforming many other local economies. Future employment growth, while still expected to be dependent on the automotive sector to a large extent, is becoming increasingly diversified and less likely to experience drastic fluctuations due to cyclic economic conditions.
- Land absorption for industrial / business park purposes was particularly strong from 1997 to 2002. There is little land available for future industrial / business park growth that is serviced or of sufficient size to accommodate interested purchasers / tenants.
- The employment growth rate method is considered an appropriate method for determining future projected employment as it incorporates various trends and factors (e.g. – jobs/labour force ratio) that should be considered for the Windsor context.
- The ‘medium growth’ employment projection should be adopted as the ‘reference scenario’ for determining future land needs requirements as it is based on the long-term (twenty year) average growth rate, rather than shorter term growth rates that may have been influenced to a greater extent by specific economic events.
- In addition to those lands calculated to be required for future industrial growth based on employment projections, additional land with close proximity to major transportation routes and servicing corridors should be set aside to accommodate potential large-scale manufacturing facilities and/or associated multi-modal transportation facilities.

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APPENDIX 1

DETAILED EMPLOYMENT CALCULATIONS

EMPLOYMENT GROWTH PROJECTIONS BY INDUSTRY SECTOR – LOW SCENARIO

Growth Rate – 0.5% per Year				
Sector	**2001 Actual**	**2001 Adjusted**	**2026 Estimate**	**# of New Jobs**
Agriculture / Forestry	480	510	578	68
Mining / Oil and Gas	130	138	156	18
Utilities	510	542	614	72
Construction	4,765	5,064	5,736	672
Manufacturing	29,030	30,849	34,946	4,097
Wholesale Trade	2,615	2,779	3,148	369
Retail Trade	11,315	12,024	13,621	1,597
Transportation and Warehousing	3,740	3,974	4,502	528
Information and cultural industries	1,155	1,227	1,390	163
Finance and insurance	2,280	2,423	2,745	322
Real estate & retail & insurance	1,280	1,360	1,541	181
Professional / scientific / technical	4,415	4,692	5,315	623
Management of companies	70	74	84	10
Administrative & support	4,035	4,288	4,857	569
Educational services	5,835	6,201	7,024	823
Health care & social assistance	9,140	9,713	11,003	1,290
Arts / entertainment / recreation	4,730	5,026	5,694	667
Accommodation / food services	9,495	10,090	11,430	1,340
Other Services	4,400	4,676	5,297	621
Public Administration	3,170	3,369	3,816	447
Industry - not applicable	2,250	2,391	2,709	318
Total Experienced Labour Force	104,840	111,410	126,205	14,795

* Note – 2001 industry sector totals have been adjusted to reflect employed labour force, assuming the same proportions per sector as exist for the total labour force.

EMPLOYMENT GROWTH PROJECTIONS BY INDUSTRY SECTOR – MEDIUM SCENARIO

Growth Rate – 1.0% per Year				
Sector	**2001 Actual**	**2001 Adjusted**	**2026 Estimate**	**# of New Jobs**
Agriculture / Forestry	480	510	654	144
Mining / Oil and Gas	130	138	177	39
Utilities	510	542	695	153
Construction	4,765	5,064	6,494	1,430
Manufacturing	29,030	30,849	39,562	8,713
Wholesale Trade	2,615	2,779	3,564	785
Retail Trade	11,315	12,024	15,420	3,396
Transportation and Warehousing	3,740	3,974	5,097	1,122
Information and cultural industries	1,155	1,227	1,574	347
Finance and insurance	2,280	2,423	3,107	684
Real estate & retail & insurance	1,280	1,360	1,744	384
Professional / scientific / technical	4,415	4,692	6,017	1,325
Management of companies	70	74	95	21
Administrative & support	4,035	4,288	5,499	1,211
Educational services	5,835	6,201	7,952	1,751
Health care & social assistance	9,140	9,713	12,456	2,743
Arts / entertainment / recreation	4,730	5,026	6,446	1,420
Accommodation / food services	9,495	10,090	12,940	2,850
Other Services	4,400	4,676	5,996	1,321
Public Administration	3,170	3,369	4,320	951
Industry - not applicable	2,250	2,391	3,066	675
Total Experienced Labour Force	104,840	111,410	142,876	31,466

Note – 2001 industry sector totals have been adjusted to reflect employed labour force, assuming the same proportions per sector as exist for the total labour force.

EMPLOYMENT GROWTH PROJECTIONS BY INDUSTRY SECTOR – HIGH SCENARIO

Growth Rate – 1.75% per Year				
Sector	**2001 Actual**	**2001 Adjusted**	**2026 Estimate**	**# of New Jobs**
Agriculture / Forestry	480	510	787	277
Mining / Oil and Gas	130	138	213	75
Utilities	510	542	836	294
Construction	4,765	5,064	7,813	2,749
Manufacturing	29,030	30,849	47,600	16,751
Wholesale Trade	2,615	2,779	4,288	1,509
Retail Trade	11,315	12,024	18,553	6,529
Transportation and Warehousing	3,740	3,974	6,132	2,158
Information and cultural industries	1,155	1,227	1,894	666
Finance and insurance	2,280	2,423	3,738	1,316
Real estate & retail & insurance	1,280	1,360	2,099	739
Professional / scientific / technical	4,415	4,692	7,239	2,547
Management of companies	70	74	115	40
Administrative & support	4,035	4,288	6,616	2,328
Educational services	5,835	6,201	9,567	3,367
Health care & social assistance	9,140	9,713	14,987	5,274
Arts / entertainment / recreation	4,730	5,026	7,756	2,729
Accommodation / food services	9,495	10,090	15,569	5,479
Other Services	4,400	4,676	7,215	2,539
Public Administration	3,170	3,369	5,198	1,829
Industry - not applicable	2,250	2,391	3,689	1,298
Total Experienced Labour Force	104,840	111,410	171,903	60,493

Note – 2001 industry sector totals have been adjusted to reflect employed labour force, assuming the same proportions per sector as exist for the total labour force.