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**CITY OF WINDSOR ANNEXED AREA
MASTER PLAN STUDY**

HOUSING DEMAND ANALYSIS

Prepared for:

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3.0 Housing Demand Analysis

3.1 INTRODUCTION

The provision of adequate housing in urban areas is necessary to attract and retain a qualified and diverse labour force. Appropriate housing also plays an important role in contributing to residents' financial security, amenity and quality of life¹. The identification and analysis of housing demand assists municipalities in ensuring that there is sufficient land for new housing and provides direction as to the types of housing that are likely to be needed in the future. Housing demand analysis can also be used as the basis for developing appropriate policies relating to housing mix, density and community form.

Housing demand projections are an essential component to determine the associated land area that will be required to accommodate future residents. These projections are also necessary to address provincial policies related to the provision of land for future growth and development, the removal of land from agricultural designations and application of new Official Plan designations.

Housing demand projections were last completed by the City of Windsor in preparation for the Official Plan which was approved by the province in March 2000. These housing projections were based on 1991 census data and the population projections prepared for the Official Plan. Since that time, updated census data has become available and new population projections have been prepared, as outlined in Section 2 of this report. Revised housing projections are now required to reflect the preferred population projection scenario as well as more recent data and analysis relating to household composition and demand. This section of the report provides the following:

- Overview of methodology used to determine housing demand forecast;
- Analysis of recent trends relating to housing demand;
- Description and rationale for underlying assumptions used;
- Projected housing demand requirements, in terms of number and composition of dwelling units.

3.2 METHODOLOGY



Housing demand projections were prepared according to the Province's projection guidelines by the City of Windsor Planning Services Unit in consultation with Stantec

¹ CMHC, Canadian Housing Observer 2003.

Consulting. The projections are based on the preferred population projection scenario as outlined in Section 2 of this report. The main steps used to calculate future housing demand for the City of Windsor followed the Province's Projection Methodology Guideline document and are summarized as follows:

- Identify the proportion of households maintained by specific age groups to determine headship rate;
- Determine the household demand propensities for those age groups by housing structure type;
- Apply the household demand propensities to the forecasted population by five year projection periods, to determine projected housing demand by dwelling structure type.

The data used to determine household headship rates and housing demand propensity is based on 2001 census data that was purchased from Statistics Canada by the City of Windsor. The methodology is consistent with that used by the City of Windsor previously and is commonly used and accepted by other municipalities, the Ministry of Municipal Affairs and Housing (MMAH) and the CMHC.

3.3 TRENDS AND ASSUMPTIONS

Household demand is influenced by a number of factors, including age, household composition, affordability, culture/lifestyle and location. Analysis of these factors and related trends can help predict potential changes in housing formation, demand for certain types of dwellings, household size and their impact on future housing demand projections.

3.3.1 Headship Rates

Headship rates are used to convert population projections into housing projections. They essentially describe the proportion of the population, by age group that maintains a household (i.e. – is responsible for major dwelling payments such as the mortgage / rent, taxes, utilities, etc.). These headship rates, when combined with data regarding the type of dwellings typically occupied by various age groups, are used to calculate the number and type of housing structures required for a given population.

Typically, headship rates are lower for younger persons and increase as these persons move into employment and child-bearing stages of life where they are able to form individual households (i.e. – become 'household maintainers'). Headship rates become progressively higher as individuals age until the latter stages of life when they again decrease, typically as a result of seniors moving into nursing /

retirement homes or other arrangements where they are no longer responsible for an individual household.

Data obtained by the City of Windsor from Statistics Canada regarding household maintainers by age groups and the resulting headship rates for 2001 reflects this general pattern, as shown in Table 3.1.

Table 3.1
HOUSEHOLD MAINTAINERS AND HEADSHIP RATES BY AGE

Age Groups	Households ²	Population-2001 ³	Headship Rates ⁴
0-14	0	39,655	0.000
15-19	350	12,965	0.027
20-24	3,725	15,330	0.243
25-29	6,920	16,510	0.419
30-34	8,720	16,455	0.530
35-39	9,625	17,170	0.561
40-44	9,130	15,775	0.579
45-49	7,920	14,130	0.561
50-54	7,535	12,785	0.589
55-59	6,015	9,825	0.612
60-64	4,905	8,480	0.578
65-69	4,775	7,855	0.608
70-74	5,075	7,740	0.656
75 +	9,125	13,750	0.664
Total	83,820	208,425	

Source – Statistics Canada, City of Windsor

Headship rates tend to be very stable over time within municipalities and the province and are generally assumed to remain constant over the projection period.⁵ For the purposes of determining housing demand projections for this report, the 2001 headship rates provided in Table 3.1 will be used and held constant for the duration of the projection period. Resulting household projections for the year 2021 based on

² Based on data provided by Statistics Canada. Primary household maintainer refers to the age groups of the first person in the household identified as the one who pays the rent or the mortgage, or the taxes, or the electricity bill, etc., for the dwelling. If no person in the household is responsible for such payments, Person 1 is considered to be the only household maintainer.

³ Based on the reference scenario of the population projection.

⁴ Number of primary household maintainers divided by the population of the age group.

⁵ Province of Ontario, Projection Methodology Guideline, 1995

these headship rates are shown in Table 3.2. Full calculations for individual five-year periods are provided in Appendix 1.

Table 3.2
PROJECTED HOUSEHOLDS AND HEADSHIP RATES
BY AGE AT END OF PLANNING PERIOD

Age Groups	Headship Rates ⁶	Population (2021)	Households (2021)
0-14	0.000	39,846	0
15-19	0.027	15,073	407
20-24	0.243	15,696	3,814
25-29	0.419	16,019	6,712
30-34	0.530	15,550	8,242
35-39	0.561	15,681	8,797
40-44	0.579	18,500	10,712
45-49	0.561	19,517	10,949
50-54	0.589	18,213	10,727
55-59	0.612	17,643	10,798
60-64	0.578	15,241	8,809
65-69	0.608	12,805	7,785
70-74	0.656	10,402	6,824
75 +	0.664	14,625	9,711
Total	0.402	244,811	104,287

Source – Statistics Canada, City of Windsor

3.3.2 Household Demand Propensities

Household demand propensity is a term used to describe the demand for certain types of housing by people within various age groups. For example, young adults are more likely to choose to live in apartments, whereas those in their 30's and 40's with families have a higher 'propensity' for choosing single family residences. Consequently, household demand propensities tend to change over a person's life span. This is typically a result of both lifestyle preference and affordability.

⁶ Based on data provided by Statistics Canada. Primary household maintainer refers to the age groups of the first person in the household identified as the one who pays the rent or the mortgage, or the taxes, or the electricity bill, etc., for the dwelling. If no person in the household is responsible for such payments, Person 1 is considered to be the only household maintainer.

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Analysis of these propensities, in context with population projections by age group, helps to predict the number of housing units by type of dwelling structure that will be required for specific periods in time. This in turn, combined with an analysis of available housing and land, is used to approximate the amount of land that will be required to accommodate a growing population.

Information regarding dwelling choice tendencies by age group in the City of Windsor was unavailable for census years prior to 2001. However, household demand propensities for individual age groups are generally assumed to be relatively stable according to CMHC findings and methodology. Household demand propensities by age group for various dwelling types in the City of Windsor are provided in Table 3.3. These proportions are assumed to remain constant throughout the twenty-year projection period.

Table 3.3
HOUSEHOLD DEMAND PROPENSITIES (AS PERCENTAGE) BY AGE GROUP - 2001

Age Group	Single Detached	Semi-Detached	Row	Duplex / Apt.	Apt < 5 Storeys	Apt. > 5 Storeys	Other Single
0-14	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
15-19	27.1%	2.9%	2.9%	15.7%	24.3%	27.1%	0.0%
20-24	32.0%	5.4%	6.7%	9.0%	17.9%	28.8%	0.3%
25-29	47.1%	5.0%	7.2%	7.7%	14.8%	17.8%	0.3%
30-34	59.6%	5.8%	5.7%	4.6%	11.1%	12.9%	0.3%
35-39	64.3%	5.2%	6.0%	4.4%	9.2%	10.5%	0.6%
40-44	66.1%	4.4%	7.6%	3.6%	8.9%	9.1%	0.3%
45-49	70.6%	3.7%	4.4%	3.3%	8.6%	9.1%	0.2%
50-54	68.9%	4.2%	5.8%	2.8%	10.6%	7.4%	0.3%
55-59	67.3%	3.9%	5.2%	3.1%	13.3%	7.0%	0.2%
60-64	70.1%	3.5%	3.8%	2.7%	14.7%	5.1%	0.2%
65-69	66.0%	2.4%	4.6%	2.3%	19.3%	5.1%	0.2%
70-74	64.5%	2.8%	4.4%	2.1%	20.6%	5.4%	0.2%
75+	62.8%	1.2%	2.5%	2.0%	26.5%	5.0%	0.0%

Source: Statistics Canada, City of Windsor

As can be seen, the tendency to live in single family dwellings increases substantially as individuals become 30 to 40 years old, and stays relatively strong for the duration of the life span. With regard to apartment dwellers, it is noted that there is a slightly higher propensity to live in apartment dwellings above 5 storeys by younger age groups, but a considerably stronger tendency for older persons to choose apartments below 5 storeys. This may be a reflection of lifestyle choices, availability, affordability and locational characteristics. At the present time, the majority of apartments above five storeys are generally located in the city core, whereas most apartment buildings outside of the core are below five storeys.

Household demand propensities can also be divided between owned and rented dwellings. This breakdown has not been provided in this report as the most important aspect of housing demand is the total number of dwellings that are projected to be needed over the twenty year time span, rather than the form of tenure.

3.3.3 Household Size and Composition

Total housing demand is also influenced by household size and composition. In recent years, the rate of household formation has exceeded the population growth rate, as shown in Table 3.4. This is due to a number of factors:

- Declining birth rates;
- An increase in the number of households consisting of single persons, lone parent families and couples without children;
- A greater number of seniors with fewer of them living in health care institutions⁷.

These factors affect housing demand as the rate of housing formation is likely to continue to exceed the rate of population growth, although at a slower rate.

⁷ CMHC. Canadian Housing Observer 2003.

Table 3.4
HOUSEHOLD SIZE AND COMPOSITION TRENDS

Factor	1981	1986	1991	1996	2001
Total Population	192,083	193,122	191,435	197,694	208,402
Population Growth		1,039	-1,687	6,259	10,708
Percentage Change		0.54%	-0.87%	3.27%	5.42%
Total Households	69,995	72,655	74,655	79,060	83,825
Household Growth		2,660	2,000	4,405	4,765
Percentage Change		3.80%	2.75%	5.90%	6.03%
Average Household Size		2.7	2.6	2.5	2.5

Table 3.4 also illustrates the concurrent decline in average household size over the past twenty years. Household sizes are expected to continue to decline marginally over the twenty year period given current demographic trends related to birthrates and an aging population.

3.3.4 Housing Demand Preferences

Housing demand preferences are a function of lifestyle and economic factors as well as underlying values. There is a strong preference for single family detached housing in Windsor with approximately 62% of the existing housing stock consisting of such dwellings. This preference is consistent with national and provincial trends, likely reflecting a general tendency for many Canadians to consider single family dwellings as the 'best' or most appropriate form of housing in which to live for lifestyle, privacy and potential return on investment reasons. However, with an aging population it is anticipated that there will be an increased demand in the future for other housing types that minimize maintenance responsibilities, particularly for owned apartments and townhomes by those over the age of 55⁸.

The historical proportion of single family detached dwellings as compared to total dwelling structure types in Windsor is shown in Table 3.5. It should be noted that in this report, any references to low, medium and high density are distinguished on the basis of City of Windsor definitions:

- Low density refers to single family detached dwellings;
- Medium density refers to semi-detached, duplex, row housing and low-rise apartment (below 5 storeys) dwellings;

⁸ CMHC Forecast Summary for Windsor. Fall 2002.

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- High density refers to apartment buildings that are 5 storeys or more.

Table 3.5
CITY OF WINDSOR OCCUPIED HOUSING STRUCTURES BY TYPE

Type of Structure	1991		1996		2001	
	# of Units	%	# of Units	%	# of Units	%
Single-detached	46,215	61.90	48,035	60.76	52,065	62.05
Semi-detached	2,510	3.36	2,615	3.31	3,415	4.07
Rowhouse	3,920	5.25	4,095	5.18	4,490	5.35
Apt. / Detached duplex	2,905	3.89	3,475	4.40	3,330	3.97
Apartment < 5 storeys	8,120	10.88	9,070	11.47	8,300	9.89
Apartment ≥ 5 storeys	10,640	14.25	11,460	14.50	12,060	14.37
Other single	310	0.42	305	0.39	235	0.28
Movable dwelling	35	0.05	15	0.02	15	0.02
Total	74,655	100.0	79,060	100.0	83,910	100.0

Source: Statistics Canada, City of Windsor

Recent building construction patterns indicate that the preference for low density, single detached dwellings continues to be strong as shown in Table 3.6, with the overall proportion ranging from approximately 59 to 70 percent in recent years.

Table 3.6
BUILDING PERMIT SUMMARY – RESIDENTIAL CONSTRUCTION (NUMBER OF UNITS)

Type of Dwelling	1996	1997	1998	1999	2000	2001	2002
Single Detached	799	900	755	846	911	971	875
Semi-detached	115	158	160	218	198	136	222
Duplex	9	12	4	0	0	0	2
Double Duplex	20	0	8	4	4	20	8
Row Housing	64	24	130	192	106	167	178
Apartment	267	209	195	146	55	121	190
Other	46	64	15	2	35	40	5
Total	1,320	1,367	1,267	1,408	1,309	1,455	1,480

Source: Infrastructure Services Building Unit / Building Department Annual Reports (1998 through 2002)

Note: 'Other' includes additional dwelling units and accessory apartments in new or existing buildings.

3.3.4 Ownership Patterns and Affordability

According to CMHC data, home ownership levels have increased slightly in Windsor as in the rest of Canada over the past five years, reversing the previous ten-year pattern which indicated general stability or slight declines in ownership, as shown in Table 3.7. This is primarily due to increased consumer confidence in the economy and affordability as a result of historically low mortgage rates. While ownership patterns have little effect on the estimated housing demand overall, they provide some indication to builders as to the type of housing that may be more marketable (e.g. – freehold and condominium ownership instead of rental accommodation).

Table 3.7
HOUSEHOLD OWNERSHIP TRENDS

Tenure	1986	1991	1996	2001
Total Number of Occupied Dwellings	72,655	74,655	79,060	83,825
Number of Owned Dwellings	45,530	46,755	48,800	54,345
% Owned	62.7%	62.6%	61.7%	64.8%
Number of Rented Dwellings	27,125	27,900	30,260	29,480
% Rented	37.3%	37.4%	38.3%	35.2%

3.4 PROJECTED HOUSING DEMAND

Housing demand projections were prepared by applying the foregoing headship rates and housing demand propensities to the population projections provided in Section 2 of this report (summarized in Table 3.8).

Table 3.8
POPULATION PROJECTION SUMMARY

	2001	2006	2011	2016	2021	Total Increase
Low Scenario	208,425	215,448	221,838	226,843	230,823	22,398
Medium Scenario	208,425	218,467	228,263	236,948	244,811	36,386
High Scenario	208,425	220,614	232,902	244,348	255,205	46,780

Source – Statistics Canada 2003, City of Windsor

The medium case scenario, identified as the ‘reference scenario’ for reasons outlined previously, has been used as the basis for projecting housing demand over the next twenty years. These projections, combined with the headship rates and housing propensity assumptions, result in a demand for a total of 104,287 dwelling units by

2021 with dwelling type categories as shown in Figure 3.9. Detailed calculations by year and age group are provided in Appendix 2.

Table 3.9
HOUSING DEMAND PROJECTION SUMMARY

Year	Single detached -	Semi-detached	Row house	Detached duplex / Apt.	Apartment < 5 storeys	Apartment ≥ 5 storeys	Projected Total
2001	52,590	3,335	4,485	3,255	11,820	8,290	83,775
2006	56,481	3,546	4,766	3,399	12,428	8,624	89,244
2011	60,061	3,724	4,994	3,521	13,038	8,920	94,258
2016	63,336	3,877	5,259	3,666	13,813	9,267	99,219
2021	66,612	4,030	5,469	3,812	14,743	9,621	104,287

Source – Statistics Canada 2003, City of Windsor

Table 3.9 indicates that the total number of households is projected to increase from approximately 83,775 in 2001 to 104,287 in 2021, a gain of 20,512. This represents a total increase in the order of 24.5%, or an average of 1.23% (1,026 units per year). This annual increase is well below the number of annual housing starts that has occurred since 1996, therefore likely reflects a conservative housing demand projection. The ratio of different dwelling structure types also exhibits minor changes with a slight increase in the proportion of single detached and low rise apartments and a corresponding decrease for other types of housing. It can also be noted that the projected household size in 2021 will decline to approximately 2.35 persons.

The number of new units required by housing type has also been calculated for each five year period as summarized in Table 3.10.

Table 3.10

**PROJECTED NUMBER OF ADDITIONAL DWELLING UNITS
REQUIRED BY TYPE PER FIVE YEAR PERIOD**

Period	Single detached -	Semi-detached	Row house	Detached duplex / Apt.	Apartment < 5 storeys	Apartment ≥ 5 storeys	Projected Total
2001-2006	3,891	211	281	144	608	334	5,469
2006-2011	3,580	178	228	122	610	296	5,014
2011-2016	3,275	153	265	145	775	347	4,960
2016-2021	3,276	153	210	146	930	354	5,069
TOTAL	14,022	695	984	557	2928	1331	20,512
%	68.4%	3.4%	4.8%	2.7%	14.3%	6.5%	

Source – Statistics Canada 2003, City of Windsor

Note – Numbers may not add up exactly due to rounding

The projected housing demand identified in Tables 3.9 and 3.10 must now be converted into the overall land requirements that will be needed to accommodate the projected housing. Additional factors that must be considered in this conversion are as follows:

- Total available housing stock, including those units constructed since 2001;
- Vacancy rates;
- Existing land availability within the City of Windsor, including vacant residential lands, draft approved plans and registered but as yet unbuilt plans;
- General density assumptions / guidelines for the various categories of housing structures;
- Proportion of housing need that is expected to be met through infill and intensification.

These aspects will be addressed in Section 6 (Land Needs Requirements) of this report.

3.5 REFERENCES

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