



APPENDICES

MAY 27, 2008

APPENDIX A

Built boundary: The limits of the developed urban area as defined by the Ministry of Public Infrastructure Renewal in concert with the Region and the affected municipalities (Places to Grow)

Built-up area: All land that falls within the built boundary (Places to Grow)

Density:

Low Density: refers to single detached and semi-detached dwellings

Medium Density: refers to row housing and detached duplexes

High Density: refers to apartments

Employment Activity Rate: is the ratio of local jobs per resident population. The Durham ROP identifies an employment activity rate target of 50%, under a mature state scenario.

Employment Areas Designation: includes all lands identified in blue as per Maps A1 through A5 of the 1999 Consolidated Durham ROP. Jobs in this area have traditionally been called “industrial” and are found in specifically designated industrial or business parks. Employment in this area also includes a portion of office commercial and to a lesser extent, institutional employment. It is assumed that 98% of industrial employment growth will be located in the Employment Areas designation. In addition, 35% and 10% of the respective commercial and institutional employment growth is also assumed to be located on lands within the Employment Areas designation.

Employment Land Vacancy: it is assumed that 7.5% of the total land base in the employment areas designation (occupied and developable) will not develop over the 20-year forecast period. This adjustment accounts for sites which are unlikely to develop due to odd/small lot sizes and poor configuration, underutilized employment sites, and site inactivity/land banking, which may tie up potentially vacant and developable lands

Gross designated Greenfield land: lands within the Urban Area boundary that are beyond the built boundary designated Living

Area, Regional Centre, Special Study Area, Deferred Area, and Employment Area. The Deferred Areas, designated Living Area as per ROPA 114 Structure Plan, include D3, D4 and D12. The Major Open Space system, key natural heritage and hydrologic features, and other valley systems that occur in Greenfield lands are not included in the Greenfield analysis in accordance with the Growth Plan policies.

Gross Developable Employment Land Area: All vacant plus identified underutilized urban and rural employment lands designated as per the Region of Durham 1999 Consolidated Official Plan. Major Open Space System and Natural heritage features that occur in these designated lands are excluded.

Gross land area: lands designated Living Area, Regional Centre, Special Study Area, Deferred Area, and Employment Area. These lands exclude the Major Open Space System and Natural heritage features that occur in these designated lands.

Intensification: The development of a property, site or area at a higher density than currently exists through:

- Redevelopment, including the reuse of brownfield sites;
- The development of vacant and/or underutilized lots within previously developed areas;
- Infill development; or
- The expansion or conversion of existing buildings (Places to Grow)

Living Areas Designation: includes all lands identified in yellow as per Maps A1 through A5 of the 1999 Consolidated Durham ROP. It is assumed that 100% of all population growth will be located in the Living Areas designation. In addition, 65% and 90% of all respective commercial and institutional employment growth is anticipated to be located within this area. Lastly, it is assumed that all work at home employment and employees with no-fixed-place-of-work will be accommodated within the Living Areas designation.

Net Developable Employment Land Area: All vacant plus

identified underutilized urban and rural employment lands designated as per the Region of Durham 1999 Consolidated Official Plan. Gross lands have been discounted by 75% to account for future roads, stormwater infrastructure, parks and open space, easements, etc. Net developable employment lands have also been downwardly adjusted by an additional 7.5% of total occupied and developable land employment land supply to account for long-term land vacancy.

Net developable Greenfield land: Gross designated Greenfield land area excluding lands with existing residential and non-residential uses, and lands within the development application process adjusted by applying a 50% net to gross ratio. The 50% net to gross ratio applied in the analysis has been reviewed against previous work carried out by the Region of Durham (Official Plan Review 2003), as well as other land needs studies recently completed within the Greater Toronto Area (GTAH). The net to gross adjustment accounts for land requirements associated with local hard infrastructure (i.e. roads, storm water, utility corridors, etc.), parkland/open space, community uses (elementary schools, high schools, recreational facilities), as well as population-related employment such as retail, service sector employment, churches, etc. Based on a review of existing conditions within Durham Region, 2%, 65% and 90% of the respective industrial, commercial and institutional employment is anticipated to be developed within the Living Area. In addition, all work at home and employees with no-fixed-place of work are also assumed to be accommodated within the Living Area.

Net developable land: Gross land area excluding lands with existing residential and non-residential uses. These lands have been discounted by 50% for future roads, parks and open space, institutional uses and commercial uses on those lands designated as Living Area, Special Study Area, Regional Centre and Deferred Area. Land vacancy is assumed to be 0.05% on total gross Living Area.

No Fixed Place of Work Employment: Statistics Canada defines No Fixed Place of Work employees as, “Persons who do not go

from home to the same work place location at the beginning of each shift. Such persons include building and landscape contractors, traveling salespersons, independent truck drivers, etc.” Given that these employees have No Fixed Place of Work, nor is it known whether or not they work in Durham, they have not been included in the employment lands needs analysis.

Population Undercount: is the population that is missed during remuneration. Statistics Canada refers to undercoverage as missed dwellings or person. The census dictionary for 2001 states “Persons can be missed when their dwelling is missed or is classified as vacant, or because the respondent misinterprets the instructions on whom to include on the questionnaire. Some individuals may be missed because they have no usual residence and did not spend census night in a dwelling”. The population undercount is a percentage added to the census population to devise the total population. The population undercount for Durham Region, in this report, is based on the difference between the Places to Grow population from Schedule 3 (530,000) and the 2001 Census population (506,901); the result is an undercount of 4.56%. The undercount is added to the forecast and is kept constant throughout the forecast period.

Residential Land Vacancy: it is assumed that 0.5% of total land base in the Living Areas designation (occupied developable) will not develop over the 20-year forecast period. This equals approximately 4.4% of the developable housing supply, which is largely weighted towards high-density housing. The land vacancy is applied to the Built Boundary and Greenfield based on the total amount of land identified within each area. Residential land vacancy accounts for parcels which will not develop over the long-term due to poor/odd lot configuration, land banking, and lands which may be difficult to market (i.e. areas zoned for high-density development, which are under conversion pressure to be developed as low-density housing).

Urban Settlement Area: Urban areas within municipalities where development is concentrated and where there is a mix of land uses (Places to Grow)

APPENDIX B

Population forecast, mid 2006 - mid 2031

Components of Population Growth							
Start Year ¹	Starting Year Population	Births	Deaths	Natural Increase	Estimated Net Migration	End Year	Ending Year Population
2006	583,193	6,142	3,926	2,216	10,554	2007	595,963
2007	595,963	6,188	4,108	2,080	10,554	2008	608,596
2008	608,596	6,266	4,287	1,978	10,554	2009	621,129
2009	621,129	6,353	4,459	1,894	10,554	2010	633,577
2010	633,577	6,516	4,646	1,869	10,554	2011	646,000
2006-2011	62,807	31,464	21,427	10,037	52,771		
2011	646,000	6,681	4,835	1,846	15,199	2012	663,045
2012	663,045	6,853	5,052	1,801	15,199	2013	680,046
2013	680,046	7,048	5,271	1,777	15,199	2014	697,023
2014	697,023	7,242	5,483	1,759	15,199	2015	713,981
2015	713,981	7,518	5,699	1,819	15,199	2016	731,000
2011-2016	85,000	35,342	26,340	9,002	75,997		
2016	731,000	7,697	5,915	1,782	14,022	2017	746,803
2017	746,803	7,887	6,095	1,792	14,022	2018	762,617
2018	762,617	8,062	6,280	1,782	14,022	2019	778,420
2019	778,420	8,206	6,459	1,748	14,020	2020	794,188
2020	794,188	8,444	6,653	1,791	14,022	2021	810,000
2016-2021	79,000	40,297	31,403	8,894	70,106		
2021	810,000	8,566	6,855	1,711	14,775	2022	826,486
2022	826,486	8,731	7,042	1,689	14,777	2023	842,952
2023	842,952	8,873	7,237	1,636	14,777	2024	859,365
2024	859,365	8,986	7,428	1,558	14,777	2025	875,700
2025	875,700	9,149	7,626	1,523	14,777	2026	892,000
2021-2026	82,000	44,305	36,187	8,118	73,882		
2026	892,000	9,080	7,829	1,250	12,650	2027	905,901
2027	905,901	9,146	8,048	1,097	12,650	2028	919,649
2028	919,649	9,223	8,274	949	12,650	2029	933,248
2029	933,248	9,300	8,496	804	12,650	2030	946,703
2030	946,703	9,369	8,723	646	12,650	2031	960,000
Total Change 2006-2031	376,807	197,525	156,727	40,798	336,009		19,381,392

SOURCE: WATSON & ASSOCIATES ECONOMISTS LTD.

NOTE: INCLUDES POPULATION UNDERCOUNT

1. THE 2006 POPULATION DOES NOT MATCH THE BASE CASE FORECAST SCENARIO DUE TO A SLIGHT DIFFERENCE IN THE BASE POPULATION UNDERCOUNT. BEYOND 2006 THE FORECAST POPULATION AND ASSOCIATED UNDERCOUNT ALIGNS WITH THE BASE CASE FORECAST SCENARIO .

Population by Cohort

Start Year	Total 0-18 Years	Total 18-54 Years	Total 55-64 Years	Total 65+ Years	Total
2006	154,663	308,852	58,640	61,037	583,193
2007	156,439	314,616	61,670	63,237	595,963
2008	157,399	320,630	64,576	65,992	608,596
2009	157,925	326,798	67,917	68,489	621,129
2010	158,357	332,547	71,591	71,082	633,577
2011	158,840	338,574	74,762	73,823	646,000
2012	161,205	346,089	77,295	78,457	663,045
2013	163,626	353,514	80,114	82,791	680,046
2014	166,334	360,246	83,658	86,784	697,023
2015	169,114	366,619	87,477	90,772	713,981
2016	172,434	371,979	91,300	95,286	731,000
2017	175,576	377,086	95,360	98,781	746,803
2018	178,694	381,888	99,346	102,688	762,617
2019	181,746	386,409	103,496	106,769	778,420
2020	185,152	391,028	106,756	111,251	794,188
2021	188,556	396,529	109,501	115,414	810,000
2022	192,224	403,482	111,078	119,702	826,486
2023	195,491	411,183	112,270	124,009	842,952
2024	198,856	418,892	112,925	128,693	859,365
2025	202,074	426,525	113,459	133,642	875,700
2026	205,469	433,960	113,473	139,097	892,000
2027	207,737	440,661	113,304	144,198	905,901
2028	209,925	447,204	112,960	149,559	919,649
2029	212,038	453,741	112,295	155,175	933,248
2030	213,999	460,193	112,233	160,277	946,703
2031	215,867	466,906	112,664	164,563	960,000
	61,203	158,054	54,023	103,526	376,807

APPENDIX C

Municipality	Census Year ¹					
	1981	1986	1991	1996	2001	2006
Ajax	25,475	36,550	57,350	64,430	73,753	90,167
Whitby	36,698	45,819	61,281	73,794	87,413	111,184
Clarington	32,229	34,073	49,479	60,615	69,834	77,820
Pickering	37,754	48,959	68,631	78,989	87,139	87,838
Uxbridge	11,207	11,895	14,092	15,882	17,377	19,169
Scugog	13,498	15,229	17,810	18,837	20,173	21,439
Brock	9,259	10,003	11,057	11,705	12,110	11,979
Oshawa	117,519	123,651	129,344	134,364	139,051	141,590
Durham Region	283,639	326,179	409,044	458,616	506,850	561,186
Province of Ontario	8,960,339	9,465,762	10,488,280	11,171,532	11,853,520	12,632,916

Municipality	Average Annual Growth					Average Annual Growth Rate					
	81-86	86-91	91-96	96-01	01-06	81-86	86-91	91-96	96-01	01-06	81-06
Ajax	2,215	4,160	1,416	1,865	3,283	7.5%	9.4%	2.4%	2.7%	4.1%	5.2%
Whitby	1,824	3,092	2,503	2,724	4,754	4.5%	6.0%	3.8%	3.4%	4.9%	4.5%
Clarington	369	3,081	2,227	1,844	1,597	1.1%	7.7%	4.1%	2.9%	2.2%	3.6%
Pickering	2,241	3,934	2,072	1,630	140	5.3%	7.0%	2.9%	2.0%	0.2%	3.4%
Uxbridge	138	439	358	299	358	1.2%	3.4%	2.4%	1.8%	2.0%	2.2%
Scugog	346	516	205	267	253	2.4%	3.2%	1.1%	1.4%	1.2%	1.9%
Brock	149	211	130	81	-26	1.6%	2.0%	1.1%	0.7%	-0.2%	1.0%
Oshawa	1,226	1,139	1,004	937	508	1.0%	0.9%	0.8%	0.7%	0.4%	0.7%
Durham Region	8,508	16,573	9,914	9,647	10,867	2.8%	4.6%	2.3%	2.0%	2.1%	2.8%
Province of Ontario	101,085	204,504	136,650	136,398	155,879	1.1%	2.1%	1.3%	1.2%	1.3%	1.4%

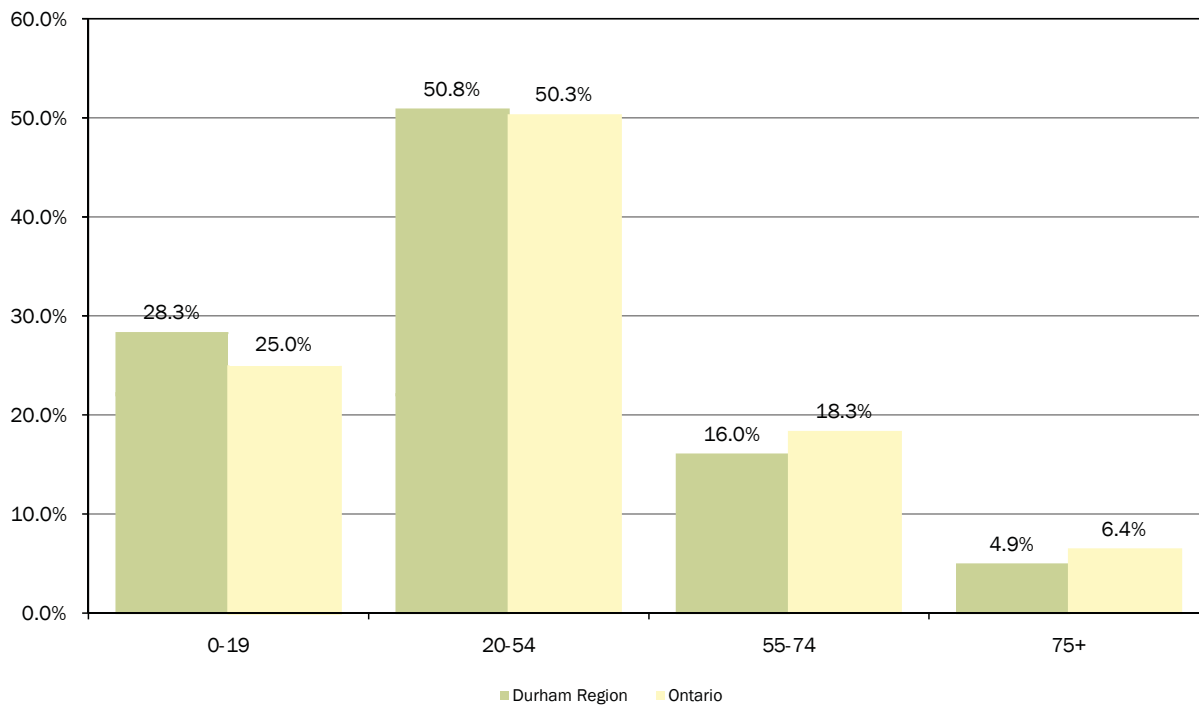
SOURCE: WATSON & ASSOCIATES ECONOMISTS LTD. (DERRIVED FROM: 1981 TO 2006 CENSUS)

NOTES:

¹ CENSUS POPULATION FIGURES INCLUDED A NET CENSUS UNDERCOUNT ADJUSTMENT OF APPROXIMATELY 4%.

Percent Population by Age Durham Region vs. Ontario 1986-2006

PERCENTAGE POPULATION BY AGE
DURHAM REGION VS. PROVINCE OF ONTARIO, 2006



	0-19	20-54	55-74	75+	Total
Durham Region					
1986	29.0%	54.6%	13.2%	3.2%	100%
2001	30.1%	52.0%	13.8%	41.1%	100%
2006	28.3%	50.8%	16.0%	4.9%	100%
Ontario					
1986	28.1%	51.3%	16.4%	4.3%	100%
2001	26.3%	51.5%	16.5%	5.7%	100%
2006	25.0%	50.3%	18.3%	6.4%	100%

SOURCE: WATSON & ASSOCIATES ECONOMISTS LTD.

Housing Growth by Local Municipality 1981-2006

Municipality	Census Year					
	1981	1986	1991	1996	2001	2006
Ajax	8,000	11,770	18,085	20,365	23,180	28,616
Whitby	11,700	14,600	19,580	23,995	28,640	37,240
Clarington	9,885	10,895	16,380	20,080	23,205	26,865
Pickering	10,915	14,560	20,520	24,030	26,945	28,210
Uxbridge	3,505	3,875	4,730	5,385	5,900	6,658
Scugog	4,320	4,990	5,960	6,445	7,070	7,705
Brock	3,120	3,440	3,920	4,165	4,400	4,422
Oshawa	39,205	42,515	46,950	49,640	52,355	54,923
Durham Region	90,650	106,645	136,125	154,105	171,695	194,639
Province of Ontario	2,969,785	3,221,730	3,638,365	3,924,510	4,219,410	4,554,251

Municipality	Average Annual Housing Growth					Average Annual Growth Rate					
	81-86	86-91	91-96	96-01	01-06	81-86	86-91	91-96	96-01	01-06	81-06
Ajax	754	1,263	456	563	1,087	8.0%	9.0%	2.4%	2.6%	4.3%	5.2%
Whitby	580	996	883	929	1,720	4.5%	6.0%	4.2%	3.6%	5.4%	4.7%
Clarington	202	1,097	740	625	732	2.0%	8.5%	4.2%	2.9%	3.0%	4.1%
Pickering	729	1,192	702	583	253	5.9%	7.1%	3.2%	2.3%	0.9%	3.9%
Uxbridge	74	171	131	103	152	2.0%	4.1%	2.6%	1.8%	2.4%	2.6%
Scugog	134	194	97	125	127	2.9%	3.6%	1.6%	1.9%	1.7%	2.3%
Brock	64	96	49	47	4	2.0%	2.6%	1.2%	1.1%	0.1%	1.4%
Oshawa	662	887	538	543	514	1.6%	2.0%	1.1%	1.1%	1.0%	1.4%
Durham Region	3,199	5,896	3,596	3,518	4,589	3.3%	5.0%	2.5%	2.2%	2.5%	3.1%
Province of Ontario	50,389	83,327	57,229	58,980	66,968	1.6%	2.5%	1.5%	1.5%	1.5%	1.7%

SOURCE: WATSON & ASSOCIATES ECONOMISTS LTD. (DERIVED FROM 1981 TO 2006 CENSUS)

Historical Net Migration 1986-2006

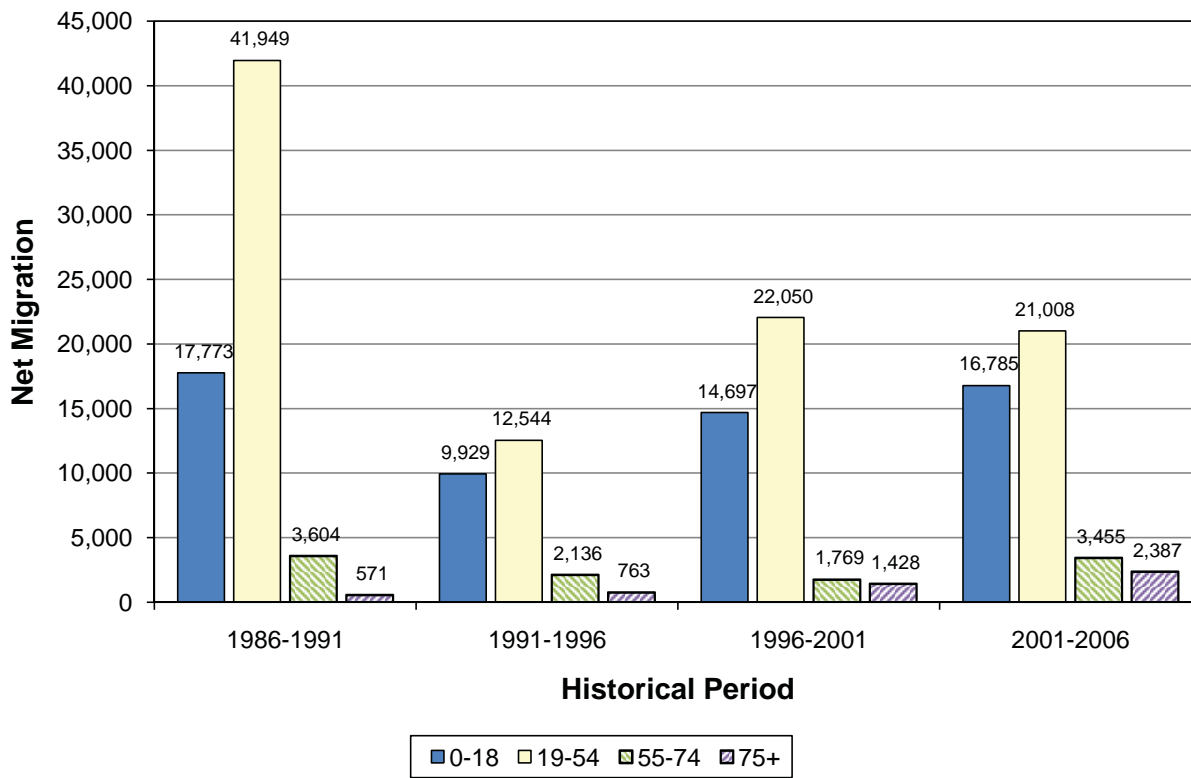
Time period	Start Population	Total Births ¹	Total Deaths ¹	End Population ²	Calculated Net Migration
1986-1991	335,869.00	32,331.00	10,179.00	422,982.00	64,981.00
1991-1996	422,982.00	34,156.00	11,753.00	471,353.00	25,968.00
1996-2001	471,353.00	29,103.00	13,570.00	526,987.00	40,101.00
2001-2006	526,987.00	27,658.00	15,113.00	583,193.00	43,660.00
1998-2006 Total		123,228.00	50,615.00		174,711.00
1986-2006 5 yr. average		30,807.00	12,654.00		43,678.00

SOURCE: WATSON & ASSOCIATES ECONOMISTS LTD.

NOTES

1. ANNUAL DEMOGRAPHIC STATISTICS, 2005 CATALOGUE NO.91-213-XPB. FIGURES INCLUDE A MINOR ADJUSTMENT FOR MIGRANT BIRTHS AND DEATHS
2. 2006 POPULATION ESTIMATE ADJUSTED FOR CENSUS UNDERCOUNTS OF APPROX. 4%

Net Migration by Major Age Group 1986-2006



Major Cohort	1986-1991	1991-1996	1996-2001	2001-2006	Total
0-18	17,773	9,929	14,697	16,785	59,184
19-54	41,949	12,544	22,050	21,008	97,550
55-74	3,604	2,136	1,769	3,455	10,964
75+	571	763	1,428	2,387	5,149
Total	63,896	25,372	39,943	4,3635	17,2847

SOURCE: WATSON & ASSOCIATES ECONOMISTS LTD.

Estimated Net Migration by Type 1986-2006

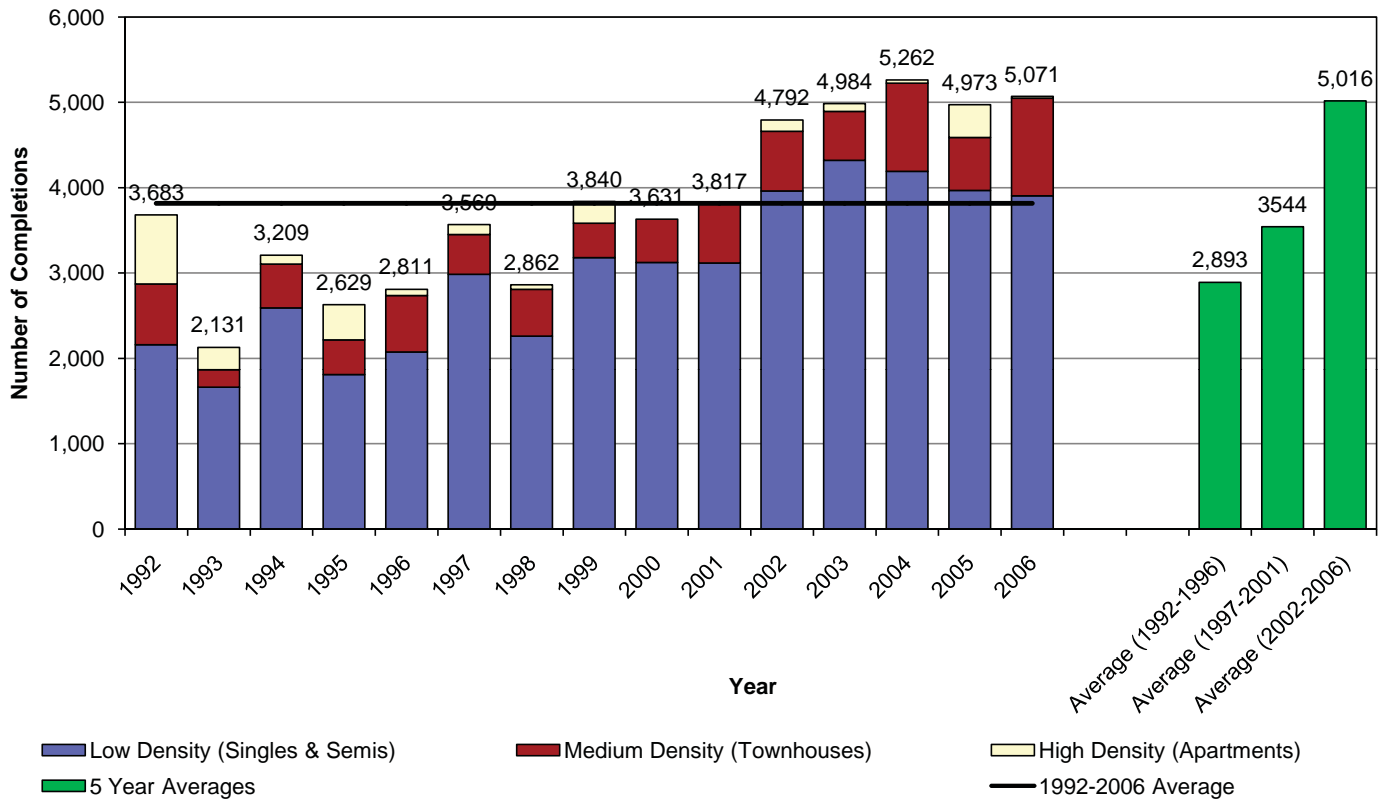
Time Period	International ¹		Inter-provincial ²		Intra-Provincial ³		Residual ⁴		Total	
	Actual	%	Actual	%	Actual	%	Actual	%	Actual	%
1986-1991	9,152	14.1%	2,551	3.9%	51,536	79.3%	1,742	2.7%	64,981	100.0%
1991-1996	3,320	12.8%	-2,030	-7.8%	30,424	117.2%	5,746	22.1%	25,968	100.0%
1996-2001	2,970	7.4%	1,590	4.0%	29,155	72.7%	6,386	15.9%	40,101	100.0%
2001-2006	5,364	12.3%	-965	-2.2%	42,176	96.7%	2,939	6.7%	43,635	100.0%
1996-2006 Ave.	5,201	11.6%	287	-5.0%	38,323	91.5%	-139	2.6%	43,671	100.0%

SOURCE: WATSON & ASSOCIATES ECONOMISTS LTD.

NOTES

1. IMMIGRANTS LESS EMIGRANTS FROM OUTSIDE CANADA.
2. IMMIGRANTS LESS EMIGRANTS FROM OTHER PROVINCES
3. IMMIGRANTS LESS EMIGRANTS WITHIN ONTARIO AND OUTSIDE DURHAM REGION
4. RESIDUAL IS THE DIFFERENCE (I.E. ERROR) BETWEEN NET MIGRATION ESTIMATE VS. ACTUAL NET MIGRATION

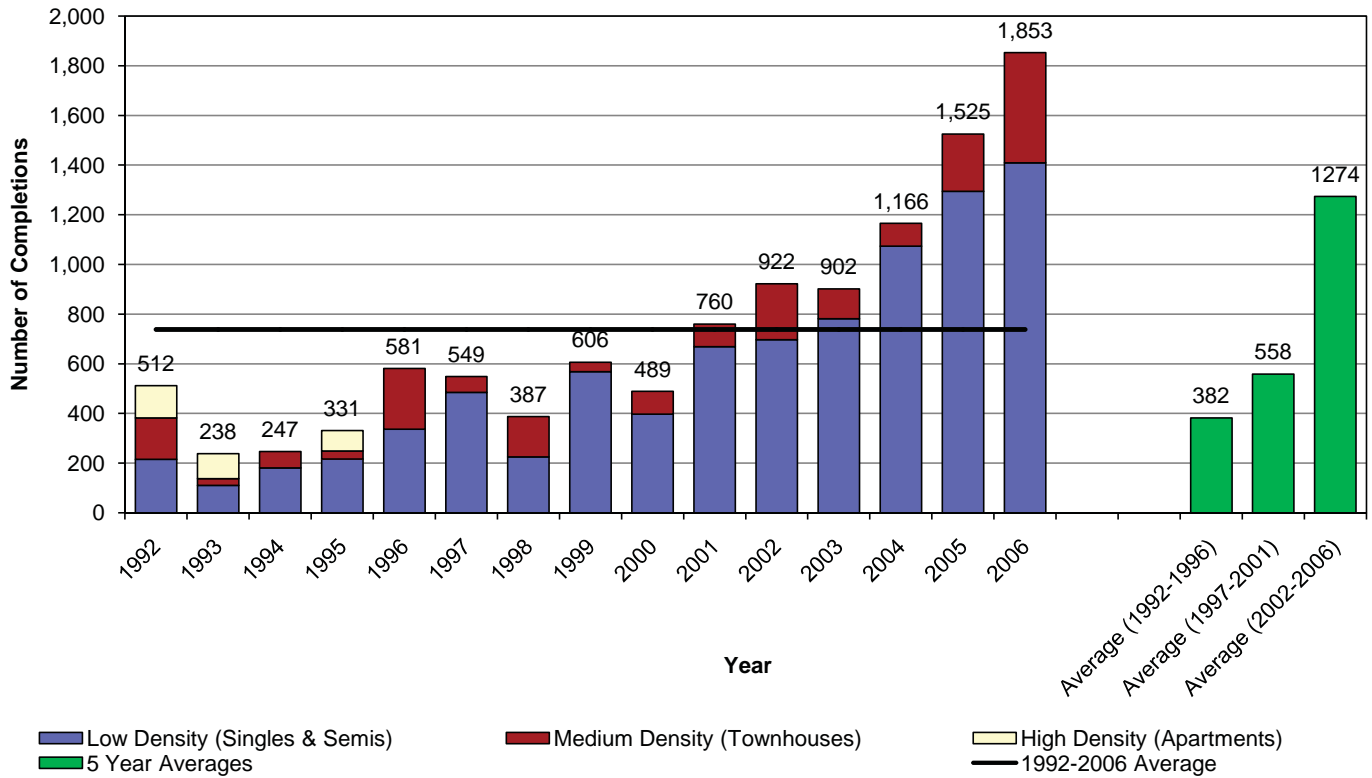
Historical Residential Completions – Durham



Source: Canada Mortgage and Housing Corporation (CMHC)

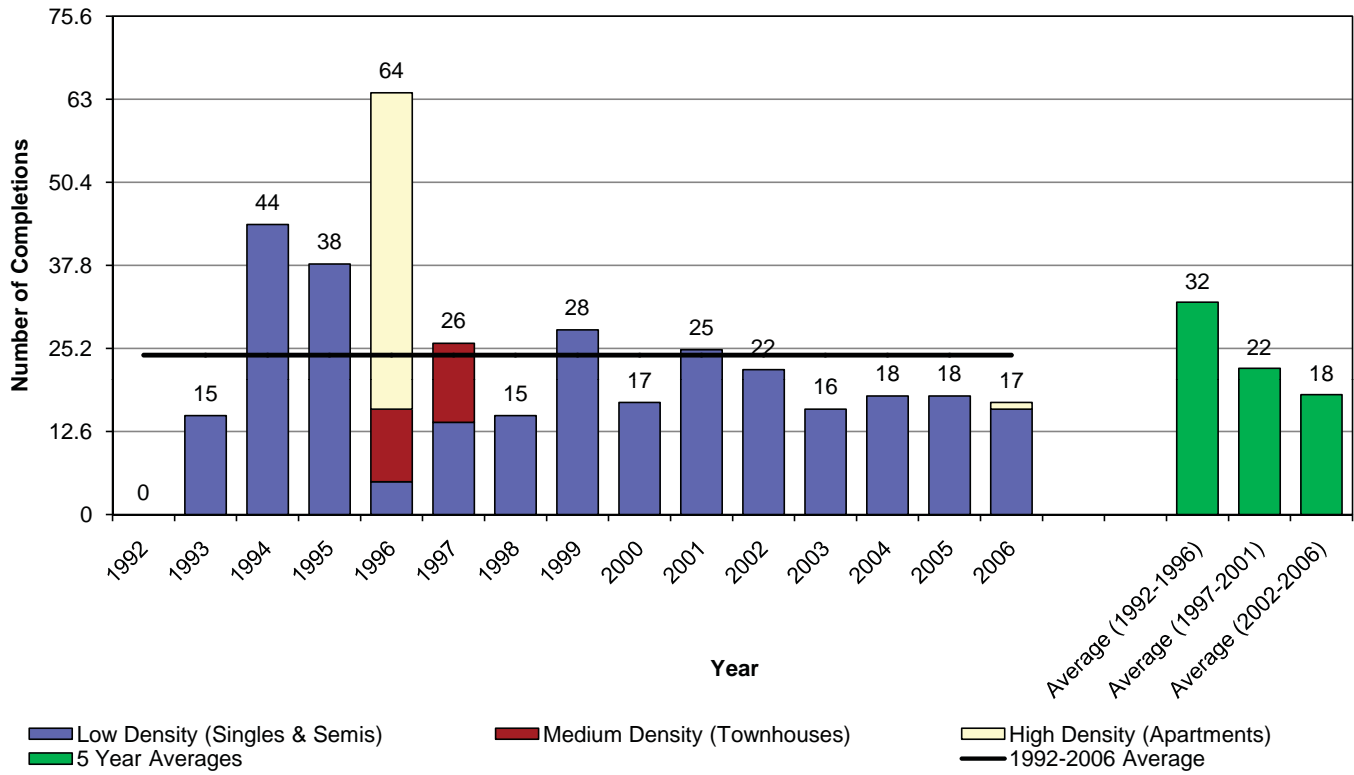
SOURCE: WATSON & ASSOCIATES ECONOMISTS LTD.

Historical Residential Completions – Ajax



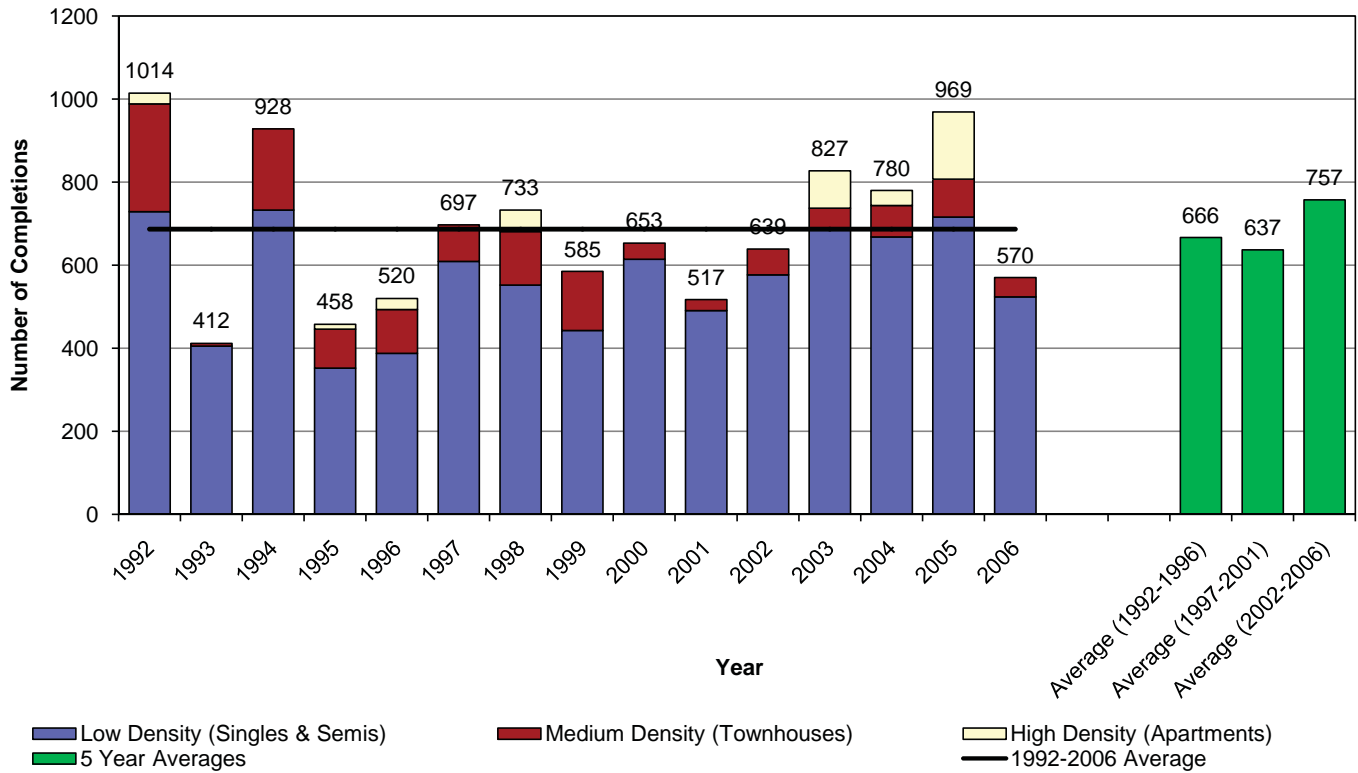
Source: Canada Mortgage and Housing Corporation (CMHC)

Historical Residential Completions – Brock,



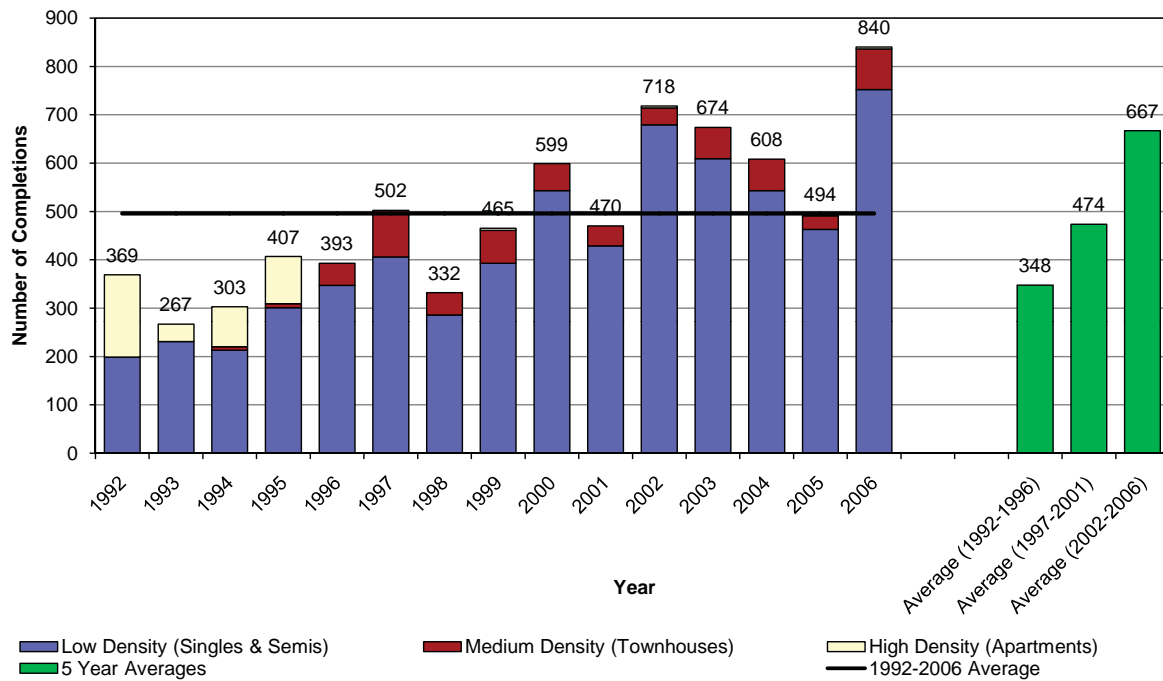
Source: Canada Mortgage and Housing Corporation (CMHC)

Historical Residential Completions – Clarington



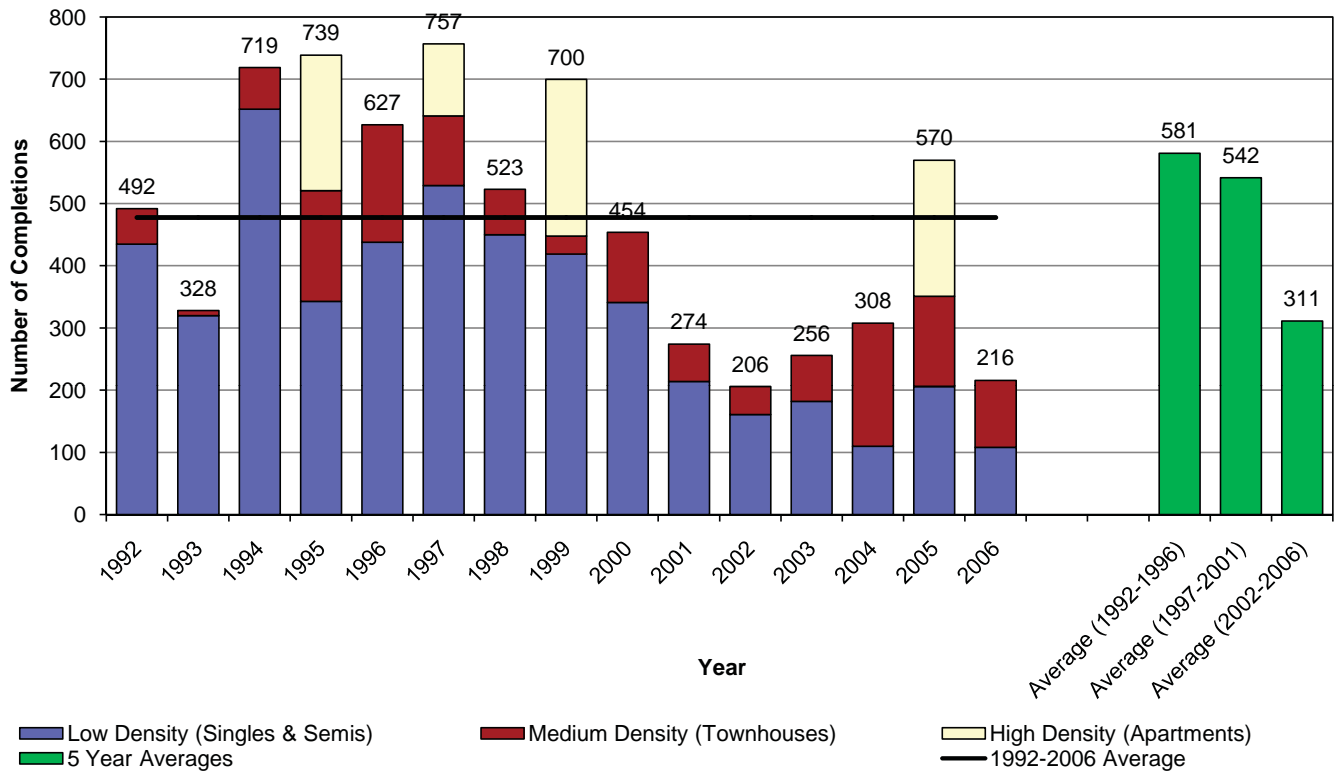
Source: Canada Mortgage and Housing Corporation (CMHC)

OSHAWA HISTORICAL RESIDENTIAL COMPLETIONS



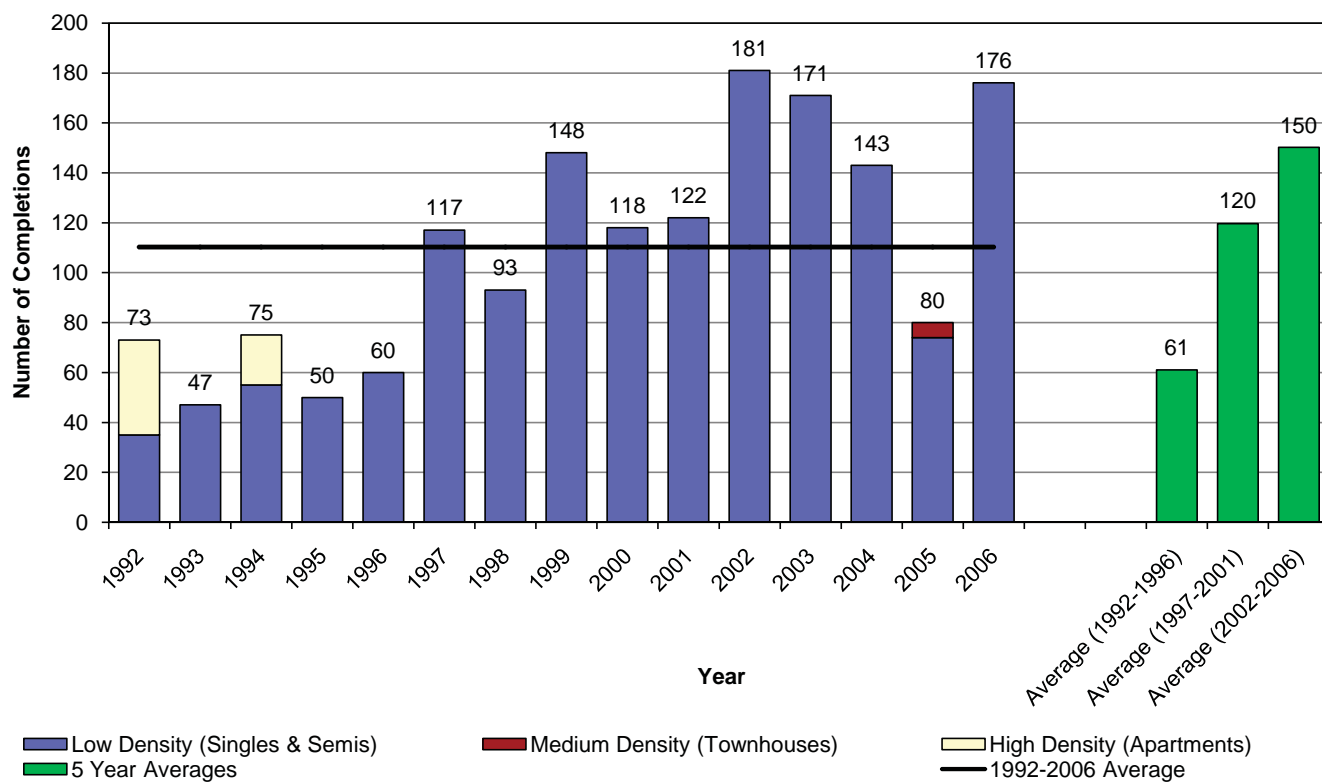
Source: Canada Mortgage and Housing Corporation (CMHC)

Historical Residential Completions – Pickering



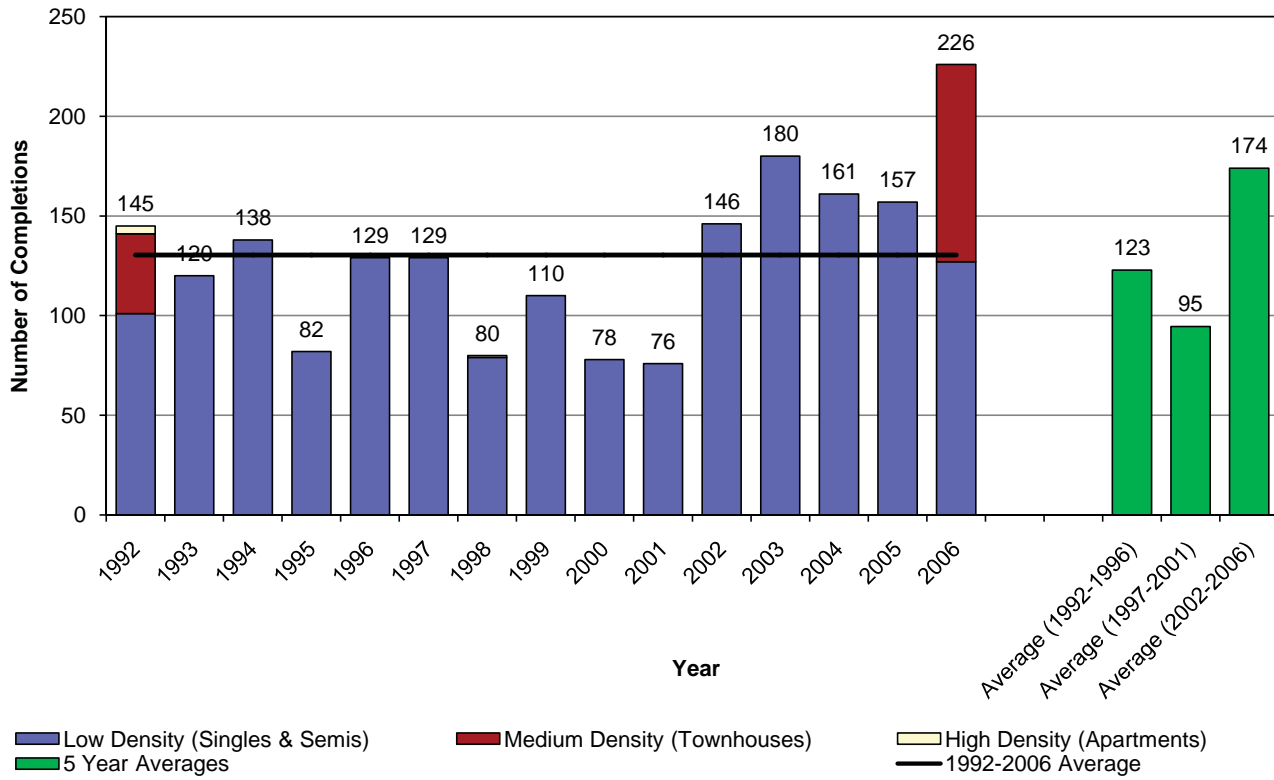
Source: Canada Mortgage and Housing Corporation (CMHC)

Historical Residential Completions – Scugog



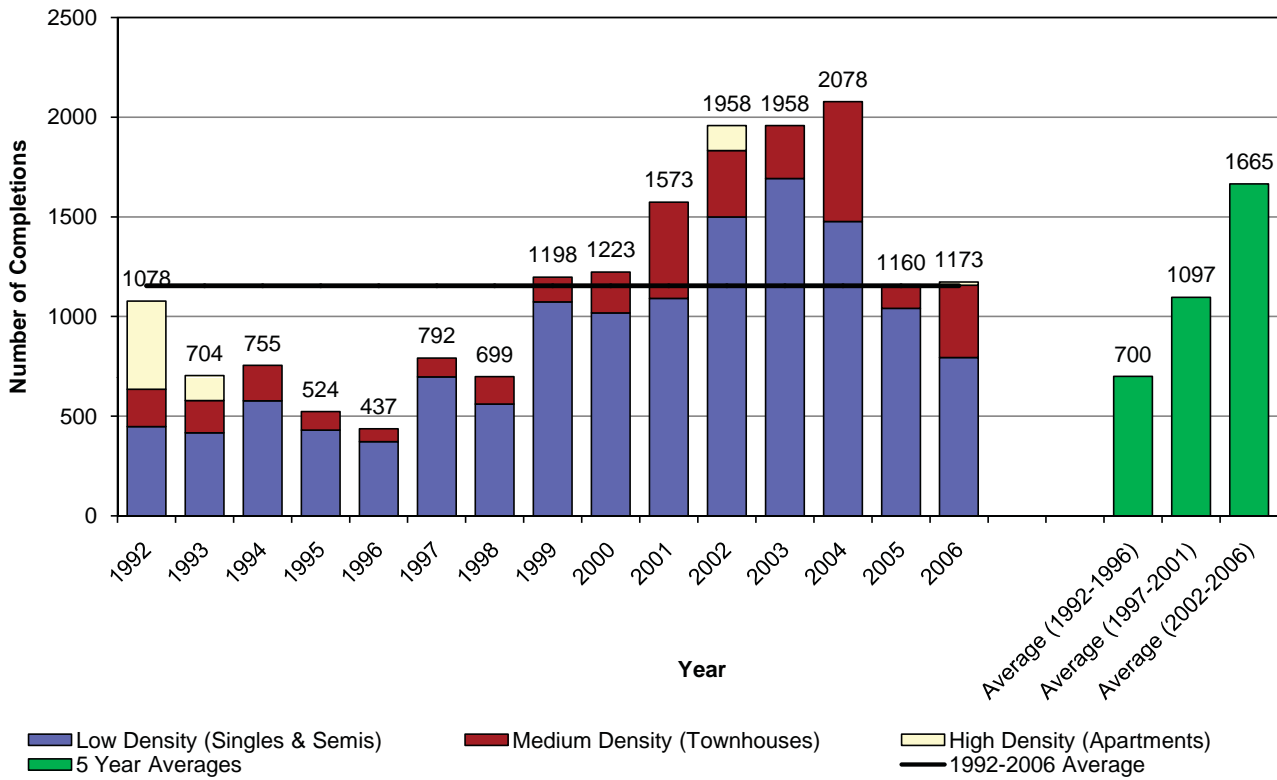
Source: Canada Mortgage and Housing Corporation (CMHC)

Historical Residential Completions – Uxbridge



Source: Canada Mortgage and Housing Corporation (CMHC)

Historical Residential Completions – Whitby



Source: Canada Mortgage and Housing Corporation (CMHC)

Average Sale Price of a Single Family Home

Rank	Municipality	2000 \$	2001 \$	2002 \$	2003 \$	2004 \$	2005 \$	2006 \$
1	King Township	402,833	409,863	478,007	497,464	525,142	721,125	863,370
2	Oakville Town	276,754	295,814	370,699	405,850	418,500	532,331	655,362
3	Caledon Town	236,901	249,652	242,451	277,996	344,087	426,978	603,090
4	Aurora Town	395,209	504,920	327,644	364,291	382,752	595,686	557,851
5	Vaughan City	293,949	314,752	333,150	373,047	421,039	488,792	519,128
6	Mississauga City	290,312	309,325	325,747	342,533	421,731	457,767	509,593
7	Burlington City	294,262	297,883	337,251	331,369	354,864	436,273	498,963
8	Richmond Hill Town	312,913	321,916	345,292	391,172	385,809	432,562	475,198
9	Whitchurch-Stouffville Town	406,223	338,395	350,630	334,294	423,343	466,283	451,436
10	Pickering City	291,482	324,211	325,577	305,436	396,406	363,135	445,414
11	Markham Town	300,948	313,166	320,333	317,712	348,760	381,833	419,549
12	East Gwillimbury Town	349,091	424,152	427,423	496,511	321,750	472,165	411,922
13	Halton Hills Town	246,681	253,655	250,767	285,257	290,350	336,470	388,408
14	Grimsby Town	243,381	234,900	261,629	266,059	284,344	318,975	381,228
15	Brampton City	245,043	258,259	243,342	285,307	329,715	370,881	375,675
16	Ajax Town	299,897	293,174	299,731	318,540	311,697	321,088	374,217
17	Hamilton CMA ¹	*	250,546	250,967	293,087	317,052	342,891	371,044
18	Milton Town	363,139	243,955	272,847	266,380	298,964	345,875	363,257
19	Uxbridge Township	281,254	307,815	284,816	308,262	331,437	351,028	361,445
20	Newmarket Town	272,423	272,197	256,811	256,533	299,903	327,971	348,568
21	Whitby Town	230,729	231,596	247,428	251,483	283,068	318,612	335,605
22	Oshawa City	211,479	207,638	227,394	236,233	256,146	293,105	329,874
23	Clarington Municipality	192,044	204,240	217,795	217,489	237,347	261,767	296,746
24	Georgina Town	211,944	216,262	219,123	242,515	257,830	287,695	283,330

Source: Canada Mortgage and Housing Corporation (CMHC).

¹ Hamilton CMA is comprised of an average of Ancaster, Dundas, Flamborough, Glanbrook, City of Hamilton and Stoney Creek.

Average Annual Growth Rate (sale price) of a Single Family Home

Rank	Municipality	2006 \$	Average Annual Growth Rate 2001-2006 (Sale Price)
1	King Township	863,370	13.2%
2	Oakville Town	655,362	14.2%
3	Caledon Town	603,090	15.8%
4	Aurora Town	557,851	1.7%
5	Vaughan City	519,128	8.7%
6	Mississauga City	509,593	8.7%
7	Burlington City	498,963	9.0%
8	Richmond Hill Town	475,198	6.7%
9	Whitchurch-Stouffville Town	451,436	4.9%
10	Pickering City	445,414	5.4%
11	Markham Town	419,549	5.0%
12	East Gwillimbury Town	411,922	-0.5%
13	Halton Hills Town	388,408	7.4%
14	Grimsby Town	381,228	8.4%
15	Brampton City	375,675	6.4%
16	Ajax Town	374,217	4.2%
17	Hamilton CMA ¹	371,044	6.8%
18	Milton Town	363,257	6.9%
19	Uxbridge Township	361,445	2.7%
20	Newmarket Town	348,568	4.2%
21	Whitby Town	335,605	6.4%
22	Oshawa City	329,874	8.0%
23	Clarington Municipality	296,746	6.4%
24	Georgina Town	283,330	4.6%

Source: Canada Mortgage and Housing Corporation (CMHC).

¹ Hamilton CMA is comprised of an average of Ancaster, Dundas, Flamborough, Glanbrook, City of Hamilton and Stoney Creek.

APPENDIX D

Persons Per Unit by Age and Type of Dwelling

Age of Dwelling	LOW DENSITY - Single and Semi-Detached					Total
	< 1 BR	1 BR	2 BR	3/4 BR	5+ BR	
1-5	-	2.827	2.313	3.211	4.777	3.219
6-10	1.176	2.468	2.150	3.394	4.643	3.352
11-15	-	2.000	2.102	3.447	4.778	3.478
16-20	-	2.273	2.140	3.375	4.599	3.412
20-25	-	2.167	2.085	3.202	4.337	3.215
25-35	-	1.692	2.123	2.976	4.602	3.012
35+	1.583	1.724	2.029	2.739	3.885	2.634
Total	2.017	2.026	2.094	3.116	4.469	3.085

Age of Dwelling	MEDIUM DENSITY - Rows and Apartment in Duplex					Total
	< 1 BR	1 BR	2 BR	3/4 BR	5+ BR	
1-5	-	1.679	2.120	2.644	-	2.566
6-10	-	2.040	1.904	2.774	4.286	2.643
11-15	-	1.632	2.341	2.963	4.095	2.862
16-20	-	1.657	1.957	3.026	3.767	2.820
20-25	-	1.545	2.063	2.967	5.036	2.828
25-35	-	1.479	2.234	2.884	3.650	2.751
35+	1.280	1.429	2.101	2.617	3.241	2.333
Total	1.679	1.557	2.106	2.820	3.878	2.655

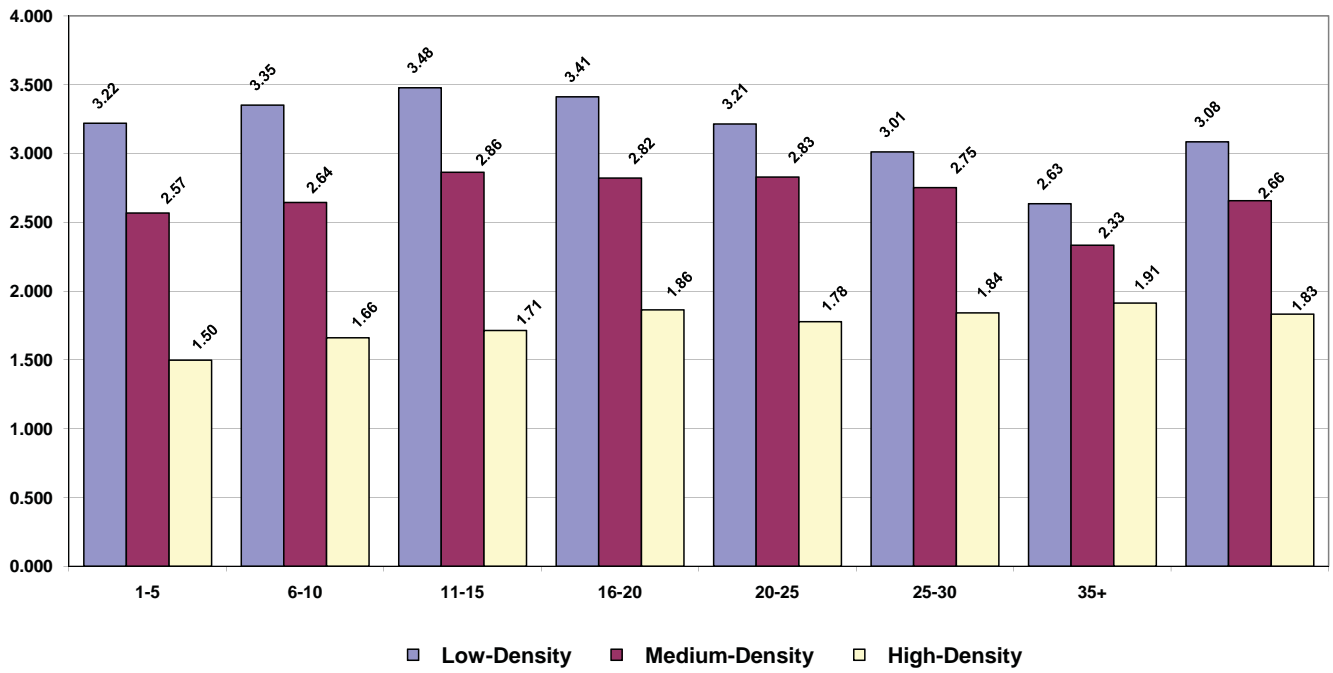
Age of Dwelling	HIGH DENSITY - Apartments < > 5 Storeys					Total
	< 1 BR	1 BR	2 BR	3/4 BR	5+ BR	
1-5	1.205	1.268	1.584	2.571	-	1.498
6-10	1.000	1.205	1.830	2.607	-	1.660
11-15	1.063	1.304	1.872	2.742	-	1.714
16-20	1.333	1.370	1.966	2.619	-	1.863
20-25	1.200	1.185	1.909	2.716	-	1.778
25-35	1.302	1.269	1.846	2.647	-	1.840
35+	1.413	1.408	1.986	2.746	3.152	1.912
Total	1.298	1.325	1.913	2.690	3.133	1.831

Age of Dwelling	ALL DENSITY TYPES					Total
	< 1 BR	1 BR	2 BR	3/4 BR	5+ BR	
1-5	1.500	1.840	2.149	3.121	4.750	3.046
6-10	1.083	1.759	2.027	3.286	4.620	3.142
11-15	1.182	1.391	2.032	3.342	4.717	3.106
16-20	1.880	1.519	2.030	3.328	4.494	3.192
20-25	1.857	1.364	1.992	3.159	4.437	2.974
25-35	1.667	1.320	1.951	2.940	4.479	2.730
35+	1.404	1.481	2.020	2.731	3.759	2.477
Total	1.475	1.478	2.021	3.065	4.384	2.859

Note: Does not include Statistics Canada data classified as 'Other' - Value of 470

Note: Does not include institutional population

Persons Per Unit by Age and Type of Dwelling



SOURCE: WATSON & ASSOCIATES ECONOMISTS LTD.

APPENDIX E

Residential Land and Unit Supply Data within the Built-up Area

		Land Area in Hectares			
		Potential Development	Vacant (2)	Combined Potential Area of Change	Land Area of Change Assumptions to 2031(3)
Regional Centres	Pickering (Liverpool Rd & Kingston Rd)	48	2	51	25
	Ajax (Harwood Ave & Kingston Rd)	53	3	56	28
	Ajax (Harwood Ave & Bayly St)	32	6	38	19
	Whitby (Brock St & Dundas St)	13	3	16	8
	Whitby (Brock St & Taunton Rd)	19	2	21	11
	Oshawa (Simcoe St & King St)	79	12	91	46
	Bowmanville West	18	7	25	13
	Bowmanville East	11	1	12	6
	Courtice	0	9	9	5
	Newcastle Village	2	0	2	1
Total Regional Centres		276	45	321	160
Northern Regional Centres	Uxbridge	2	0	2	1
	Port Perry	7	1	8	4
	Sunderland	0	0	1	0
	Cannington	1	0	1	0
	Beaverton	1	0	1	1
	Total Northern Regional Centres	11	2	12	6
EMERGING GROWTH NODES					
Waterfront villages	UOIT	1	77	78	39
	Port of Newcastle	0	4	4	2
	Whitby Harbor	68	8	76	38
	Oshawa Port	9	8	17	8
	Total Waterfront villages	77	20	97	48
Transit Centres	Pickering GO	11	1	12	6
	Ajax GO	10	0	10	5
	Whitby GO	16	0	16	8
	Oshawa GO	11	28	39	19
	Total Transit Centres	48	28	76	38

	Land Area in Hectares			
	Potential Development	Vacant (2)	Combined Potential Area of Change	Land Area of Change Assumptions to 2031(3)
Regional Corridors (1)				
Bayly St. West	30	2	32	8
Harwood Ave (Ajax)	0.5	0	1	0
Kingston Rd.	225	17	243	61
Whites Rd.	5	0	5	1
Brock Rd. (Pickering)	84	23	107	27
Brock St. (Whitby)	11	7	18	4
Simcoe St.	23	0	23	6
Taunton Rd. East	63	14	77	19
Total Corridors	442	63	505	126
Local Centres (4)				
Total Local Centres				135
Total	843	233	1,076	553

NOTES:

AT INTERSECTING CORRIDORS, THERE ARE PARCELS THAT COULD BE CONSIDERED FOR BOTH CORRIDORS. IN THESE CIRCUM STANCES, PARCELS ARE NOT REPEATED AND ARE COUNTED TOWARDS THE EAST-WEST CORRIDOR.

THERE ARE INSTANCES IN WHICH THE DEVELOPABLE AREA OF REGIONAL GROWTH CENTRES EXTENDS BEYOND THE GIVEN BOUNDARIES. THIS ADDITIONAL AREA IS NOT COUNTED TOWARDS THE REGIONAL CENTRE

LAND AREA AT THIS POINT, AND COULD THEREFORE BE MISLEADING. THIS IS THE CASE WITH NEWCASTLE, BOWMANVILLE EAST, COURTYCE, SIMCOE-WINCHESTER, TAUNTON-BROCK, AND AJAX SOUTH.

(1) CORRIDOR LAND AREA IS CALCULATED BASED ON A BUFFER MEASURING 100 METRES ON EACH SIDE OF THE CENTRE LINE. BROCK ROAD IN PICKERING IS THE EXCEPTION, AND IS CALCULATED WITH A 200 METRE BUFFER DUE TO LARGE PARCEL SIZES.

(2) 25% HAS BEEN REMOVED FROM VACANT LANDS TO ACCOUNT FOR EVENTUAL INFRASTRUCTURE

(3) ASSUMING 25% OF CORRIDOR LAND AREA, AND 50% OF REGIONAL CENTRE, EMERGING URBAN VILLAGES, TRANSIT CENTRES AND LOCAL CENTRES/ CORRIDORS LAND AREA WOULD CHANGE WITHIN THE GROWTH PERIOD.

(4) 135 HECTARES HAVE BEEN ALLOCATED TO THE LOCAL CENTRES/CORRIDORS WITHOUT ANY NETTING DOWN

Total supply units in the built area

	Low	Medium	High	Total
Regional Centres	1,600	1,728	13,440	16,768
Northern Regional Centres	68	54	14	135
Emerging Growth Nodes	1,207	2,253	7,834	11,294
Regional Corridors	1,024	3,175	6,426	10,625
Local Centres/Corridors	1,333	4,698	675	6,706
Total units based on identified land supply	5,232	11,908	28,389	45,528
10% net down (1)	523	1,191	2,839	4,553
Total units based on identified land supply netted down	4,709	10,717	25,550	40,975
1.5% of new housing supply (2)	71	161		231
1.5% of existing low and medium density housing stock (3)	1,074	1,074		2,147
Units in the development process (4)	6,224	4,814	5,192	16,230
Units in the development process adjusted (5)	441	133	73	647
Land vacancy (6)	(475)	(1,146)	(2,738)	(4,359)
	12,044	15,752	28,076	55,872

NOTES

(1) 10% NET DOWN TO ACCOUNT FOR EXISTING UNITS REPLACED DUE TO INTENSIFICATION

(2) 1.5% OF LOW OR MEDIUM UNITS (RESPECTIVELY) IN THE IDENTIFIED SUPPLY

(3) 1.5% OF EXISTING LOW AND MEDIUM DENSITY HOUSING STOCK (SINGLES, SEMIS, LINKS AND TOWNHOUSES) BASED ON MPAC DATA FOR DURHAM REGION YE 2005

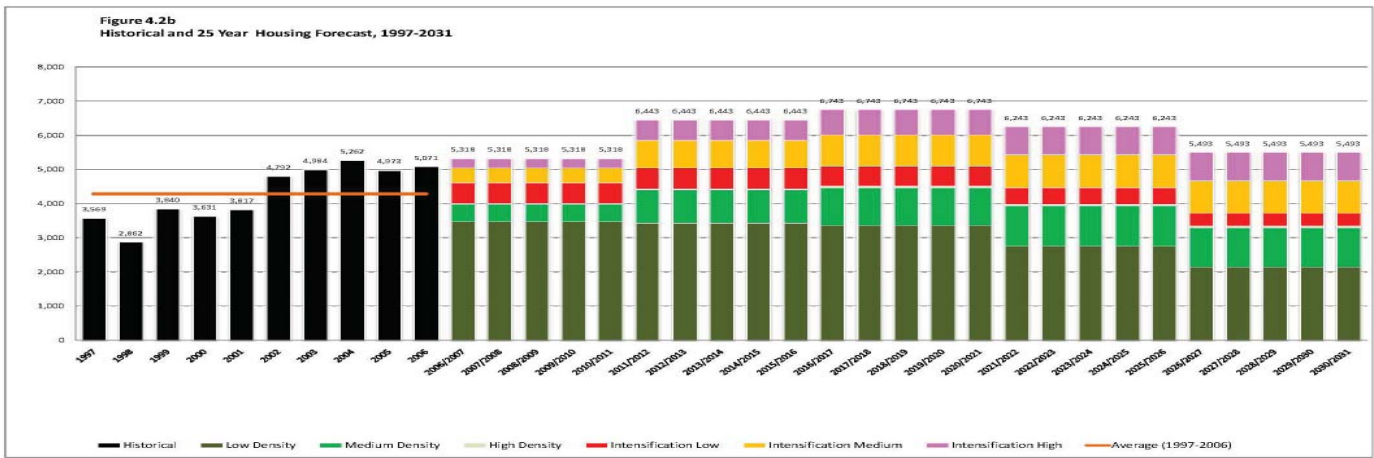
(4) UNITS IN THE DEVELOPMENT PROCESS INCLUDES: PLANS OF SUBDIVISION IN CIRCULATION, DRAFT APPROVED AND REGISTERED NOT BUILT

(5) HALF A YEAR OF GROWTH HAS BEEN ADDED BACK TO THE UNITS IN THE DEVELOPMENT PROCES IN ORDER TO ALIGN WITH THE STARTING POINT OF THE FORECAST (MID 2006 CENSUS)

(6) LAND VACANCY IS BASED ON 0.5% OF THE TOTAL LIVING AREA BROKEN OUT BY THE AMOUNT OF LAND IN THE BUILT-UP AREA AND GREENFIELD. THE LAND AREA IN THE BUILT-UP AREA IS CONVERTED TO UNITS BY APPLYING THE FOLLOWING DENSITIES: 13UPH FOR LOW, 27UPH FOR MEDIUM AND 90 UPH FOR HIGH. THE UNIT MIX APPLIED IS 20% LOW; 20% MEDIUM; AND 60% HIGH DENSITY.

APPENDIX F

Historical and 25 Year Housing Forecast, 1997-2031



SOURCE: WATSON & ASSOCIATES ECONOMISTS LTD.

APPENDIX G

Residential Density Precedents in Durham

Density Precedents in Durham

It is often difficult to visualize housing types simply from statistics pertaining to building densities. With added densities come negative associations and images of tall buildings overshadowing single family homes. However, while tall buildings may be appropriate in downtown cores, intensification – more compact development – can be achieved in many different forms. A mid-rise building can often accommodate as many people as a tower. Thus, development can provide added density and be sensitively integrated into the existing surroundings.

The following examples demonstrate that a full range of medium and high density housing forms exist, and are being developed, in Durham in both infill and greenfield conditions. This range of housing provides options for an age and income diverse population and creates greater choice within the community.



- Freehold townhouses
- Lot Area: .3 ha
- # of Units: 12
- Density: 41 units per ha(net)

Brock St. at Chestnut St.
WHITBY



- 3 Storey condominium townhouses/16 semi-detached
- # of Units: 177 units
- Site area: 3.7 ha approx.
- Density: 47 units per ha (net)

Chapman Drive at Kingston Rd.
AJAX



- 4 Storeys
- Land Area: 2.7 ha
- # of Units: 180
- Density: 68 Units per ha (net)

1400 Esplanade N.
PICKERING



250 Hickory St. South
WHITBY

- 6 Storey apartment
- Lot area: .6 ha
- # of Units: 122
- Density: 192 units per ha (net)



1000 The Esplanade N.
PICKERING

- 16 Storeys
- Land Area: .6 ha
- # of Units: 253
- Density: 436 units per ha (net)

Over the next 25 and certainly 50 years, Durham will evolve to include a greater range of housing forms. There are some important considerations when thinking about density and what intensification will look like in Durham:

1. **Density is not necessary tall buildings:** there are many ways to increase density than through apartment towers. Mid-rise buildings can be just as, or denser, than a 15-25 storey apartment building while providing stronger at-grade access condition to units. There are many places where tall buildings will be appropriate in Durham, but intensification can, and should, take many forms with respect to scale and height;
2. **Density needs to be paired with highly livable environments:** one with public spaces, good pedestrian environments, close to transit service and other community and retail amenities.
3. **Density needs to respect and respond to the existing built form:** appropriate transitions to existing buildings, streets and public spaces needs to be incorporated in the design when larger scale or higher buildings are being proposed. New development needs to be designed in a manner that fits the location and responds to the surroundings;
4. **Intensification is not appropriate everywhere:** In particular, stable residential areas and areas of built heritage should be preserved and protected in their existing form.

On the basis of the intensification precedents that were gathered, density benchmarks were derived for medium and high density development. The range of examples of high density construction was quite broad and thus the category was divided into three:

- **Medium density:** townhouses and duplexes (30 units/ha)
- **High density:**
 - 3-5 storey house form such as townhouses and stacked townhouses; some units with direct access to grade (35 units/ha);
 - Mid rise (6-8 storey) apartment form housing (40 units/ha);
 - 7 storey and higher tower apartment form housing (125 units/ha).

Residential density benchmarks

Gross		Net (55% take out)	
Units/h	Units/a	Units/h	Units/a

Average regional density yield (year 2001)	13	5	25	11
1993 ROP Planned density	17	7	35	14
Current precedent-townhouses and row housing	12-24	5-10	24-48	10-19
Current precedent- stacked townhouse	35	14	70	28
Current precedent- mid rise	40	16	80	32
Current precedent- high rise apartments	70-200	81	140-400	162
Seaton- low density	12-20	5-8	25-40	10-16
Seaton-medium density	20-40	8-16	40-80	16-32
Seaton- high density	70-125	28-50	140-250	57-100
Growth Plan- 50 pj/ha in Greenfield*	9	4	18	7
Growth Plan- 50 pj/ha in Greenfield **	15	6	30	12
Growth Plan- 200pj/ha in UGC***	37	15	74	30
Growth Plan- 200pj/ha in UGC****	55	22	110	44

* 50pj/ha= 25 people (2.7 people/unit) and 25 jobs (613 sq ft/ employee)= 9 units/ha and 1 575 sq ft

**50pj/ha= 40 people (2.7 people/unit) and 10 jobs (613 sq ft/ employee)= 15 units/ha and 6 130 sq ft

*** 200pj/ha= 100 people (2.7 people/unit) and 100 jobs (613 sq ft/ employee)= 37 units/ha and 61 300 sq ft

**** 200pj/ha= 150 people (2.7 people/unit) and 50 jobs (613 sq ft/ employee)= 55 units/ha and 30 650 sq ft

2.7 PPU is based on an average from low (3.39), medium (2.87) and high (1.74) Source: Watson (2007)

613 sq. ft/employee Source: Watson analysis of industrial/business parks in Durham Region (2007)

APPENDIX H

Units in the Development Approvals Process Identified by Area

AJAX	Status	Circulation/Pending (CI)				Draft Approved (DR)					Vacant				Grand total		
		Single	Semi	Mul- tiple	Apart- ment	Total	Single	Semi	Mul- tiple	Apart- ment	Total	Total	Total	Total			
	Built Boundary	185	80	260	-	525	160	30	415	246	851	518	162	441	-	1,121	2,497
	Greenfield	889	-	314	30	1,233	1,066	189	140	-	1,395	228	71	194	-	493	3,121
	Rural	27	-	-	-	27	6	-	-	-	6	-	-	-	-	-	33
	Unknown	-	-	-	-	-	-	-	-	-	-	-	-	-	-	53	53
	Total	1,101	80	574	30	1,785	1,232	219	555	246	2,252					1,667	5,704

BROCK	Status	Circulation/Pending (CI)				Draft Approved (DR)					Vacant				Grand total		
		Single	Semi	Mul- tiple	Apart- ment	Total	Single	Semi	Mul- tiple	Apart- ment	Total	Total	Total	Total			
	Built Boundary	123	88	55	-	266	-	-	73	35	108	36	-	-	-	36	410
	Greenfield	289	80	176	70	615	539	86	153	-	778	-	-	-	-	-	1,393
	Rural	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	3
	Unknown	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Total	412	168	231	70	881	539	86	226	35	886					39	1,806

CLARINGTON	Status	Circulation/Pending (CI)				Draft Approved (DR)					Vacant				Grand total		
		Single	Semi	Mul- tiple	Apart- ment	Total	Single	Semi	Mul- tiple	Apart- ment	Total	Total	Total	Total			
	Built Boundary	576	220	313	254	1,363	408	305	278	476	1,467	348	155	41	7	551	3,381
	Greenfield	2,164	146	599	-	2,909	840	258	262	6	1,366	506	224	59	11	800	5,075
	Rural	46	-	-	-	46	116	-	-	-	116	-	-	-	-	46	208
	Unknown	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2
	Total	2,786	366	912	254	4,318	1,364	563	540	482	2,949					1,399	8,666

OSHAWA	Status	Circulation/Pending (CI)					Draft Approved (DR)					Vacant					Grand total
		Single	Semi	Mul- tiple	Apart- ment	Total	Single	Semi	Mul- tiple	Apart- ment	Total	Total					
	Built Boundary	28	-	116	1,468	1,612	61	4	346	240	651	514	-	77	133	724	2,987
	Greenfield	697	-	193	361	1,251	962	-	339	-	1,301	944	-	141	244	1,329	3,881
	Rural	-	-	-	-	-	12	-	-	-	12					1	13
	Unknown	-	-	-	-	-	-	-	-	-	-					8	8
	Total	725	-	309	1,829	2,863	1,035	4	685	240	1,964					2,062	6,889

PICKERING	Status	Circulation/Pending (CI)					Draft Approved (DR)					Vacant					Grand total
		Single	Semi	Mul- tiple	Apart- ment	Total	Single	Semi	Mul- tiple	Apart- ment	Total	Total					
	Built Boundary	52	20	179	-	251	187	6	71	-	264	61	44	149	383	637	1,152
	Greenfield	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Rural	96	-	-	-	96	14	-	-	-	14					49	159
	Unknown	-	-	-	-	-	-	-	-	-	-					-	-
	Total	148	20	179	-	347	201	6	71	-	278					686	1,311

SCUGOG	Status	Circulation/Pending (CI)					Draft Approved (DR)					Vacant					Grand total
		Single	Semi	Mul- tiple	Apart- ment	Total	Single	Semi	Mul- tiple	Apart- ment	Total	Total					
	Built Boundary						-	-	-	52	52	56	10	-	-	66	118
	Greenfield	51	-	-	-	51						19	3	-	-	22	73
	Rural	169	-	-	-	169	83	-	-	-	83					719	971
	Unknown															3	3
	Total	220	-	-	-	220	83	-	-	52	135					810	1,165

UXBRIDGE	Status	Circulation/Pending (CI)					Draft Approved (DR)					Vacant					Grand total
		Single	Semi	Mul- tiple	Apart- ment	Total	Single	Semi	Mul- tiple	Apart- ment	Total	Total					
	Built Boundary	-	-	51	31	82						40	35	28	-	103	185
	Greenfield	378	76	90	-	544						54	47	39	-	140	684
	Rural	137	-	-	-	137	120	-	-	-	120					121	378
	Unknown															1	1
	Total	515	76	141	31	763	120	-	-	-	120					365	1,248

WHITBY	Status	Circulation/Pending (CI)					Draft Approved (DR)					Vacant					Grand total
		Single	Semi	Mul- tiple	Apart- ment	Total	Single	Semi	Mul- tiple	Apart- ment	Total	Total					
	Built Boundary	214	140	737	266	1,357	444	212	909	1,307	2,872	666	37	275	293	1,271	5,500
	Greenfield	426	-	208	-	634	764	36	131	-	931	199	11	82	88	380	1,945
	Rural						58	-	-	-	58					2	60
	Unknown															34	34
	Total	640	140	945	266	1,991	1,266	248	1,040	1,307	3,861					1,687	7,539

TOTAL	Status	Circulation/Pending (CI)					Draft Approved (DR)					Vacant					Grand total
		Single	Semi	Mul- tiple	Apart- ment	Total	Single	Semi	Mul- tiple	Apart- ment	Total	Total					
	Built Boundary	1,178	548	1,711	2,019	5,456	1,260	557	2,092	2,356	6,265	2,240	442	1,011	817	4,509	16,230
	Greenfield	4,894	302	1,580	461	7,237	4,171	569	1,025	6	5,771	1,950	357	515	342	3,164	16,172
	Rural	475	-	-	-	475	409	-	-	-	409					941	1,825
	Unknown	-	-	-	-	-	-	-	-	-	-					101	101
	Total	6,547	850	3,291	2,480	13,168	5,840	1,126	3,117	2,362	12,445					8,715	34,328

Total Supply By Unit Type & Area				
Status	Total by Type			
Unit Type	Low	Me- dium	High	Total
Built Up area	6,663	4,592	4,975	16,230
Greenfield	12,125	3,159	888	16,172
Rural	1,535	165	125	1,825
Unknown	70	18	13	101
Total	20,393	7,934	6,001	34,328

NOTES:

- 1. LOW DENSITY CONSISTS OF SINGLES AND SEMIS
- 2. MEDIUM DENSITY CONSISTS OF MULTIPLE UNITS
- 3. HIGH DENSITY CONSISTS OF APARTMENTS

APPENDIX I

Developable Greenfield Vacant Land Supply and Total Unit Supply

Municipality	Vacant Living Area (2)		Planned Regional Centre		Special Study Area (4)		Deferred Living Area		Total Hectares
	Gross hect- ares (1)	Net hectares (3)	Gross hect- ares (1)	Net hectares (3)	Gross hect- ares (1)	Net hectares (3)	Gross hect- ares (1)	Net hectares (3)	
Ajax	216	97	0	0	0	0	0	0	97
Clarington	648	292	0	0	138	62	7	3	357
Pickering	752	338	0	0	0	0	0	0	338
Oshawa	455	205	105	47	0	0	425	191	443
Whitby	66	30	0	0	0	0	139	62	92
Brock	114	51	0	0	0	0	0	0	51
Scugog	31	14	0	0	0	0	0	0	14
Uxbridge	7	3	0	0	75	34	0	0	37
		0		0		0		0	0
South Durham	2138	962	105	47	138	62	570	257	1328
North Durham	152	69	0	0	75	34	0	0	102
DURHAM TOTAL	2290	1030	105	47	213	96	570	257	1430

NOTES

1. THE GROSS LAND AREAS DO NOT INCLUDE AREAS IN NATURAL HERITAGE AND HYDROLOGIC FEATURES, REGIONAL MAJOR OPEN SPACE SYSTEM OR COLD WATER STREAM BUFFERS (30M).

2. VACANT LAND AREA EXCLUDES ALL PLANS OF SUBDIVISION (CIRCULATION OR DRAFT) AND REGISTERED PLANS.

3. A 45% GROSS TO NET RATIO WAS ASSUMED.

4. THE SPECIAL STUDY AREA (SSA) IN PICKERING DOES NOT INCLUDE LANDS UNDER THE JURISDICTION OF TRANSPORT CANADA RELATED TO THE FEDERAL AIRPORT LANDS.

Greenfield Unit Yield

Vacant Living Area

Type	Unit Mix	Amount of Land	Density (u/ha)	Unit Yield
Low	70%	847	25	21,163
Medium	20%	101	60	6,060
High	10%	14	200	2,886
Total		962		30,109

Deferred Living Area

Type	Unit Mix	Amount of Land	Density (u/ha)	Unit Yield
Low	70%	226	25	5,647
Medium	20%	27	60	1,617
High	10%	4	200	770
Total		257		8,035

Planned Regional Centre

Type	Unit Mix	Amount of Land	Density (u/ha)	Unit Yield
Low	20%	26	25	658
Medium	20%	11	60	669
High	60%	10	200	1,992
Total		47		3,319

Northern Living Area

Type	Unit Mix	Amount of Land	Density (u/ha)	Unit Yield
Low	75%	62	15	925
Medium	20%	6	40	251
High	5%	1	100	62
Total		69		1,237

Special Study Area

Type	Unit Mix	Amount of Land	Density (u/ha)	Unit Yield
Low	70%	55	25	1,366
Medium	20%	7	60	391
High	10%	1	200	186
Total		62		1,944

Northern Special Study Area

Type	Unit Mix	Amount of Land	Density (u/ha)	Unit Yield
Low	75%	30	15	455
Medium	20%	3	40	123
High	5%	0	100	30
Total		34		608

Greenfield Total Housing Supply (Units)

Designation	Low	Medium	High	Total
Vacant Living Area	21,163	6,060	2,886	30,109
Planned Regional Centre	658	669	1,992	3,319
Special Study Area	1,366	391	186	1,944
Deferred Living Area	5,647	1,617	770	8,035
Northern Living Area	925	251	62	1,237
Northern Special Study Area	455	123	30	608
TOTAL	30,214	9,112	5,926	45,252
Units in the development process ¹	12243	3120	809	16172
Units in the development process adjusted ²	1373	412	227	2012
Land Vacancy ³	-190	-59	-30	-279
TOTAL	43,640	12,585	6,932	63,157

NOTES:

(1) UNITS IN THE DEVELOPMENT PROCESS INCLUDES: PLANS OF SUBDIVISION IN CIRCULATION, DRAFT APPROVED AND REGISTERED NOT BUILT

(2) HALF A YEAR OF GROWTH HAS BEEN ADDED BACK TO THE UNITS IN THE DEVELOPMENT PRO

(3) LAND VACANCY IS BASED ON 0.5% OF THE TOTAL LIVING AREA BROKEN OUT BY THE AMOUNT OF LAND IN THE BUILT-UP AREA AND GREENFIELD. THE LAND AREA IN GREENFIELD IS CONVERTED TO UNITS BY APPLYING THE FOLLOWING DENSITIES: 13UPH FOR LOW, 27UPH FOR MEDIUM AND 90 UPH FOR HIGH. THE UNIT MIX APPLIED IS 70% LOW: 20% MEDIUM; AND 10% HIGH DENSITY. CES IN ORDER TO ALIGN WITH THE STARTING POINT OF THE FORECAST (MID 2006 CENSUS)

APPENDIX J

Historical Employment Growth by Employment Sector, 1996-2006

Employment by Industry	Year			Change		Annual Growth	
	1996	2001	2006 ¹	96-01	01-06	96-01	01-06
1.0 - Primary Industry Employment							
1.1 - All Primary	3,920	3,355		-565	-3,355	-3.1%	-100.0%
Sub-Total	3,920	3,355	3,457	-565	-3,355	-3.1%	0.6%
2.0 - Industrial and Other Employment							
2.1 - Manufacturing	35,380	34,725		-655	-34,725	-0.4%	-100.0%
2.2 - Wholesale Trade	5,945	6,390		445	-6,390	1.5%	-100.0%
2.3 - Construction	4,310	5,660		1,350	-5,660	5.6%	-100.0%
2.4 - Transportation, storage, communication and other utility	12,390	16,400		4,010	-16,400	5.8%	-100.0%
Sub-Total	58,025	63,175	65,453	5,150	-63,175	1.7%	0.7%
3.0 - Population Related Employment							
3.1 - Retail Trade	21,295	25,640		4,345	-25,640	3.8%	-100.0%
3.2 - Finance, insurance, real estate operator and insurance report	6,450	8,060		1,610	-8,060	4.6%	-100.0%
3.3 - Business service	8,325	13,065		4,740	-13,065	9.4%	-100.0%
3.4 - Accommodation, food and beverage and other service	18,855	23,170		4,315	-23,170	4.2%	-100.0%
Sub-Total	54,925	69,935	79,833	15,010	-69,935	5.0%	2.7%
4.0 - Institutional							
4.1 - Government Service	6,740	7,340		600	-7,340	1.7%	-100.0%
4.2 - Education service, Health, Social Services	25,580	29,655		4,075	-29,655	3.0%	-100.0%
Sub-Total	32,320	36,995	40,785	4,675	-36,995	2.7%	2.0%
Total Employment	149,190	173,460	189,528	24,270	-173,460	3.1%	1.8%

SOURCE: WATSON & ASSOCIATES ECONOMISTS LTD. (DERIVED FROM STATISTICS CANADA EMPLOYMENT BY PLACE OF WORK)

NOTE

1. 2006 PRELIMINARY EMPLOYMENT ESTIMATE, WATSON & ASSOCIATES, 2007

Industrial Employment Growth by Local Municipality, 1996 - 2006

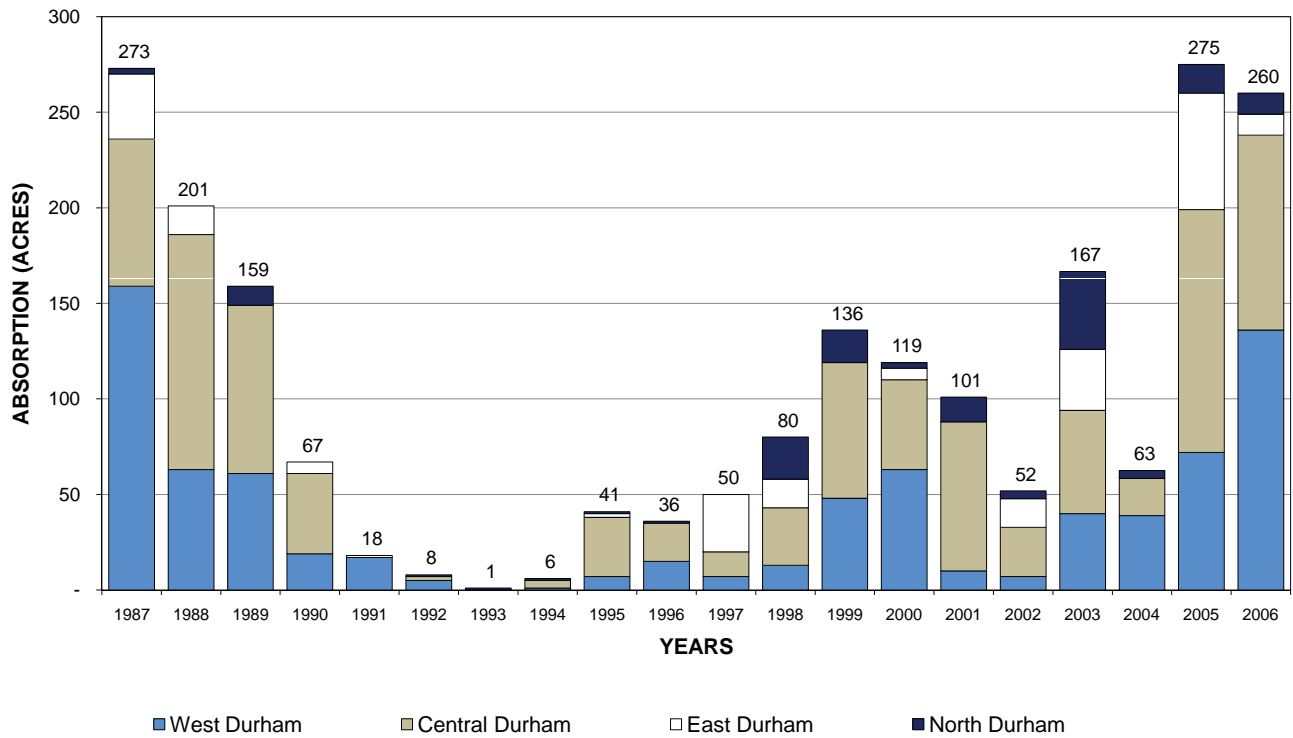
Local Municipality	Year			Change		Annual Growth Rate	
	1996	2001	2006 ¹	96-01	01-06	96-01	01-06
Ajax	7,360	8,695	8,805	1,335	110	3.4%	0.3%
Brock	805	1,163	1,380	358	218	7.6%	3.5%
Clarington	5,045	5,823	6,774	778	952	2.9%	3.1%
Oshawa	24,160	22,408	23,437	-1,753	1,030	-1.5%	0.9%
Pickering	10,985	14,135	15,138	3,150	1,003	5.2%	1.4%
Scugog	1,045	1,315	1,591	270	276	4.7%	3.9%
Uxbridge	845	905	1,043	60	138	1.4%	2.9%
Whitby	7,765	8,698	9,527	933	830	2.3%	1.8%
Durham Region	58,010	63,140	67,696	5,130	4,556	1.7%	1.4%

SOURCE: WATSON & ASSOCIATES ECONOMISTS LTD. (DERIVED FROM STATISTICS CANADA EMPLOYMENT BY PLACE OF WORK)

NOTE

1. 2006 PRELIMINARY EMPLOYMENT ESTIMATE, WATSON & ASSOCIATES (2007)

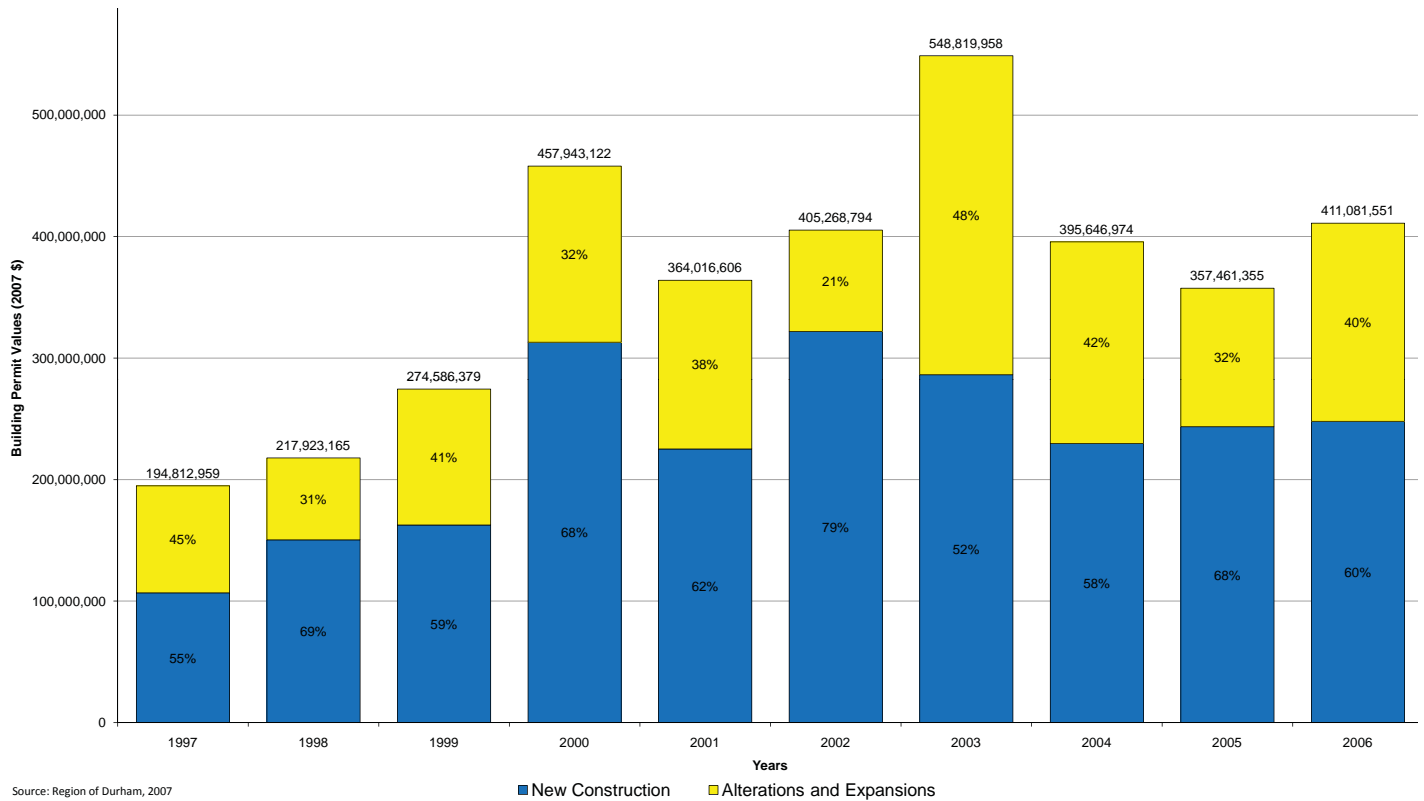
Employment Area Land Absorption (net areas), 1987 to 2006



SOURCE: WATSON & ASSOCIATES ECONOMISTS LTD.

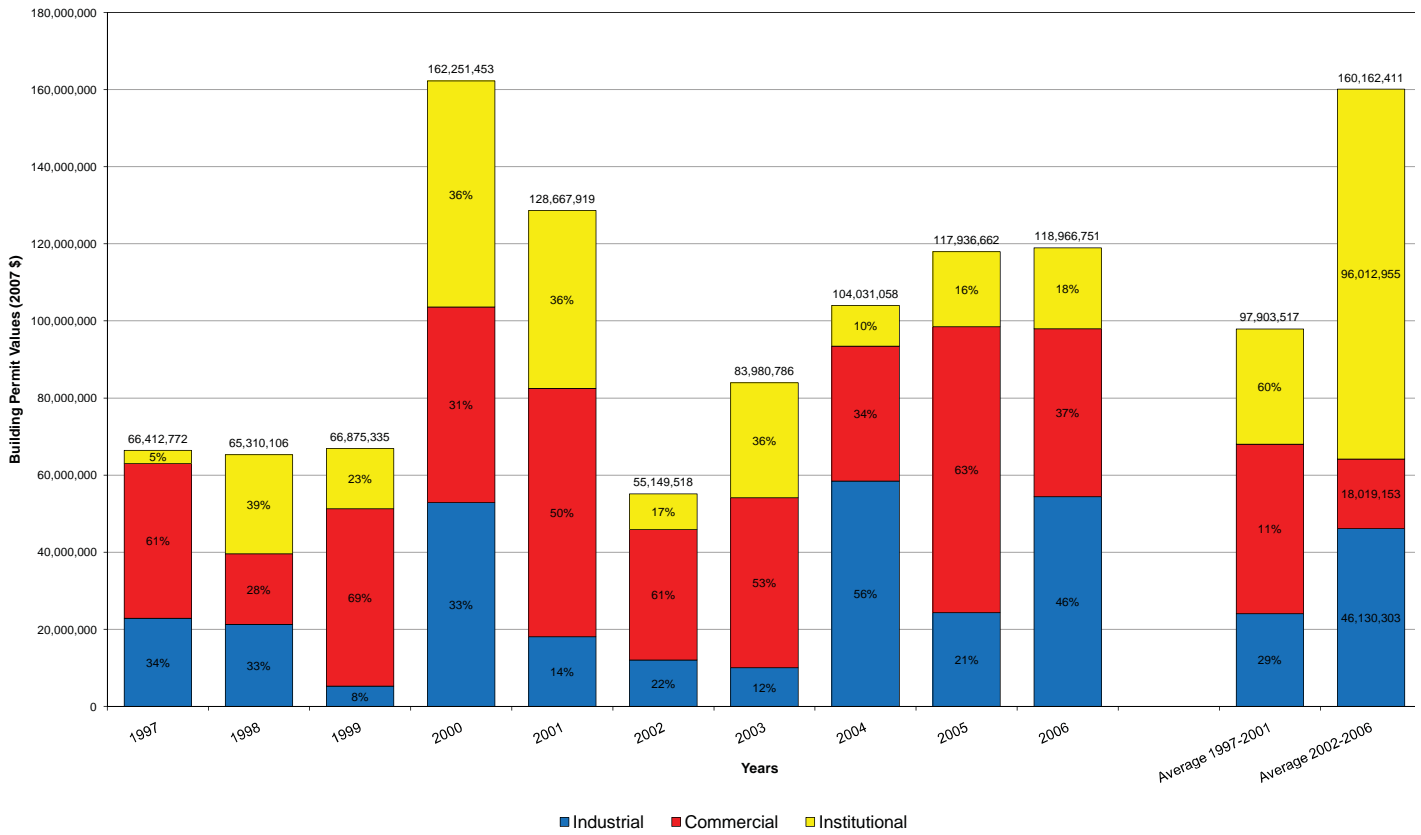
*EMPLOYMENT AREAS BASED ON REGIONAL OFFICIAL PLAN

New Contrustion vs. Alterations and Expansions, 1997-2006



SOURCE: WATSON & ASSOCIATES ECONOMISTS LTD. (DERIVED FROM REGION OF DURHAM, 2007)

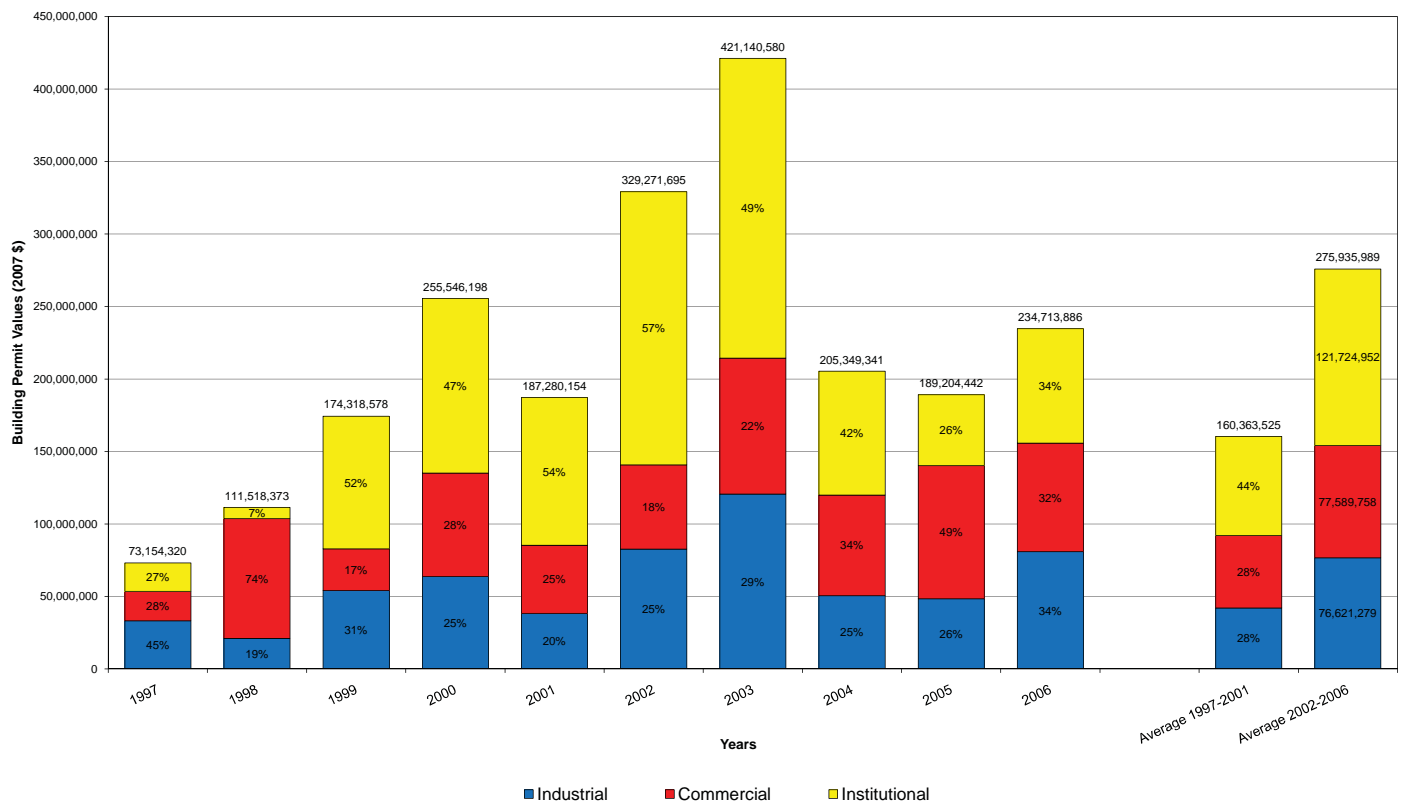
West Durham - Historical Building Permit Values



SOURCE: WATSON & ASSOCIATES ECONOMISTS LTD. (DERRIVED FROM REGION OF DURHAM, 2007)

NOTE: WEST DURHAM INCLUDES AJAX AND PICKERING

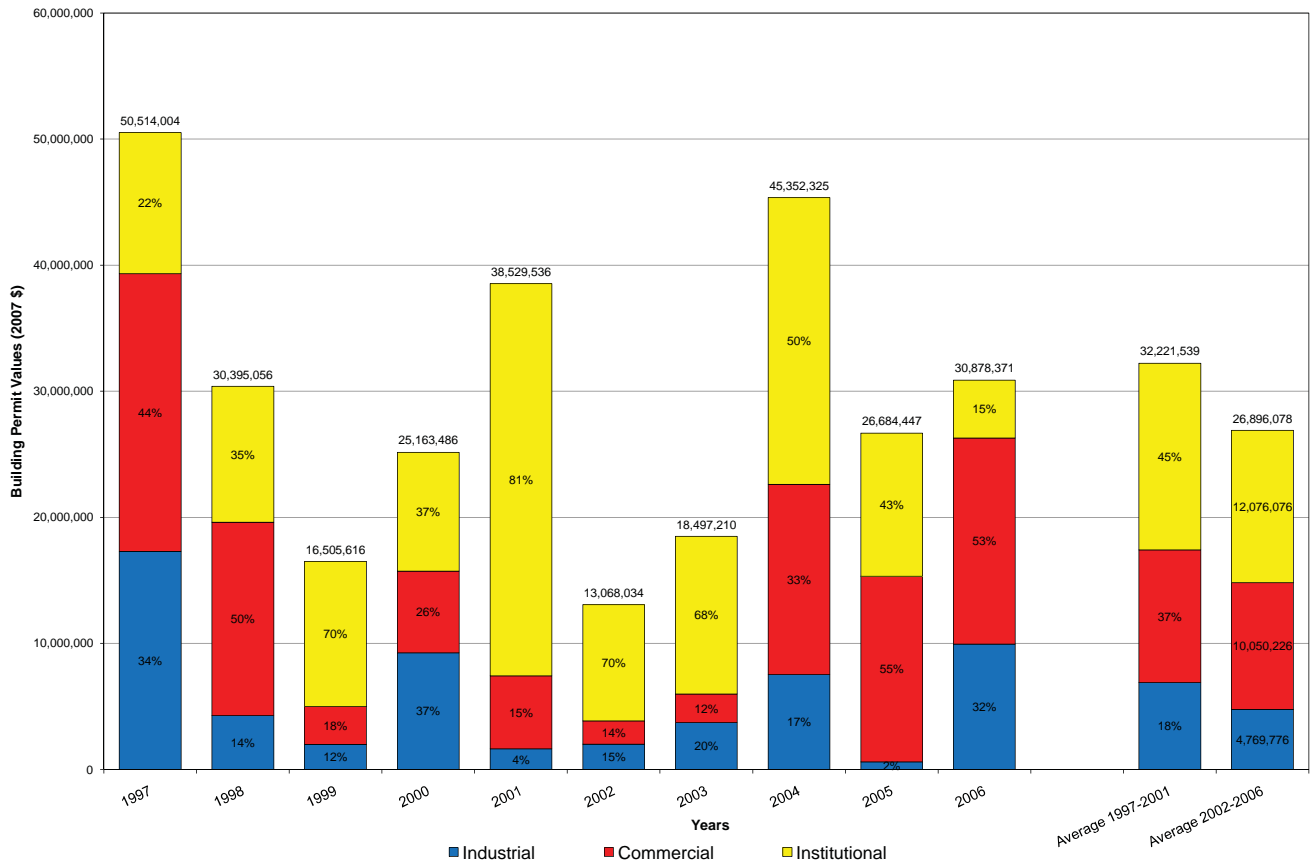
Central Durham - Historical Building Permit Values



SOURCE: WATSON & ASSOCIATES ECONOMISTS LTD. DERRIVED FROM REGION OF DURHAM, (2007)

NOTE: CENTRAL DURHAM INCLUDES WHITBY AND OSHAWA

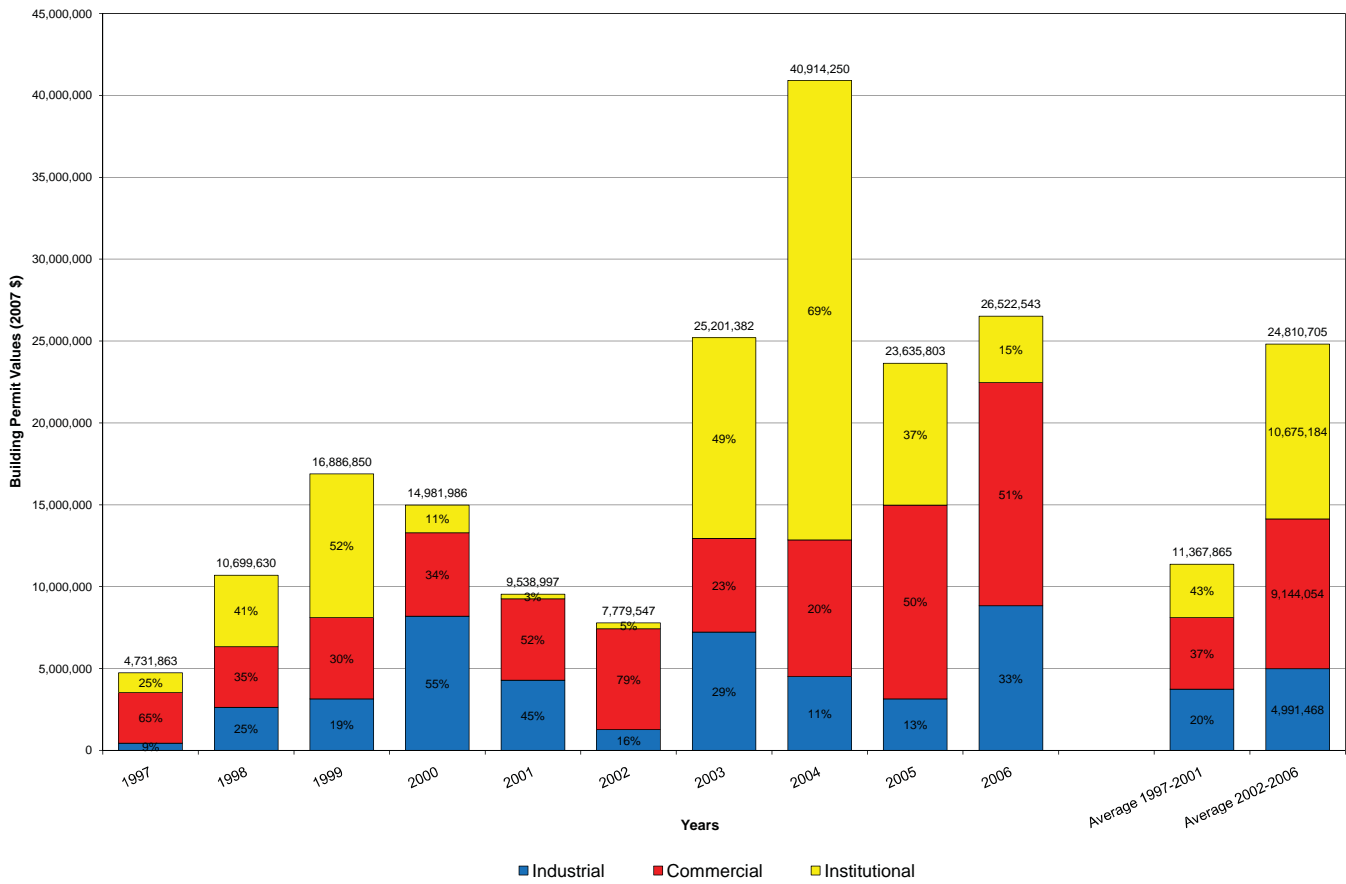
East Durham - Historical Building Permit Values



SOURCE: WATSON & ASSOCIATES ECONOMISTS LTD. (DERRIVED FROM REGION OF DURHAM, 2007)

NOTE: EAST DURHAM INCLUDES CLARINGTON

North Durham - Historical Building Permit Values



SOURCE: WATSON & ASSOCIATES ECONOMISTS LTD (DERRIVED FROM REGION OF DURHAM, 2007)

NOTE: NORTH DURHAM INCLUDES UXBRIDGE, SCUGOG AND BROCK.

APPENDIX K

Density on Employment Lands on Survey of Occupied Sites, December 2007

		PHYSICAL ATTRIBUTES							
		Avg. Site Area (net acres)	Avg Site Area (net ha)	Avg. Floor Area (sq.ft.)	Sq. Ft. per Employee	Building Coverage	Employee per Net Acre	Employee per Net Ha	
Ajax		Sample Size							
<u>Employment Sector</u>									
Manufacturing		6	6.87	2.78	82,567	615	27.9%	21	53
Warehouse/Distribution		1	131.00	53.01	1,100,000	1,375	19.3%	6	15
Oshawa		Sample Size							
<u>Employment Sector</u>									
Manufacturing		6	4.35	1.76	34,833	722	25.1%	23	58
Warehouse/Distribution									
Pickering		Sample Size							
<u>Employment Sector</u>									
Manufacturing		7	4.18	1.69	45,286	446	24.3%	24	60
Warehouse/Distribution		2	33.61	13.60	36,022	133	1.7%	6	16
Whitby		Sample Size							
<u>Employment Sector</u>									
Manufacturing		5	17.23	6.97	226,849	880	31.3%	24	59
Warehouse/Distribution		1	42.63	17.25	474,526	643	25.6%	17	43
Durham Region		Sample Size							
<u>Employment Sector</u>									
Manufacturing		24	7.74	3.13	89,819	648	26.8%	23	57
Warehouse/Distribution		4	60.21	24.37	411,642	571	12.1%	9	22

SOURCE: WATSON & ASSOCIATES ECONOMISTS LTD.

Analysis of industrial business parks in the GTA



NAME OF BUSINESS	Patheon Inc.
Address	11 Consumers Dr.
Municipality	Whitby
NAICS (Primary code)	Chemical Manufacturing
Zoning	Prestige
PHYSICAL ATTRIBUTES	FISCAL ATTRIBUTES
Number of Employees	Assessment
300	\$10,422,000
Site Size (Net Acres)	Assessment / sq. ft.
17.1	\$57
Gross Floor Area (sq.ft.)	Assessment / acre
183,998	\$609,474
Sq. Ft. / Employee	Assessment / employee
613	\$34,740
Employees / Net Acre	
18	
Building Coverage	
25%	



NAME OF BUSINESS	McGraw-Hill Ryerson Ltd.
Address	300 Water St.
Municipality	Whitby
NAICS (Primary code)	Publishing Industries
Zoning	Prestige
PHYSICAL ATTRIBUTES	FISCAL ATTRIBUTES
Number of Employees	Assessment
200	\$9,810,000
Site Size (Net Acres)	Assessment / sq. ft.
11	\$80
Gross Floor Area (sq.ft.)	Assessment / acre
122,568	\$891,818
Sq. Ft. / Employee	Assessment / employee
613	\$49,050
Employees / Net Acre	
18	
Building Coverage	
26%	

SOURCE: WATSON & ASSOCIATES ECONOMISTS LTD.

Analysis of industrial business parks in the GTA



PHYSICAL ATTRIBUTES

Number of Employees	350
Site Size (Net Acres)	36.94
Gross Floor Area (sq.ft.)	489,854
Sq. Ft. / Employee	1,400
Employees / Net Acre	9
Building Coverage	30%

FISCAL ATTRIBUTES

Assessment	\$27,860,000
Assessment / sq. ft.	\$57
Assessment / acre	\$754,196
Assessment / employee	\$79,600



NAME OF BUSINESS

Address	405 Fairall St.
Municipality	Ajax
NAICS (Primary code)	Transportation Equipment Manufacturing
Zoning	General

BBI Enterprises Group Ltd.

PHYSICAL ATTRIBUTES

Number of Employees	250
Site Size (Net Acres)	14.03
Gross Floor Area (sq.ft.)	90,000
Sq. Ft. / Employee	360
Employees / Net Acre	18
Building Coverage	15%

FISCAL ATTRIBUTES

Assessment	\$1,403,000
Assessment / sq. ft.	\$16
Assessment / acre	\$100,000
Assessment / employee	\$5,612

Analysis of industrial business parks in the GTA



NAME OF BUSINESS

Fleming Door Products Ltd.

Address 20 Barr Rd.
Municipality Ajax
NAICS (Primary code) Fabricated Metal Product Manufacturing
Zoning General

36%

PHYSICAL ATTRIBUTES

FISCAL ATTRIBUTES

Number of Employees
150
Site Size (Net Acres)
8.53
Gross Floor Area (sq.ft.)
135,000
Sq. Ft. / Employee
900
Employees / Net Acre
18
Building Coverage
36%

Assessment
\$5,461,000
Assessment / sq. ft.
\$40
Assessment / acre
\$640,211
Assessment / employee
\$36,407



NAME OF BUSINESS

Messier-Dowty Inc.

Address 574 Monarch Ave.
Municipality Ajax
NAICS (Primary code) Transportation Equipment Manufacturing
Zoning General

PHYSICAL ATTRIBUTES

FISCAL ATTRIBUTES

Number of Employees
500
Site Size (Net Acres)
12.12
Gross Floor Area (sq.ft.)
186,000
Sq. Ft. / Employee
372
Employees / Net Acre
41
Building Coverage
35%

Assessment
\$6,326,000
Assessment / sq. ft.
\$34
Assessment / acre
\$521,947
Assessment / employee
\$12,652

SOURCE: WATSON & ASSOCIATES ECONOMISTS LTD.

Analysis of industrial business parks in the GTA



NAME OF BUSINESS

Escalator Handrail Company Inc.

Address	1287 Boundary Rd.
Municipality	Oshawa
NAICS (Primary code)	Fabricated Metal Product Manufacturing
Zoning	General

PHYSICAL ATTRIBUTES

FISCAL ATTRIBUTES

Number of Employees	150	Assessment	\$3,356,000
Site Size (Net Acres)	4.08	Assessment / sq. ft.	\$177
Gross Floor Area (sq.ft.)	19,000	Assessment / acre	\$822,549
Sq. Ft. / Employee	127	Assessment / employee	\$22,373
Employees / Net Acre	37		
Building Coverage	11%		



NAME OF BUSINESS

Makita Canada Inc.

Address	1950 Forbes St.
Municipality	Whitby
NAICS (Primary code)	Machinery Manufacturing
Zoning	General
	43%

PHYSICAL ATTRIBUTES

FISCAL ATTRIBUTES

Number of Employees	100	Assessment	\$6,288,000
Site Size (Net Acres)	8.24	Assessment / sq. ft.	\$41
Gross Floor Area (sq.ft.)	154,236	Assessment / acre	\$763,107
Sq. Ft. / Employee	1,542	Assessment / employee	\$62,880
Employees / Net Acre	12		
Building Coverage	43%		

Analysis of industrial business parks in the GTA



NAME OF BUSINESS

AGS Automotive Systems

Address
Municipality
NAICS (Primary code)
Zoning

901 Simcoe St. S.
 Oshawa
 Transportation Equipment Manufacturing
 General

PHYSICAL ATTRIBUTES

FISCAL ATTRIBUTES

Number of Employees
 500
Site Size (Net Acres)
 11.3
Gross Floor Area (sq.ft.)
 75,000
Sq. Ft. / Employee
 150
Employees / Net Acre
 44
Building Coverage
 15%

Assessment
 \$6,606,000
Assessment / sq. ft.
 \$88
Assessment / acre
 \$584,602
Assessment / employee
 \$13,212

SOURCE: WATSON & ASSOCIATES ECONOMISTS LTD.

APPENDIX L

Total Net Developable Employment Land Supply (As at Year End 2006)

The net developable employment land supply has been reduced to account for a number of market considerations.

Based on a detailed site-by-site review of net developable employment land supply within Durham Region, the following adjustments were made to the Base Case employment land supply figures identified in Appendix K of the Phase 1 and 2 Draft Report:

- A total of 184 gross Ha have been removed from the supply inventory in north Oshawa in accordance with the realignment of the proposed Highway 407. These lands are bounded by Ritson Rd. to the west, Townline Rd. to the east, south the former Highway 407 route and north of the Trans Canada Pipeline. Based on our review, these lands would no longer directly front onto the proposed Highway 407 given the proposed northerly realignment, which now extends the Highway north of Windchester Rd. between Simcoe Rd. and Harmony Rd. The proposed removal of these lands would require an additional 184 gross ha of Employment Area to be designated directly along the technically recommended Highway 407 route in north Oshawa. The exact location for these lands has not yet been determined.
- Assumptions regarding employment “land vacancy” have been increased based on our review of employment lands which will not likely develop over the long-term. Based on a site-by-site review of vacant developable, serviceable and marketable employment land, an additional 77 gross Ha of employment land has been categorized under “long-term employment land vacancy” in the Township of Brock. Given the considerable challenges to municipally, or even privately, service these Employment Areas, it is unlikely that these lands will develop over the long-term.
- Two Employment Area sites which are currently under conversion pressure for non-employment lands development have been removed from the supply inventory. This includes the 5 gross Ha Axis site in Downtown Oshawa and a portion of the Oshawa Harbour lands, totaling approximately 13 gross

Ha. Please refer to Section x for a further discussion of these lands.

- Other minor employment land supply adjustments were also made to several municipalities due to data refinements.

Table L1 summarizes the impact of the above-identified changes to the Durham Region wide employment inventory. A more detailed description of the refined Durham Region net developable vacant employment land supply by local municipality is provided in Table L2 and L3

TABLE L1: SUPPLY OF NET DEVELOPABLE EMPLOYMENT LANDS¹

(AS OF DECEMBER, 2006)

Phase 1 & 2 December 2007 Report (Base Case)	
Net Acres	Net Hectares
5,480	2,218
Phase 3 & 4 May 2008 Report (Refined Base Case)	
Net Acres	Net Hectares
5,022	2,032

SOURCE: WATSON & ASSOCIATES ECONOMISTS LTD. DERIVED FROM REGION OF DURHAM PLANNING DEPARTMENT UPDATED TO YEAR END 2006.
 1. NET DEVELOPABLE EMPLOYMENT LANDS ARE ADJUSTED FOR LAND VACANCY.

Table L2: Total Net Developable Employment Land Supply (As at Year End 2006)

Area		Total Net Developable Vacant Employment Lands		Land Vacancy Adjustment ¹		Total Net Developable Employment Land Supply Adjusted for Land Vacancy	
		Acres	Hectares	Acres	Hectares	Acres	Hectares
West	Ajax	807	327	144	58	664	269
	Pickering	1,044	422	171	69	873	353
	Sub Total	1,851	749	314	127	1,536	622
Central	Oshawa	779	315	258	104	521	211
	Whitby	1,480	599	250	101	1,230	498
	Sub-Total	2,259	914	508	206	1,751	709
East	Clarington	1,435	581	179	72	1,256	508
	Sub Total	1,435	581	179	72	1,256	508
North	Brock	215	87	165	67	50	20
	Scugog	352	143	47	19	305	123
	Uxbridge	144	58	21	9	123	50
	Sub Total	711	288	233	94	478	193
TOTAL		6,256	2,532	1,235	500	5,022	2,032

SOURCE: WATSON & ASSOCIATES ECONOMISTS LTD. (DERIVED FROM REGION OF DURHAM PLANNING DEPT. UPDATED TO YEAR END 2006.)

NOTES:

1. THIS ADJUSTMENT ACCOUNTS FOR SITES WHICH ARE UNLIKELY TO DEVELOP OVER THE LONG-TERM (I.E. 2006-2031 AND BEYOND) DUE TO ODD/ SMALL LOT SIZES, SITE INACTIVITY, AND LAND BANKING WHICH CAN OFTEN TIE UP POTENTIALLY VACANT DEVELOPABLE LANDS.

Table L3: Total Net Developable Employment Land Supply Built-up Area vs. Greenfield (As at Year End 2006)

	Total Occupied Underutilized ¹			Net Developable Occupied Underutilized ²			Total Vacant Developable (Gross) ³			
	A			B			C			
	Area	Acres		Within Built-up Area	Acres		Within Built-up Area	Acres		
Greenfield		Total	Greenfield		Total	Greenfield		Total		
West	Ajax	104	-	104	104	-	104	180	368	549
	Pickering	158	-	158	40	-	40	399	886	1,285
	Sub Total	262	-	262	144	-	144	579	1,255	1,834
Central	Oshawa	288	82	370	73	21	94	533	308	842
	Whitby	188	99	288	48	25	73	764	1,010	1,774
	Sub Total	476	182	658	121	46	168	1,297	1,319	2,616
East	Clarington	62	23	85	30	12	42	593	1,185	1,778
	Sub Total	62	23	85	30	12	42	593	1,185	1,778
North	Brock	-	16	16	-	4	4	10	270	280
	Scugog	27	-	27	7	-	7	3	457	460
	Uxbridge	-	-	-	-	-	-	1	190	191
	Sub Total	27	16	42	7	4	11	14	917	932
Total	827	221	1,048	2,484	4,675	7,159	2,484	4,675	7,159	

SOURCE: WATSON & ASSOCIATES ECONOMISTS LTD. (DERIVED FROM REGION OF DURHAM PLANNING DEPT. UPDATED TO YEAR END 2006.)

NOTES:

OCCUPIED AND UNDERUTILIZED - LAND PARCEL IS OCCUPIED BUT IS PARTLY UTILIZED.

ASSUMES THAT 30% OF GROSS OCCUPIED LANDS ARE DEVELOPABLE. NET DEVELOPABLE OCCUPIED LANDS BASED ON A GROSS TO NET RATIO OF 85%. PROVIDED BY THE REGION OF DURHAM PLANNING DEPT. (YEAR END 2006). GROSS LAND AREA EXCLUDES ENVIRONMENTAL LANDS AND MAJOR NATURAL FEATURES. TOWN OF AJAX EMPLOYMENT LAND SUPPLY BASED ON A DETAILED SITE-BY-SITE ANALYSIS, ADJUSTED TO YEAR END 2006 FROM TOWN OF AJAX AS OF END 2007. EMPLOYMENT AREA IN SEATON IS UPDATED BY REPLACING CPDP OLD VERSION (JULY 15, 2005) WITH THE FINAL CPDP PLAN.

NET VACANT DEVELOPABLE AREA BASED ON A 75% GROSS TO NET RATIO ON GREENFIELD LANDS AND AD 85% GROSS TO NET RATIO IN THE BUILT BOUNDARY. FOR THE TOWN OF AJAX A GROSS TO NET RATIO OF 69% HAS BEEN CALCULATED BASED ON A SITE-BY-SITE SURVEY OF VACANT EMPLOYMENT LANDS.

Total Vacant Developable (Net) ⁴			Total Net Developable Including (Including Net Developable Underutilized Lands)					
D			E (B+D)			F		
Acres			Acres			Hectares		
Within Built-up Area	Greenfield	Total	Within Built-up Area	Greenfield	Total	Within Built-up Area	Greenfield	Total
231	472	703	335	472	807	136	191	327
339	665	1,003	379	665	1,044	153	269	422
570	1,137	1,706	714	1,137	1,851	289	460	749
453	231	685	527	252	779	213	102	315
649	758	1,407	697	783	1,480	282	317	599
1,103	989	2,091	1,224	1,035	2,259	495	419	914
504	889	1,393	535	900	1,435	216	364	581
504	889	1,393	535	900	1,435	216	364	581
9	202	211	9	206	215	3	84	87
3	343	345	9	343	352	4	139	143
1	143	144	1	143	144	0	58	58
12	688	700	19	692	711	8	280	288
2,189	3,702	5,891	2,492	3,764	6,256	1,008	1,523	2,532