

Memo

To: North Brunswick Planning Board
From: Urbanomics
Date: 3/31/2010
Re: North Brunswick Transit Village Projected School Child Generation and Local Fiscal Impact Analysis

Urbanomics has been requested by North Brunswick TOD Associates, L.L.C. determine the expected number of school children and the local fiscal impact of the proposed North Brunswick Transit Village. To accomplish this task, Urbanomics utilized an independent assessment of the number of school-aged children living in Transit Oriented Developments (TODs) in the United States¹ to ascertain if the examined TODs are comparable to the proposed TOD in North Brunswick, NJ in terms of the expected socioeconomic and design characteristics and local school performance. If it was found the proposed North Brunswick Transit Village was comparable to the previously studied TODs, Urbanomics could then subsequently estimate the number of school-children to be generated by the proposed development based upon original research.

Key Findings:

- The North Brunswick TOD is comparable to the analyzed TODs.
- The number of school age children to be generated by the development is:
 - 9 school age children for Phase 1
 - 181 school age children at full buildout

Methodology

Urbanomics identified a total of 32 comparable TOD projects with a combined 12,945 units in the following areas: Denver, Colorado; Silver Spring, Maryland; Portland, Oregon; Dallas, Texas, and Arlington County, Virginia. These comparable TOD projects include those in urban and suburban locations; having rental and condominium units; and a wide range of housing types from low-rise and mid-rise apartments, townhouses, lofts and high rise apartments. The TODs examined also include a total of 315 affordable units, representing just over 2% of total units.

¹ "What About Our Schools?" in 2008 for InterCap Holdings was originally done for the location of Edison, NJ. North Brunswick has almost exact demographic and school characteristics.

Urbanomics research indicates the number of school aged children generated by the comparable TOD projects identified in the study is extremely low with an average generation rate of 3 students per 100 units. The generation rates of the TODs analyzed ranged from 0 to 12 school aged children per 100 units depending on bedroom mix, type of housing, marketing target and child-friendliness of the development. Those developments that are primarily residential with open space, playgrounds, and game rooms typically generate higher numbers of school children, whereas developments that are in keeping with the North Brunswick TOD plans, i.e., mixed-use with a substantial commercial component and with limited family amenities, tend to generate fewer children.

These results mirror the exploratory data for TODs published by Rutgers University in the 2006 update of *Who Lives in New Jersey Housing*.² Therefore we project the North Brunswick Transit Village will generate school age children at a rate of 3 children per 100 units in market rate units. In consultation with municipal and school officials and recognizing the unique nature of affordable housing units in NJ, generation rates of 0.16, 0.68, and 1.37 per unit were used for affordable 1-bedroom units, 2-bedroom units, and 3-bedrooms units, respectively, as found in the *Who Lives in New Jersey Housing* study.³

Upon completion of the initial assessment, Fiscal Impact Analysis spreadsheets were completed utilizing the child-generation multipliers from the Urbanomics' original report as well as comments received from the Township of North Brunswick and North Brunswick School District after a meeting on March 16, 2010 as follows.

A 3 school children per 100 units generation rate was used for market rate units of all sizes, consistent with Urbanomics research findings. Recognizing the unique nature of affordable housing units in NJ, generation rates of 0.16, 0.68, and 1.37 per unit were used for affordable 1-bedroom units, 2-bedroom units, and 3-bedrooms units, respectively, as found in the Rutgers study cited above. In addition, all assessment, budgetary and demographic inputs were updated to the most recently available data and reviewed with municipal and school officials.

² Listokin, David, et al. *Who Lives in New Jersey Housing?* Center for Urban Policy Research, Edward J. Bloustein School of Planning and Public Policy, Rutgers University. New Brunswick, New Jersey: November 2006.

³ Listokin, David, et al. *Who Lives in New Jersey Housing?* Center for Urban Policy Research, Edward J. Bloustein School of Planning and Public Policy, Rutgers University. New Brunswick, New Jersey: November 2006.

The Fiscal Impact Analysis results in the following for the development at full buildout:

- Total Persons- 3,546
- School Aged Children-181
- Workers- 1,778

- Total Local Revenue
 - Municipal-\$3,071,996.64
 - School- \$8,041,316.97
 - Total- \$11,113,313.61

- Net Fiscal Impact (Annual Revenues minus Costs)
 - Municipal-\$83,392.37
 - School- \$4,175,681.28
 - Total- \$4,557,522.73

The Fiscal Impact Analysis will result in the following for Phase 1:

- Total Persons- 546
- School Aged Children-9
- Workers- 962

- Total Local Revenue
 - Municipal-\$919,842.02
 - School- \$2,424,874.42
 - Total- \$3,344,716.44

- Net Fiscal Impact (Annual Revenues minus Costs)
 - Municipal-\$331,933.57
 - School- \$2,247,097.80
 - Total- \$2,579,031.37

As indicated above, the substantial property tax revenue and low school child generation from the proposed transit village results in a total positive fiscal impact of \$2,579,031.37 for Phase 1 and \$4,557,52.73 on full build out.



Regina B. Armstrong
Principal, Urbanomics

Summary		All Phase	Phase 1
Development Pro Forma and Estimated Value	Number of Residential Units	1,875	300
	Project Value	\$ 577,941,970.00	\$ 174,279,500.00
	Assessed Value	\$ 290,300,251.53	\$ 87,540,592.85
	Commerical Square Footage	947,000	1,379,000

Project Value and assessments have been reviewed with the municipal tax assessor and utilize the current equalization ratio of 50.23%.

Demographic Impact and Project Costs: Annual Municipal and School District Costs	Demographic Impact	Total Persons	3,546	546
		School Age Children	181	9
		Workers	1,778	962
	Public Costs Generated	Municipal	\$ 2,988,604.27	\$ 587,908.45
		School	\$ 3,567,186.61	\$ 177,776.62
		Total Public Costs	\$ 6,555,790.88	\$ 765,685.07

Total people and workers calculated from Center for Urban Policy Research (CUPR) research data.

School Age Children calculated from Urbanomics Research for market units and CUPR research for affordable units in NJ.

Municipal Costs apportioned per capita, proportionally for residential (70%) and commercial (30%) assessment and then divided by total residents and workers in the

School costs calculated dividing total budget by total students, plus a capital cost factor of \$5,000 and results in a per student cost of \$19,753.

School costs is apportioned \$13,752 for operating expenses and \$6,001 for capital expenses.

Project Revenues: Annual Municipal and School District Property Tax Revenues (Land)	Property Tax Revenue	Municipal	\$ 2,972,674.58	\$ 896,415.67
		School	\$ 8,041,316.97	\$ 2,424,874.42

Project tax revenue calculated using 2010 tax rates of \$1.024/\$100 municipal and \$2.77/\$100 school.

Project-Generated Revenues: Annual Municipal and School District Non-Property Tax Revenue		Municipal	\$ 99,322.06	\$ 23,426.35
		School	\$ -	
		Total Non-Property Tax Revenue	\$ 99,322.06	\$ 23,426.35

Project non-property tax revenue includes typical permits and fees for operation, and hotel tax revenue. It is conservative.

Project Revenues: Annual Municipal and School District Total Revenues	Municipal	Property Tax Revenue	\$ 2,972,674.58	\$ 896,415.67
		Non-Property Tax Revenue	\$ 99,322.06	\$ 23,426.35
		Total Revenue	\$ 3,071,996.64	\$ 919,842.02
	School	Property Tax Revenue	\$ 8,041,316.97	\$ 2,424,874.42
		Non-Property Tax Revenue	\$ -	\$ -
		Total Revenue	\$ 8,041,316.97	\$ 2,424,874.42
	Total	Revenues	\$ 11,113,313.61	\$ 3,344,716.44

Net Fiscal Impact: Annual Revenues Minus Costs	Total Public Costs	Municipal	\$ 2,988,604.27	\$ 587,908.45
		School	\$ 3,567,186.61	\$ 177,776.62
		Total	\$ 6,555,790.88	\$ 765,685.07
	Total Public Revenues	Municipal	\$ 3,071,996.64	\$ 919,842.02
		School	\$ 8,041,316.97	\$ 2,424,874.42
		Total	\$ 11,113,313.61	\$ 3,344,716.44
	Net Fiscal Impact (Revenues Minus Costs)	Municipal	\$ 83,392.37	\$ 331,933.57
		School	\$ 4,474,130.36	\$ 2,247,097.80
		Total	\$ 4,557,522.73	\$ 2,579,031.37

Project Revenues: Annual Municipal, County and School District Property Tax Revenues	Property Tax Revenue	Municipal	\$ 2,972,674.58	\$ 896,415.67
		County	\$ 1,614,069.40	\$ 486,725.70
		School	\$ 8,041,316.97	\$ 2,424,874.42
		Municipal & County Open Space	\$ 182,889.16	\$ 55,150.57
		Local Open Space	\$ 182,586.70	\$ 26,262.18
		Total	\$ 12,993,536.80	\$ 3,889,428.54

North Brunswick Transit Village

Projected School Child Generation &

Local Fiscal Impact Analysis

Urbanomics

March 2010

North Brunswick Transit Village

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North Brunswick Transit Village Projected School Child Generation and Local Fiscal Impact Analysis

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Executive Summary

Urbanomics developed a national database of over 500 transit oriented developments (TODs) overlaid with data on project site and location, demographic, socioeconomic and school performance as demonstrated by SAT scores.

A targeted list of TODs was identified with characteristics most similar to a potential TOD in North Brunswick Township, New Jersey. We have provided an extensively researched existing condition analysis of the number of school children living in these comparable TOD projects based upon:

- site criteria
- socioeconomic characteristics
- school performance information (SAT Scores)

Urbanomics identified a total of 32 comparable TOD projects with a combined 12,945 units. These developments were located in the following areas: Denver, Colorado; Silver Spring, Maryland; Portland, Oregon; Dallas, Texas; and Arlington County, Virginia. These comparable TOD projects include:

- a wide range of housing types from low-rise and mid-rise apartments, townhouses, lofts and high rise apartments, both rental and condominium.
- locations near existing transit facilities and include both urban and suburban areas across the country.
- total of 315 affordable units, representing just over 2% of total units.

The Urbanomics analysis indicates the following:

- the number of school aged children generated by the comparable TOD projects identified in the study is extremely low with an average generation rate of 3 students per 100 units.
- generation rates in our analysis ranged a total of 0 to 12 school aged children per 100 units.
- in addition to factors such as bedroom mix, type of housing and marketing target which may have an impact on school children generation, it appears that the child-friendliness of the development may also have an impact. Those developments that were on larger properties with open space, playgrounds, and game rooms typically generated school children at the upper end of this range, where as projects that are more dense , mixed use and less children friendly, tend to have less children.

Our analysis of the combined 12,945 units in the 32 TOD projects indicates that the number of school aged children generated by such units is extremely low. These TOD units yield 428 students for an average generation rate 3 school aged children per 100 units. The generation rates in our analysis ranged from total of 0 to 12 school aged children per 100 units. While characteristics such as bedroom mix, type of housing and marketing target may be contributing factors, it appears that the child-friendliness of the development may also have an impact. Developments, such as The Blairs in Silver Spring, MD and Crystal Towers in Crystal City in Arlington, VA. with open space, playgrounds, and game

rooms, were typically at the upper end of the range. It should be noted that even at these levels the number of school children produced per unit is small. Both The Blairs and Crystal Towers had approximately 4 and 8 school children per hundred units respectively.

These results mirror the exploratory data for TODs published by Rutgers University in its update on *Who Lives in New Jersey Housing*.¹ The Rutgers University updated report identified 10 New Jersey TODs with a total of 2,183 units. These developments were all rental units in a variety of housing types which generated a total of 47 school aged children.²

The TOD projects in our report include a wide range of housing types from low-rise and mid-rise apartments, townhouses, lofts and high rise apartments, both rental and condominium. They are located near existing transit facilities and include both urban and suburban areas across the country.

Lenox Park Apartments in Silver Spring is an example of a development with approximately 30% of its units in 2 or more bedrooms. It produces 2 children per 100 units. Developments, in Crystal City and Pentagon City, such as the Metropolitan at Pentagon Row and Crystal House, have 30%. These produce 2 and 3 children per 100 units, respectively. Developments in these areas with 50% or more of their units in 2 or more bedrooms, such as The Buchanan and Water Park Towers, also exhibited low generation rates. All of these developments are located in close proximity to Washington, D.C.

Within our sample, there were 315 affordable units, representing just over 2% of total units.

Examples of developments with significant affordable units include Lenox Park Apartments (84 units - 20% affordable), the Bennington (68 units - 30% affordable) and Alexander House (123 units - 40% affordable) in Silver Spring. The generation rate for Lenox Park Apartments was 2 and 3 children per 100 units for the Bennington and Alexander House.

Approximately 96% of these affordable units were in Silver Spring, MD, within the Washington DC metro area. In the Silver Spring developments surveyed, affordable units accounted for almost 10%. The units in Silver Spring (2,976 units in 7 TOD projects) yielded similar generation rates with an average of 3 school children per unit.

¹ Listokin, David, et al. *Who Lives in New Jersey Housing?* Center for Urban Policy Research, Edward J. Bloustein School of Planning and Public Policy, Rutgers University. New Brunswick, New Jersey: November 2006.

² Listokin, David, et al. *Who Lives in New Jersey Housing?* Center for Urban Policy Research, Edward J. Bloustein School of Planning and Public Policy, Rutgers University. New Brunswick, New Jersey: November 2006.

Table 1
School Children Generated from Transit Oriented Developments
(TODs) Comparable to Potential North Brunswick TOD

Project Name	Location	Tenure	Type	Number of Units	Pupil Generation	Pupil Multipliers (Per unit)	Sat or ACT Scores (2005)
<u>North Brunswick TOD Associates, LLC</u>	<u>North Brunswick, NJ</u>	<u>Rental/Condo</u>	<u>Apt</u>	<u>1875</u>	<u>181</u>	<u>0.09</u>	<u>1035</u>
Savoy at Hampden Town Center	Aurora, CO	Rental	Apt	444	54	0.12	1164
Hampden Town Center Terrace	Aurora, CO	Condo	Apt	168	15	0.09	1164
Uptown Square	Denver, CO	Rental	Apt	696	2	0	20
Crest at Lone Tree	Lone Tree, CO	Rental	Apt	400	20	0.05	22
The Metropolitan at Lincoln Station	Lone Tree, CO	Rental	Apt	431	15	0.04	22
Amlis at Park Meadows	Lone Tree, CO	Rental	Apt	518	35	0.07	22
Alexander House	Silver Spring, MD	Rental	HR	311	10	0.03	976
The Blairs	Silver Spring, MD	Rental	HR/Apt/TH	1,397	55	0.04	976
Lenox Park Apts	Silver Spring, MD	Rental	HR	406	6	0.02	976
MCI A Condos	Silver Spring, MD	Condo	HR	151	1	0.01	976
The Bennington	Silver Spring, MD	Rental	HR	223	6	0.03	976
Crescent Condos	Silver Spring, MD	Condo	HR	143	0	0	976
Twin Towers Apts	Silver Spring, MD	Rental	HR	345	12	0.04	976
Columbia Trails	Gresham, OR	Rental	Apt	364	10	0.03	1031
Club 1201	Hillsboro, OR	Condo	Apt	210	6	0.03	1025
Mockingbird Station	Dallas, TX	Rental	Apt	211	0	0	1006
Phoenix at Midtown	Dallas, TX	Rental	Apt	449/269 occ.	2	0.01	1006
The Vista	Dallas, TX	Rental	Apt	125	3	0.03	1006
The W North & South Victory Park	Dallas, TX	Condo	HR	147/125 occ.	2	0.02	1006
East Side Village	Plano, TX	Rental	Apt	491	0	0	1032
Crystal Towers	Crystal City, VA	Rental	HR	912	73	0.08	900
Crystal Square	Crystal City, VA	Rental	HR	378	12	0.03	900
Crystal Plaza	Crystal City, VA	Rental	HR	540	10	0.02	900
Crystal House I & II	Crystal City, VA	Rental	HR	828	26	0.03	900
Water Park Tower	Crystal City, VA	Rental	HR	366	3	0.01	900
Crystal Place	Crystal City, VA	Rental	HR	183	1	0.01	900
The Lofts 590	Crystal City, VA	Rental	Apt	212	6	0.03	900
Buchanan	Crystal City, VA	Rental	HR	442	11	0.03	900
Pentagon Row	Pentagon City, VA	Rental	Apt	504	8	0.02	900
Metropolitan at Pentagon City	Pentagon City, VA	Rental	HR	325	7	0.02	900
Metropolitan at Pentagon Row	Pentagon City, VA	Rental	HR	326	7	0.02	900
Parc Vista	Pentagon City, VA	Rental	HR	299	10	0.03	900
TOTAL				12,945	428	0.03	
TOTAL Condos				797	24	0.03	
TOTAL Rentals				11946	404	0.03	

* Rounded to nearest hundredth; total do not include North Brunswick; SAT scores=Math + Verbal

We also compared the pupil generation rates developed by two school districts in our survey to the generation rates for specific TOD projects within their district. Montgomery County uses generation rates based on an annual census of a sample of developments throughout the county. Montgomery County uses a generation factor of 11 children per 100 units for high rise/mid-rise units based on a countywide survey.³ The comparable actual finding was 3 school children per 100 units.

Douglas County School District uses student generation rates as a function of density. The district covers the 3 projects at the Lincoln Station TOD in Lone Tree, CO. At the highest density of 22 dwelling units per acre, the district uses a generation factor of 8 children per 100 units. At a density of 15 – 21 units per acre, the district's student generation factor is 15 children per 100 units.⁴ The actual generation factors for the three TOD projects at Lincoln Station are well below these rates; the actual factors are 4, 5, and 7 children per 100 units.

Table 1 shows the actual generation factors for school aged children by project. The number of pupils was developed through telephone interviews and visits with school planners and onsite property managers for the individual project. If a project had an occupancy rate below 90%, we used the occupied units to calculate the specific generation factor for the project.

Our analysis of the combined 12,945 units in the 32 TOD projects indicates that the number of school aged children generated by such units is extremely low. These TOD units yield 428 students for an average of 3 school aged children per 100 units for the market rate units. These results mirror the exploratory data for TODs published by Rutgers University in its update on *Who Lives in New Jersey Housing*.⁵

Therefore we project the North Brunswick Transit Village will generate school age children at a rate of 3 children per 100 units in the market rate units. In consultation with municipal and school officials and recognizing the unique nature of affordable housing units in NJ, generation rates of 0.16, 0.68, and 1.37 per unit were used for affordable 1-bedroom units, 2-bedroom units, and 3-bedrooms units, respectively, as found in the *Who Lives in New Jersey Housing* study.⁶

³ The Maryland – National Capital Park and Planning Commission (M-NCPPC). "Montgomery County Student Generation Rates for New Housing by Type: 2005 Census Update Survey." Silver Spring, Maryland: 2006.

⁴ Douglas County School District, Planning Department. Development Review: Student Generation Rates, 2007-2008. 2007. Retrieved 20 Feb. 2008 at http://www.dcsdk12.org/portal/page/portal/DCSD/Operations/Planning/Development_Review.

⁵ Listokin, David, et al. *Who Lives in New Jersey Housing?* Center for Urban Policy Research, Edward J. Bloustein School of Planning and Public Policy, Rutgers University. New Brunswick, New Jersey: November 2006.

⁶ Listokin, David, et al. *Who Lives in New Jersey Housing?* Center for Urban Policy Research, Edward J. Bloustein School of Planning and Public Policy, Rutgers University. New Brunswick, New Jersey: November 2006.

Purpose

Urbanomics has been requested by North Brunswick TOD Associates, L.L.C. to provide an independent assessment of the number of school-aged children living in Transit Oriented Developments (TODs) in the United States and identify those most comparable to a potential TOD in North Brunswick Township, New Jersey.⁷

Urbanomics examined North Brunswick's Education, Socioeconomic and Design characteristics in the context of the original report. Our report presents the analysis of these comparable TODs with selected demographics, socioeconomic characteristics, school performance and the number of school-aged children anticipated.

Introduction

Our assignment included the development of a national database of TODs with site and location characteristics and supplemented by demographic, socioeconomic and school performance data. We have identified TODs with selected characteristics most closely resembling a potential TOD in North Brunswick Township, New Jersey. Finally, we have provided our client with an extensively researched existing conditions analysis of the number of school children living in TODs throughout the nation based upon a matrix of site, socioeconomic and school performance (SAT Scores) criteria for these comparable TOD projects.

Transit Oriented Development (TOD) Characteristics

Our initial task was to identify all existing and occupied TODs nationwide, using the definition established by the American Planning Association. This profile includes pedestrian friendly, balanced mixed use developments with places to live, work and shop within one half-mile of light rail, metro, streetcar/trolley or heavy rail train stations.

We undertook a literature review, internet research (including the California Transit Database and other state/metropolitan transit databases) and interviews with planning, transportation and other government agencies, selected professional associations, universities and research organizations to assist with the initial identification of a universe of TODs nationwide.⁸

Urbanomics criteria focused on population density and not total population in the municipality. The population density criteria account for the community's land area as well as population, thereby providing a more statistically reliable measure of the surrounding nature of the community. Additionally, the TOD projects identified include a range of housing unit types, including townhouses and mid-rise apartment buildings as well as high rise (defined as developments of over 7 stories). Our analysis indicates that a combination of bedroom mix, marketing targets, size of the property and overall child-friendliness of the development contribute to the generation of school children and not only concentrating on housing type. These results mirror the exploratory data for TOD projects in the recent Rutgers Study on *Who Lives in New Jersey?* The housing types in the Rutgers TOD study were

⁷ "What About Our Schools?" in 2008 for InterCap Holdings was originally done for the location of Edison, NJ. North Brunswick has almost exact demographic and school characteristics.

⁸ See Bibliography for detailed list

almost all low rise developments with similar generation results to our review of comparable TOD developments nationwide.

A list of 505 possible TODs were identified throughout the United States using the resources mentioned above. Appendix A shows this universe of TODs nationwide with site and location information. We then narrowed down the list to meet the parameters required for our analysis in the following manner. Each TOD was reviewed initially to determine that they met the profile of a TOD as defined by the American Planning Association. Specifically, we checked to confirm that each TOD was within at least one half-mile of a light rail, metro, heavy rail station or a streetcar/trolley stop and that the project had actually been built and occupied. A number of TODs were thus excluded since they were only proximate to bus transit, were too far away from rail and other transit stations and/or were in the planning or construction stage. TODs in the State of New Jersey were excluded since the client already had sufficient information on these TODs. We also excluded TODs with less than 100 residential units to provide a significantly reliable universe for our analysis. We then expanded our list to include those TODs that only had a residential component, since our analysis is focused on school-aged children living in TOD projects. In addition we continued to add to the list if an acceptable TOD was found at a later date. The result was a list of 151 TODs forming the basis for our further analysis, as shown in Appendix B.

The targeted list of 151 TODs are concentrated in the West and East regions. Shown in Table 2, approximately 50% are located in the West with California and Colorado predominating (36, and 22 TODs respectively). Another 34% of TODs are located in the East, concentrated in the DC metropolitan area with 40 projects or 26% in Virginia and Maryland. This is not unexpected since these areas have a predominance of metropolitan areas with an established transit system. These are also areas in which there has been significant population growth and development activity. As seen in Table 3, light rail transit is strongly represented in the States of California, and Colorado (15, and 21 TODs respectively). Likewise, California also has the strongest incidence of heavy rail TODs (15 projects). Metro or subway transit predominates in the Maryland/ Virginia area (36 projects in total).

Table 2

Region	Number	Percent
West	76	50%
East	51	34%
Midwest	13	9%
South	11	7%

Table 3

TOD by Region and Type of Transit

Region	Light Rail		Heavy Rail		Metro		Streetcar/Trolley		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
West	46	71%	17	57%	4	9%	9	100%	76	50%
East	5	8%	8	27%	37	78%	0	0%	50	34%
Midwest	9	13%	1	3%	4	9%	0	0%	15	9%
South	5	8%	4	13%	2	4%	0	0%	10	7%
Total	65	100%	30	100%	47	100%	9	100%	151	100%

For the purpose of our analysis, we overlaid the following characteristics of each TOD:

Location: State/Metropolitan Area/County
Town
Address/ZIP
Urban/Suburban

Project: Name of Project
Year Built
Number of Residential Units
Number of Hotel Rooms
Commercial Square Footage - Office/Retail
Parking Spaces
Project Cost
Community Facilities/Amenities
Type of Public Transit
Percentage of Affordable Units
Occupancy Rate

School Performance Characteristics

North Brunswick Township is located in a high performance school district and includes an ethnically diverse population. To assist in determining the most comparable TODs from our list of targeted TODs, we developed school performance indices for each of the TODs on this list. School performance data were sourced from the State Department of Education School Report Cards, individual school district web sites and supplemented by telephone interviews and onsite visits with School District administrators and planners. The following information was developed for the high schools attended by the school children from each TOD on our list, if available:

TOD High School Performance: SAT Scores – 2005-2006
Grade 12 Enrollment
Number of Students Tested
SAT Average Verbal Score
SAT Average Math Score
SAT Average Writing Score
SAT Composite Score

* ACT scores have been collected for several school districts and converted to corresponding SAT scores.

Table 4 details the demographic, socioeconomic and school performance characteristics of North Brunswick as compared to the State of New Jersey.

Table 4

**Summary of New Jersey State and North Brunswick Demographics,
Socioeconomics and School Performance**

Geography	SAT*	Pop Density per sq. mile	Housing Unit Density per sq. mile	Square Miles (land area)	Total Pop	Total Housing Units	Median Household Income	Multi-cultural	% White	% Black	% Asian	% Hispanic
North Brunswick	1035	2835	1,088	12.8	36,287	13,932	\$61,325	41.6	58.8	14.8	16.3	10.4
New Jersey State	1021	1,134	468	7,417	8,414,350	3,472,643	\$65,370	32.6	72.6	13.6	5.7	13.3

Source: All Data except SAT scores- Census 2000; SAT- Department of Education 2005* Math and verbal scores

After reviewing the characteristics overlaid on the TOD database, we developed a scoring algorithm using the following variables: SAT composite score, % Multi-Cultural and Population Density. Our scoring system used a possible total of 5; the specific weights used were SAT composite score – 2, % Multi-Cultural – 1.5 and Population Density – 1.5. The SAT composite score was more heavily weighted since school performance was considered to be one of the most significant data elements in our analysis. Based on information for North Brunswick Township, we used the following ranges:

Indicator	Range
SAT Composite (Math & Verbal)	900-1139
Multi-Cultural	35%
Population Density	2000-4000 per square mile

We scored each of the possible TOD projects with this scoring algorithm using these selected characteristics. Each of the TODs was then ranked from high to low. The result was the identification of 32 TOD projects with scores of 3.5 or higher that were most closely comparable to North Brunswick. Appendix C, D, and E shows the results of these rankings and the composite scores for each TOD and detailed information on their demographic, socioeconomic and school performance data.

For each of these identified TODs, we conducted site visits to gain an overview of the individual project. During these visits, we conducted interviews with the developer, Management Company, planning and other local agencies as well as local school officials. During these site visits, we verified the location, site specific information previously collected and gathered more detailed information on housing type, unit sizes, bedroom mix and the number of school children living in the TOD. The number of public school aged children was developed through interviews and onsite visits with school district planners and property managers for the individual TODs. More detailed information on these comparable TODs, which include the results of our site visits and local interviews are presented below.

Comparable TOD Project Information

Our analysis identified 32 projects consisting of a combined 12,945 units as comparable to a potential TOD in North Brunswick, NJ. These projects are located in 1) Silver Spring, a suburb of Washington D.C. in Montgomery County, MD, 2) Denver, CO and its suburbs of Aurora and Lone Tree, 3) Portland, OR and its suburban communities of Gresham and Hillsboro, 4) Dallas, TX and suburban Plano, and 5) Crystal City and Pentagon City in Arlington County, VA. We will briefly describe these areas, their respective school districts and a general profile of the identified projects in each area.

Montgomery County, Maryland

Montgomery County is the largest county in the State of Maryland. It is located just north of Washington D.C. and is one of the most affluent counties in the nation. It has 507 square miles and an estimated 2006 population of 932,131.¹⁰ The southern part of the county adjacent to Washington D.C. is more urbanized than the largely agricultural northern section of the county. Most of the county's residents live in unincorporated areas. The county provides a wide variety of services, including zoning and land use which are generally provided by municipal government.¹¹ Many of the major communities in the county such as Bethesda and Silver Spring are unincorporated and have no local governing structure.

Since the 1970s, the county has had in place a Moderately Priced Dwelling Unit (MPDU) zoning plan that requires developers of projects over 50 units to include affordable housing in any new residential developments that they construct in the county. Developers who provide for more than the minimum amount of MPDUs are allowed to increase the density of their developments. The Montgomery County Housing Opportunities Commission (HOC) was created in the mid-1970s to facilitate this affordable housing program. HOC provides below market rate mortgages for home ownership and for the construction of rental housing.¹² HOC owns and manages Alexander House, one of the identified projects in the Silver Spring area.¹³ Of the 7 comparable projects in Silver Spring, all but two developments have affordable units included.

Montgomery County School District

A single school system serves the entire county. The Montgomery County School District serves over 137,745 children and is the largest in the State of Maryland and the 16th largest in the U.S. The system has 130 elementary schools, 38 middle schools, 25 high schools and 7 special/alternative schools. It is an ethnically diverse, high performing district with a reputation for excellence. The district's graduation rate is over 90% with almost 70% of its students participating in Honors/AP programs. The district's

¹⁰ U.S. Census Bureau, 2006 American Community Survey

¹¹ Wikipedia. "Montgomery County, Maryland." Wikipedia Foundation, Inc. 2008. Retrieved 22 Feb. 2008 at http://en.wikipedia.org/wiki/Montgomery_County,_Maryland

¹² Housing Opportunities Commission of Montgomery County, Maryland. "Our History." 21 June 2007. Retrieved 21 Feb. 2008 at http://www.hocmc.org/About_HOC/History.asp.

¹³ Housing Opportunities Commission of Montgomery County, Maryland. "HOC Owned/Managed Properties." 21 June 2007. Retrieved 21 Feb. 2008 at <http://www.hocmc.org/Housing/Properties/Properties.asp>.

students consistently score among the highest in the nation in AP exams. The district's average SAT scores are among the highest in the U.S. and the top ranked in the state.¹⁴

Montgomery County has a sophisticated system of growth management, which channels new residential and commercial development into a series of centers along the county's transportation corridors. Silver Spring is an example of these centers, targeted for such growth. The county uses its *Adequate Public Facilities Ordinance* to stage development. Adequate space in schools is a factor included in this growth management policy. The school district's division of long range planning works closely with county planning to monitor school enrollment trends. Based on interviews with Mr. Bruce Crispell, the Director of Long Range Planning for the school system, annual student development rates by type of housing are developed using census update surveys conducted by county planning.¹⁵

Silver Spring

Silver Spring is located in the southeastern part of the county, adjacent to Washington D.C. on the south. The community is the most populous area in the county. It has a 360 acre Central Business District centered on a Metro station (Red line). It includes 17.6 acres of parkland, 7.2 million square feet of office space and over 5,200 residential units.¹⁶ Population density is 3,124 persons per square mile.¹⁷ Downtown Silver Spring is a focus of the county's smart growth policies. In 2004, development has been spurred by the relocation of the 550,000 square foot world headquarters for Discovery Communications and the establishment of the American Film Institute and its redevelopment of the Silver Theatre. Significant public improvements, retail/entertainment development and a planned \$75 million redevelopment of a multi-modal transit center have quickened Silver Spring's downtown transformation.¹⁸

Our survey has identified 7 comparable TOD projects in Silver Spring. These projects are briefly profiled below:

- ***Alexander House*** – this 17 story high rise was opened in 1992. It contains 311 rental units, including 123 affordable units. It is owned and managed by the Montgomery County Housing Opportunities Commission (HOC).
- ***The Blairs*** - this 27 acre, mixed use development includes 4 high rise rental apartment complexes (including Blair Plaza), 4 mid-rise (5-story) rental apartment buildings and a 78 rental townhouse development. The development consists of 1,397 rental units with 10 affordable units. The development's buildings were constructed between 1959 and 2004.

¹⁴ Montgomery County Public Schools. "About the Montgomery County Public Schools." 2008. Retrieved 21 Feb. 2008 at <http://www.montgomeryschoolsmd.org/about/>.

¹⁵ Crispell, Bruce. Personal Interview. 7 Feb. 2008.

¹⁶ [Silver Spring Regional Center - Downtown Silver Spring](http://www.montgomerycountymd.gov/mcgtmpl.asp?url=/Content/RSC/SilSprng/DowntownDevelopment/welcome.asp)". Montgomerycountymd.gov. 2006-02-03. <http://www.montgomerycountymd.gov/mcgtmpl.asp?url=/Content/RSC/SilSprng/DowntownDevelopment/welcome.asp>.

¹⁷ U.S. Census Bureau, 2000

¹⁸ Montgomery County. "Silver Spring Regional Center – Downtown Silver Spring." 2008. Retrieved 21 Feb. 2008 at <http://www.montgomerycountymd.gov/mcgtmpl.asp?url=/Content/RSC/SilSprng/DowntownDevelopment/welcome.asp>.

- **Lenox Park Apartments** – this 17 story high rise was built in 1995. It includes 406 rental units, including 84 affordable units. It has 20,000 square feet of convenience retail space.
- **MICA Condos** - this 20 story high rise was originally built in 1969 and redeveloped and converted to condominiums in 2005. The development has 151 units with no affordable units included.
- **The Bennington** - this newly constructed rental high rise has 223 units with 68 affordable units. It is located adjacent to the National Oceanic and Atmospheric Administration headquarters.
- **Crescent Condominiums** – this 14 story condominium development was completed in 2007. It includes 143 units, including 18 affordable units.
- **Twin Towers Apartments** - this rental development consists of two 12 and 8 story towers. It was developed in 1967 from two original office towers. It includes 345 units with no affordable units included.

Denver, Colorado

Denver is a consolidated city/county government. It consists of 154.9 square miles with a 2000 population of 554,636. The city's population density is 3,617 persons per square mile.¹⁹ Denver, according to the Mayor's office, has the 10th largest downtown in the country. Downtown Denver is experiencing an increase in apartment development. The downtown area is centered along the 16th Street Mall, lined with outdoor cafes and featuring 300 restaurants, three new sports stadiums, galleries and museums, three college campuses, and the second largest performing arts center in the nation.²⁰

Downtown Denver sits at the center of the region's transportation system. Mass transit in the region is the responsibility of the Regional Transportation District (RTD), which operates buses and the light rail system. The downtown area also has a free 16th Street Mall shuttle, operating on a 3 mile loop throughout the downtown.²¹ One of our identified projects is located downtown in close proximity to light rail. Five other TOD projects are located in the suburbs of Aurora, and Lone Tree, which are to the east and south of downtown and serviced by the light rail system.

Denver Public Schools

The Denver Public Schools (DPS) provides educational services to residents of the City/County of Denver. DPS is recognized as one of the better school systems in the country. The system has a very diverse student composition with an enrollment of 73,399. The school district operates 151 schools; 73 of these are elementary, 15 are K-8, 17 are middle schools and 14 are high schools.²²

¹⁹ U.S. Census Bureau, 2000

²⁰ City of Denver, Office of the Mayor. "Press Release: DemoDaze® Selects Denver for New Headquarters." 1 June 2004. Retrieved 20 Feb. 2008 at <http://www.denvergov.org/Mayor/PressReleases/PressReleases4/tabid/390460/Default.asp>

²¹ Regional Transportation District, http://www.rtd-denver.com/lightRail_subHome.shtml

²² Denver Public Schools. "About DPS." 2008. Retrieved 20 Feb. 2008 at <http://www.dpsk12.org/aboutdps/>.

Our survey has identified 1 comparable TOD project in the downtown area of Denver. This project is briefly profiled below:

- **Uptown Square** – this 4 story, mid-rise rental apartment complex was completed in 2001. It has 696 units with 34,000 square feet of retail space. It includes no affordable units.

Aurora

The City of Aurora is located to the east of Denver. Aurora is the third most populous city in Colorado with a population of 276,393 as of the 2000 Census. Population density of the city is 1,940 persons per square mile.²³ The city is in Arapahoe, Adams and Douglas counties. The city is well-served by highway access and light rail service. Aurora is proximate to Denver International Airport (DIA). The planned expansion of DIA together with the construction of additional light rail service will promote further growth in the city.²⁴ The Hampden Town Center TOD is located around the Dayton light rail station to the south.

Cherry Creek School District

The City of Aurora is primarily served by the Aurora Public Schools; however, the Hampden Town Center TOD is in the Cherry Creek School District, located in nearby Greenwood Village. The Cherry Creek School District is rated as one of the top ranked districts in the state. The district has 54 schools with 6 high schools, 9 middle schools, 35 elementary schools and 1 charter school. Student SAT and ACT scores are consistently well above the national and state averages. The Cherry Creek High School (which serves the Hampden Town Center TOD) is a National Blue Ribbon school and typically has 93% of its graduates accepted directly into college.²⁵

The projects in the Hampden Town Center TOD are described below:

- **Savoy at Hampden Town Center** – this 3 story, rental apartment development contains 444 units on 6 acres. The project was completed in 2000 and includes no affordable units.
- **Hampden Town Center Terrace** – this is a 4 story, 168 unit condominium apartment complex. It was constructed in 2006 on 11 acres. It contains no affordable units.

Lone Tree

The City of Lone Tree is located in the northern part of Douglas County and adjacent to Arapahoe County. The city is situated approximately 20 miles south of Denver, in the “South Metro” area. Lone Tree was incorporated in 1995 and is the second newest city incorporated into the South Metro area.²⁶ Lone Tree consists of 1.7 square miles and had a population of 4,873 in 2000. The city’s population

²³ U.S. Census Bureau, 2000

²⁴ <http://www1.auroragov.org/stellent/groups/public/documents/article-publication/007271.pdf> auroragov.org

²⁵ Cherry Creek School District. “District Information and Resources.” 9 Jan. 2008. Retrieved 21 Feb. 2008 at http://www.ccsd.k12.co.us/dist_info/dist_info.html#row4.

²⁶ City of Lone Tree. “A History of Lone Tree of a City that is Growing ...Carefully.” 2008. Retrieved 20 Feb. 2008 at <http://www.cityoflonetree.com/index.asp?nid=276>.

density is 2,827 persons per square mile.²⁷ It is estimated by Douglas County's Demographics Division that the city's population has grown to 10,264 as of January 1, 2007.²⁸ Southeast light rail service was extended to the city in 2006. This transportation improvement made the city very convenient to downtown Denver, and the Denver Tech Park. Planned expansion of light rail will eventually extend to the Denver International Airport and provide convenient access for residents throughout the metro area.²⁹

Douglas County School District

Educational facilities are provided by the Douglas County School District. The district is the third largest in the state. It is one of the fastest growing school districts in the nation with annual growth rates of 6% to 7%, yet classroom sizes continue to be well below the national average. The Douglas County School District has 66 schools serving over 50,000 students. The district has 44 elementary schools, 7 middle schools, 8 high schools, 1 alternative high school and 6 charter schools. The City of Lone Tree is primarily served by 2 elementary schools, a middle school and magnet school and Highlands Ranch High School.³⁰ The district's SAT and ACT scores are higher than the state and national averages. Students outperform in every grade on the annual state assessment tests.³¹

The three comparable TOD projects identified in Lone Tree are described below:

- ***Crest at Lone Tree*** – this 4 story, mid-rise apartment complex was built in 2003 on 15 acres. It consists of 400 rental units with no affordable units.
- ***The Metropolitan at Lincoln Station*** – this 4 ½ story mid-rise apartment development was completed in 2005. It has 431 rental units on 11 acres and provides no affordable units.
- ***Amlı at Park Meadows*** – this 3 story apartment complex was completed in 2001 on 35 acres. It is located across from the Metropolitan at Lincoln Station. It consists of 518 rental units with no affordable units.

Portland, Oregon

The City of Portland is the most populous city in the State of Oregon. As of the 2000 Census, the city had a population of 568,380.³² It includes all of Multnomah County and a small portion of Washington and Clackamas counties. The city and surrounding metro region are known for strong land use planning and investment in public transit.³³

²⁷ U.S. Census Bureau, 2000

²⁸ City of Lone Tree. "City Facts." 2008. Retrieved 20 Feb. 2008 at <http://www.cityoflonetree.com/index.asp?nid=273>.

²⁹ City of Lone Tree. "A History of Lone Tree of a City that is Growing ...Carefully." 2008. Retrieved 20 Feb. 2008 at <http://www.cityoflonetree.com/index.asp?nid=276>.

³⁰ Douglas County School District. "About Douglas County School District." 2008. Retrieved 21 Feb. 2008 at http://www.dcsdk12.org/portal/page/portal/DCSD/District_Information/Welcome

³¹ Douglas County School District. The 2007 One Report. 18 Jan. 2008. Retrieved 21 Feb. 2008 at <http://www.dcsdk12.org/portal/page/portal/DCSD>.

³² U.S. Census Bureau, 2000

³³ Wikipedia. "Portland, Oregon." Wikipedia Foundation, Inc. 2008. Retrieved 22 Feb. 2008 at http://en.wikipedia.org/wiki/Portland,_Oregon.

TriMet operates the region's buses, and Max, the light rail system. The Max light rail system connects Portland and its suburbs. TriMet also operates the Portland streetcar system within the city's downtown and surrounding areas.³⁴

Hillsboro and Gresham are suburbs of Portland that are located west and east of Portland respectively and served by the Max light rail system. Our survey has identified 3 TOD projects in these two communities.

Hillsboro

The City of Hillsboro is located in Washington County 11 miles to the west of Portland. The city's population was 70,186 as of the 2000 Census, making it the fifth most populous city in the state. Population density in the city is 3,254 persons per square mile.³⁵ The city is home to a number of high tech firms including Intel. Therefore, the city has a large daytime population based on city planning estimates of 110,000. The first Max light rail line (Blue line) was extended to serve Hillsboro in 1998.³⁶ The city has 7 light rail stations and two transit centers

Hillsboro School District

Public schools in the City of Hillsboro are operated by the Hillsboro School District. The Hillsboro School District is the fourth largest in the state. The district operates 32 schools: 23 elementary schools, 4 middle schools, 4 high schools and 1 special alternative school. There are currently 5 new schools under construction. Average teacher/student ratio is 1:26. Student achievement is strong with almost all schools receiving a strong or exceptional rating on their annual assessments from the State Education Department. Total enrollment as of 2007 was 20,059 students.³⁷

Orenco Station in the city's east central section is the site of a TOD developed on 209 acres. It is a mixed use development containing retail and a variety of housing options, including rental apartments, condominiums and townhouses. The selected project that is part of the Orenco Station TOD is described below:

- ***Club 1201*** – this 3 story, condominium development includes 210 townhouse units on 12 acres. The project consists of 21 buildings of 10 units each. There are no affordable units included in the project.

Gresham

The City of Gresham is located in Multnomah County, approximately 13 miles to the east of Portland. The city's population was 90,205 as of the 2000 Census. Its population density is 4,072 persons per

³⁴ Wikipedia. "Portland, Oregon." Wikipedia Foundation, Inc. 2008. Retrieved 22 Feb. 2008 at http://en.wikipedia.org/wiki/Portland,_Oregon.

³⁵ U.S. Census Bureau, 2000

³⁶ Wikipedia. "Hillsboro, Oregon." Wikipedia Foundation, Inc. 2008. Retrieved 22 Feb. 2008 at http://en.wikipedia.org/wiki/Hillsboro,_Oregon.

³⁷ Hillsboro School District. "Fast Facts." 2007. Retrieved 22 Feb. 2008 at <http://www.hsd.k12.or.us/district/fastfacts.asp>.

square mile.³⁸ The city is the fourth largest in the state with a population as of July, 2007 estimated at 99,250 by Portland State University's Population Research Center.³⁹

Gresham is served by the Max light rail Blue line which provides residents with a 35 minute commute to downtown Portland. The city has 6 Max light rail stations plus 2 transit centers. The city has encouraged redevelopment around its transit stations in the downtown area.⁴⁰

Gresham-Barlow School District

The Gresham-Barlow School District serves the cities of Hillsboro, Boring and Damascus. It has a diverse student population of 12,150. The district operates 20 schools: 11 elementary schools, 5 middle schools, 3 high schools and 1 charter school. The Sam Barlow High School serves the identified TODs in downtown Gresham. The district's students consistently score above the national average on standardized exams. It currently has 37 nationally certified teachers.⁴¹

Our survey has identified the following TOD project in the Gresham Station area.

- ***Columbia Trails*** – this 3 story, rental apartment development consists of 364 units. It was completed in 2002 and has no affordable units. The project is located just west of the Gresham Station shopping center (297,000 sq.ft.).

Dallas, Texas

The City of Dallas is the third largest city in the State of Texas and is the economic centerpiece of the Metroplex – the Fort Worth-Dallas-Arlington metropolitan area. Dallas is the county seat of Dallas County and extends into portions of Collin, Denton, Kaufman and Rockwall Counties.⁴² The population of Dallas as of 2000 Census was 1,888,580. The city covers a land area of 342.5 square miles and has a population density of 3,470 persons per square mile.⁴³ The city's economy is focused on the telecommunication, energy and financial industries. The Dallas Area Rapid Transit (DART) is the Dallas area public transportation authority. It provides bus and light rail service to Dallas and its suburbs. Currently, DART operates two light rail lines (Blue/Red) with planned expansion for two additional light rail lines.⁴⁴

³⁸ U.S. Census Bureau, 2000

³⁹ Wikipedia. "Gresham, Oregon." Wikipedia Foundation, Inc. 2008. Retrieved 22 Feb. 2008 at http://en.wikipedia.org/wiki/Gresham,_Oregon.

⁴⁰ Wikipedia. "Gresham, Oregon." Wikipedia Foundation, Inc. 2008. Retrieved 22 Feb. 2008 at http://en.wikipedia.org/wiki/Gresham,_Oregon.

⁴¹ Gresham Barlow School District. "District Profile." 2008. Retrieved 22 Feb. 2008 at http://www.gresham.k12.or.us/about_our_district/district_profile.html.

⁴² Wikipedia. "Dallas, Texas." Wikipedia Foundation, Inc. 2008. Retrieved 22 Feb. 2008 at http://en.wikipedia.org/wiki/Dallas,_Texas.

⁴³ U.S. Census Bureau, 2000

⁴⁴ Wikipedia. "Dallas, Texas." Wikipedia Foundation, Inc. 2008. Retrieved 22 Feb. 2008 at http://en.wikipedia.org/wiki/Dallas,_Texas.

Dallas Independent School District

The Dallas Independent School District provides educational facilities to the city. The District is the 12th largest school district in the country and enrolls over 161,000 students. The District operates over 150 elementary schools, 32 middle schools and 28 high schools. A number of the district's schools have been recognized nationally and locally, including Woodrow Wilson High School, which serves the five identified TOD projects in Dallas.⁴⁵

Our survey identified the Mockingbird Station and Victory Park in the City of Dallas as TODs. Victory Park is immediately north of Downtown Dallas and includes 3 projects. Mockingbird Station is situated in North Dallas; two projects have been included from this TOD. A brief profile of these projects is included below:

- **Mockingbird Station** – this TOD is located adjacent to the DART light rail station, which is served by both the Blue and Red lines. The complex was a former Western Electric building that was redeveloped into a commercial, residential and entertainment complex in 2001. The 8 acre project consists of 211 rental apartments, an 8 screen movie theatre, restaurants and boutiques. The retail and office components are 173,468 square feet and 148,417 square feet respectively. The residential component consists of loft apartments in a 4 story building. There are no affordable units in the project. The development is connected to the existing station by a bridge that crosses the DART tracks.
- **Phoenix at Midtown** – this 4 story residential complex consists of 449 rental apartments built in 1999. The project is located within walking distance of Mockingbird Station as well as the retail and commercial areas around the station.

Victory Park – this TOD just north of Downtown Dallas was built around the American Airlines Center. It was constructed on 75 acres and planned for 4,000 residences and 4 million square feet of retail and office space when built out. It is located adjacent to Victory Station, served by the commuter rail (Trinity Railway Express), and the DART Blue and Red lines.⁴⁶ We have profiled two projects in Victory Park as described below:

- **The Vista (Victory Park)** – this 7 story rental apartment development consists of 125 apartment units and was completed in 2007. It contains 28,000 sq. ft. of retail and no affordable units.
- **The W Dallas Victory Hotel and Residences** – This 33 story hotel and condominium residences was completed in 2006. This was the first W Hotel built in Texas. The 147 residences are located on the 7th through 15th floors of the hotel. The hotel itself has 252 rooms. It is located on 2 acres across from the American Airlines Center and looks out on public parkland.

⁴⁵ Dallas Independent School District. "General Information About Dallas ISD." 2008. Retrieved 20 Feb. 2008 at <http://www.dallasisd.org/about/geninfo.htm/>.

⁴⁶ Wikipedia. "Victory Park, Dallas, Texas." Wikipedia Foundation, Inc. 2008. Retrieved 22 Feb. 2008 at http://en.wikipedia.org/wiki/Victory_Park.

Plano

The City of Plano is located in Collin and Denton Counties. It is an affluent northern suburb of Dallas. The population as of 2000 was 222,030, making it the ninth largest city in Texas.⁴⁷ The city is the corporate home of many Fortune 500 companies such as Perot Systems, JC Penney, Frito-Lay, and EDS. Plano is served by the DART public transportation system. In recent years, DART's Red line has opened light rail stations in Downtown Plano and at Parker Road.⁴⁸

Plano Independent School District

The Plano Independent School District serves most of the City of Plano. Its enrollment is 53,000 students. The district has a slightly different high school system, in which students in grades 9 – 10 attend a high school and students in grades 11 – 12 attend a senior high school. There are 42 elementary schools, 12 middle schools, 5 junior high schools and 3 senior high schools. The district is known for its high academic standards.⁴⁹ All three of the district's senior high schools were listed in the top 500 of *Newsweek's* 1000 top high schools in America.⁵⁰

We have identified one TOD in Plano. A description of East Side Village follows:

- **East Side Village** – This TOD is a 6.6 acre, mixed use development of retail, residential and restaurants completed in 2004. It is an extension of the “Old Downtown” of Plano, located adjacent to the new DART Downtown Plano Station. The 3 story residences are built above ground level stores along a main street. The residential development consists of 491 rental apartments. There are no affordable units located in the development.

Arlington County, Virginia

Arlington County is an independent city which is part of the Washington D.C. metropolitan area. It is located in northern Virginia, across the Potomac from Washington D.C. It is bordered by the City of Alexandria to the south. Arlington County is one of the most affluent counties in the DC metropolitan area. Its median household income as of 1999 was \$99,102. The county has the highest percentage of residents over 25 years that held an advanced degree. The population of the county was 55,277 as of the 2000 Census. The county covers 26 square miles with a population density of 4,206 persons per square mile.⁵¹ It is home to the Pentagon, Reagan Washington National Airport, and Arlington National Cemetery.

Before the advent of the metro system, Arlington was a close-in bedroom suburb offering convenient access to DC. The Metro started in 1976 and its first extension was to Arlington County. Arlington County has land use planning and zoning power for the entire county and its planning efforts have been

⁴⁷ U.S. Census Bureau, 2000

⁴⁸ Wikipedia. “Plano, Texas.” Wikipedia Foundation, Inc. 2008. Retrieved 22 Feb. 2008 at http://en.wikipedia.org/wiki/Plano,_Texas.

⁴⁹ Plano Independent School District. “Know Your School District.” 2008. Retrieved 22 Feb. 2008 at <http://www.pisd.edu/about.us/index.shtml>.

⁵⁰ Kantrowitz, Barbara. “The 1000 Best High Schools in America.” *Newsweek* 16 May 2005 Retrieved at <http://www.newsweek.com/id/59272>.

⁵¹ U.S. Census Bureau, 2000

focused on encouraging mixed use development around the county's Metro stations. In 2005, the county implemented an affordable housing ordinance to provide such housing in conjunction with these development efforts.⁵² Two of the county's most well-known TODs are Crystal City and Pentagon City. Our survey has identified 12 projects in both of these areas.

Arlington County School District

The Arlington County School District covers the entire county. It is the 14th largest district in the state, serving 18,680 students. The district has a very diverse population with students coming from 120 countries and speaking over 100 languages. Arlington County spends almost half of its revenue on education. During the last ten years, the district has renovated and/or expanded 24 schools, built an additional elementary school, and is rebuilding one of its high schools. The district has 30 schools with 22 elementary schools, 5 middle schools and 3 high schools. The graduation rate in the district is over 90% with students continually scoring well above state and national averages on standardized tests and the SAT. The school district has some of the smallest classroom sizes in the region. As noted in the Arlington Public Schools, *Quick Facts 2007-08*, all of the district's high schools have been listed in the 2007 *Newsweek/Washington Post Challenge Index* as being in the top 1% of schools nationally.⁵³

The school district's Facilities Planning Department provided the number of public school children by building address to determine student generation from these buildings. In our interview with Ms. Alison Denton, the Geographic Information System (GIS) Manager for the department, it was noted that the district, like similar areas in suburban DC, has a large number of garden apartments. *The district is finding that these garden apartments are being replaced by higher density housing which is reducing student enrollment in these areas.*⁵⁴

Crystal City

Crystal City is located in southeastern Arlington County. It was one of the earliest urban villages or TODs planned by the county. Construction on the first buildings in Crystal City started in 1963. The area is concentrated along the Jefferson Davis Highway (US 1) and is served by the Blue and Yellow Metro lines as well as the Virginia Rail Express commuter line.⁵⁵ It is a short distance from Reagan National Airport and within walking distance of the county's newer TOD in Pentagon City. Crystal City is a mixed use area with extensive shopping, landscaped parks, offices and high rise apartments. It has over 6,000 residents and a daytime population of 60,000.⁵⁶

⁵² Wikipedia. "Arlington County, Virginia." Wikipedia Foundation, Inc. 2008. Retrieved 22 Feb. 2008 at http://en.wikipedia.org/wiki/Arlington,_Virginia

⁵³ Arlington Public Schools. "Arlington Public Schools Quick Facts 2007-08." 2008. Retrieved 21 Feb. 2008 at http://www.apsva.us/154010716144517/lib/154010716144517/Quickfacts_08b.pdf.

⁵⁴ Denton, Alison. Personal Interview. 8 Feb. 2008

⁵⁵ Wikipedia. "Crystal City, Virginia." Wikipedia Foundation, Inc. 2008. Retrieved 22 Feb. 2008 at http://en.wikipedia.org/wiki/Crystal_City,_Virginia.

⁵⁶ Arlington County, Arlington Economic Development. "Crystal City Submarket." 2008. Retrieved 22 Feb. 2008 at <http://www.arlingtonvirginiausa.com/index.cfm/5985>

Pentagon City

Pentagon City is located within walking distance to the west of Crystal City. The area includes 234 acres. In 1976, Arlington County approved a concept plan for development of the area, identifying 116 acres planned for high density mixed uses. Pentagon City is centered on the Pentagon City Metro Station, served by the Blue and Yellow lines. The Pentagon is located several blocks away from the metro station. It is home to major shopping centers such as Fashion Centre and Pentagon Row, high rise offices and apartments.⁵⁷

Our survey has identified 8 comparable TOD projects in Crystal City. These projects are briefly profiled below:

- ***Crystal Towers*** – this complex consists of two 12 story high rise buildings. It was originally built in 1967-1968 and renovated in 2000. It has 912 rental units in both towers on 14 acres. There are no affordable units provided in the complex.
- ***Crystal Square*** - this 17 story rental high rise was completed in 1974. It consists of 378 rental units on 5 acres. It is adjacent to the Crystal City Shops, a 400,000 square foot mall owned and managed by Vornado. It was recently acquired by a new owner, the Bainbridge Companies. The building provides no affordable units.
- ***Crystal House I & II*** – this development consists of two 12 story buildings on 18 acres. The development was completed in 1964 and includes a total of 828 rental units. The complex does not contain any affordable housing units. Crystal House I contains 422 units while Crystal House II has 406 units.
- ***Crystal Plaza*** - this complex consists of two adjacent 12 story buildings on 6 acres. The buildings include 540 rental units with 270 units in each building. It was completed in 1967. It includes almost 20,000 square feet of retail space. The complex includes no affordable units.
- ***Water Park Tower*** - this development consists of two 11 story buildings of 183 units each. The total number of units is 366 built on 5 acres. The complex was completed in 1987. There are no affordable units provided on site.
- ***Crystal Place*** – this 11 story rental development was completed in 1988. It includes 183 units on almost 3 acres. The development provides no affordable housing units.
- ***Lofts 590*** - this loft style development was built on part of the parking lot. It includes 212 units in a 4 story building. The building includes 12 affordable housing units.

⁵⁷ Arlington County, Arlington Economic Development. "Pentagon City Submarket." 2008. Retrieved 22 Feb. 2008 at <http://www.arlingtonvirginiausa.com/index.cfm/6003>.
<http://www.arlingtonvirginiausa.com/index.cfm/6003>

- ***The Buchanan*** – this 14 story rental high rise was built in 1972. It includes 442 units with 53,549 square feet of retail. The complex is built on almost 4 acres. It does not provide any affordable housing units.

Our survey has identified 4 comparable TOD projects in Pentagon City. These projects are briefly profiled below:

- ***Pentagon Row*** – this 504 unit, 4 story, mixed use development features rental apartments over stores. The complex is built on 15 acres and includes 300,000 square feet of retail. The development was completed in 2001. It has no affordable units.
- ***The Metropolitan at Pentagon City*** - this 15 story rental high rise contains 325 units. It was built in 2002 on 2.6 acres. There are no affordable units provided in this building.
- ***The Metropolitan at Pentagon Row*** – this 17 story rental high rise was built in 2004. It includes 326 units on 1.3 acres. No affordable units are provided.
- ***Parc Vista*** – this development is a 17 story, high rise with 299 units. It was built in 1988 on 2.2 acres. There are no affordable units in the building.

Conclusion

Our analysis of the combined 12,945 units in the 32 TOD projects indicates that the number of school aged children generated by such units is extremely low. These TOD units yield 428 students for an average generation rate 3 school aged children per 100 units. The generation rates in our analysis ranged from total of 0 to 12 school aged children per 100 units. While characteristics such as bedroom mix, type of housing and marketing target may be contributing factors, it appears that the child-friendliness of the development may also have an impact. Developments, such as The Blairs in Silver Spring, MD and Crystal Towers in Crystal City in Arlington, VA. with open space, playgrounds, and game rooms, were typically at the upper end of the range. It should be noted that even at these levels the number of school children produced per unit is small. Both The Blairs and Crystal Towers had approximately 4 and 8 school children per hundred units respectively.

These results mirror the exploratory data for TODs published by Rutgers University in its update on *Who Lives in New Jersey Housing*.⁵⁸ The Rutgers University updated report identified 10 New Jersey TODs with a total of 2,183 units. These developments were all rental units in a variety of housing types which generated a total of 47 school aged children.⁵⁹

The TOD projects in our report include a wide range of housing types from low-rise and mid-rise apartments, townhouses, lofts and high rise apartments, both rental and condominium. They are located near existing transit facilities and include both urban and suburban areas across the country.

Lenox Park Apartments in Silver Spring is an example of a development with approximately 30% of its units in 2 or more bedrooms. It produces 2 children per 100 units. Developments, in Crystal City and Pentagon City, such as the Metropolitan at Pentagon Row and Crystal House, have 30%. These produce 2 and 3 children per 100 units, respectively. Developments in these areas with 50% or more of their units in 2 or more bedrooms, such as The Buchanan and Water Park Towers, also exhibited low generation rates. All of these developments are located in close proximity to Washington, D.C.

In comparison, several developments in the Denver suburbs of Aurora and Lone Tree also have approximately 50% of their units in 2 or more bedrooms but with higher generation rates. These projects include the Crest at Lone Tree, The Metropolitan at Lincoln Station and the Savoy at Hampden Town Center, The generation factors for school children from these developments were 5, 7, and 12 per 100 0.05, 0.07 and 0.12 respectively. These generation rates would still yield relatively small numbers of school children, ranging from 5 to 12 children per hundred units. These suburban areas are some 30 minutes or more from downtown Denver.

Within our sample, there were 315 affordable units, representing just over 2% of total units.

Examples of developments with significant affordable units include Lenox Park Apartments (84 units - 20% affordable), the Bennington (68 units - 30% affordable) and Alexander House (123 units - 40%

⁵⁸ Listokin, David, et al. *Who Lives in New Jersey Housing?* Center for Urban Policy Research, Edward J. Bloustein School of Planning and Public Policy, Rutgers University. New Brunswick, New Jersey: November 2006.

⁵⁹ Listokin, David, et al. *Who Lives in New Jersey Housing?* Center for Urban Policy Research, Edward J. Bloustein School of Planning and Public Policy, Rutgers University. New Brunswick, New Jersey: November 2006.

affordable) in Silver Spring. The generation rate for Lenox Park Apartments was 2 and 3 children per 100 units for the Bennington and Alexander House.

Approximately 96% of these affordable units were in Silver Spring, MD, within the Washington DC metro area. In the Silver Spring developments surveyed, affordable units accounted for almost 10%. The units in Silver Spring (2,976 units in 7 TOD projects) yielded similar generation rates with an average of 3 school children per 100 units.

We also compared the pupil generation rates developed by two school districts in our survey to the generation rates for specific TOD projects within their district. Montgomery County uses generation rates based on an annual census of a sample of developments throughout the county. Montgomery County uses a generation factor of 11 children per 100 units for high rise/mid-rise units based on a countywide survey.⁶⁰ The comparable 3 school children per 100 units.

Douglas County School District uses student generation rates as a function of density. The district covers the 3 projects at the Lincoln Station TOD in Lone Tree, CO. At the highest density of 22 dwelling units per acre, the district uses a generation factor of 8 children per 100 units. At a density of 15 – 21 units per acre, the district's student generation factor is 15 children per 100 units.⁶¹ The actual generation factors for the three TOD projects at Lincoln Station are well below these rates; the actual factors are 4, 5, and 7 children per 100 units.

Table 5 shows the actual generation factors for school aged children by project. The number of pupils was developed through telephone interviews and visits with school planners and onsite property managers for the individual project. If a project had an occupancy rate below 90%, we used the occupied units to calculate the specific generation factor for the project.

Our analysis of the combined 12,945 units in the 32 TOD projects indicates that the number of school aged children generated by such units is extremely low. These TOD units yield 428 students for an average of 3 school aged children per 100 units for the market rate units. These results mirror the exploratory data for TODs published by Rutgers University in its update on *Who Lives in New Jersey Housing*.⁶²

Therefore we project the North Brunswick Transit Village will generate school age children at a rate of 3 children per 100 units in the market rate units. In consultation with municipal and school officials and recognizing the unique nature of affordable housing units in NJ, generation rates of 0.16, 0.68, and 1.37 per unit were used for affordable 1-bedroom units, 2-bedroom units, and 3-bedrooms units, respectively, as found in the *Who Lives in New Jersey Housing* study.⁶³

⁶⁰ The Maryland – National Capital Park and Planning Commission (M-NCPPC). "Montgomery County Student Generation Rates for New Housing by Type: 2005 Census Update Survey." Silver Spring, Maryland: 2006.

⁶¹ Douglas County School District, Planning Department. Development Review: Student Generation Rates, 2007-2008. 2007. Retrieved 20 Feb. 2008 at http://www.dcsdk12.org/portal/page/portal/DCSD/Operations/Planning/Development_Review.

⁶² Listokin, David, et al. *Who Lives in New Jersey Housing?* Center for Urban Policy Research, Edward J. Bloustein School of Planning and Public Policy, Rutgers University. New Brunswick, New Jersey: November 2006.

⁶³ Listokin, David, et al. *Who Lives in New Jersey Housing?* Center for Urban Policy Research, Edward J. Bloustein School of Planning and Public Policy, Rutgers University. New Brunswick, New Jersey: November 2006.

Table 5
School Children Generated from Transit Oriented Developments
(TODs) Comparable to Potential North Brunswick TOD

Project Name	Location	Tenure	Type	Number of Units	Pupil Generation	Pupil Multipliers (Per unit)	Sat or ACT Scores (2005)
<u>North Brunswick TOD Associates, LLC</u>	<u>North Brunswick, NJ</u>	<u>Rental/Condo</u>	<u>Apt</u>	<u>1875</u>	<u>181</u>	<u>0.09</u>	<u>1035</u>
Savoy at Hampden Town Center	Aurora, CO	Rental	Apt	444	54	0.12	1164
Hampden Town Center Terrace	Aurora, CO	Condo	Apt	168	15	0.09	1164
Uptown Square	Denver, CO	Rental	Apt	696	2	0	20
Crest at Lone Tree	Lone Tree, CO	Rental	Apt	400	20	0.05	22
The Metropolitan at Lincoln Station	Lone Tree, CO	Rental	Apt	431	15	0.04	22
Amlis at Park Meadows	Lone Tree, CO	Rental	Apt	518	35	0.07	22
Alexander House	Silver Spring, MD	Rental	HR	311	10	0.03	976
The Blairs	Silver Spring, MD	Rental	HR/Apt/TH	1,397	55	0.04	976
Lenox Park Apts	Silver Spring, MD	Rental	HR	406	6	0.02	976
MCI A Condos	Silver Spring, MD	Condo	HR	151	1	0.01	976
The Bennington	Silver Spring, MD	Rental	HR	223	6	0.03	976
Crescent Condos	Silver Spring, MD	Condo	HR	143	0	0	976
Twin Towers Apts	Silver Spring, MD	Rental	HR	345	12	0.04	976
Columbia Trails	Gresham, OR	Rental	Apt	364	10	0.03	1031
Club 1201	Hillsboro, OR	Condo	Apt	210	6	0.03	1025
Mockingbird Station	Dallas, TX	Rental	Apt	211	0	0	1006
Phoenix at Midtown	Dallas, TX	Rental	Apt	449/269 occ.	2	0.01	1006
The Vista	Dallas, TX	Rental	Apt	125	3	0.03	1006
The W North & South Victory Park	Dallas, TX	Condo	HR	147/125 occ.	2	0.02	1006
East Side Village	Plano, TX	Rental	Apt	491	0	0	1032
Crystal Towers	Crystal City, VA	Rental	HR	912	73	0.08	900
Crystal Square	Crystal City, VA	Rental	HR	378	12	0.03	900
Crystal Plaza	Crystal City, VA	Rental	HR	540	10	0.02	900
Crystal House I & II	Crystal City, VA	Rental	HR	828	26	0.03	900
Water Park Tower	Crystal City, VA	Rental	HR	366	3	0.01	900
Crystal Place	Crystal City, VA	Rental	HR	183	1	0.01	900
The Lofts 590	Crystal City, VA	Rental	Apt	212	6	0.03	900
Buchanan	Crystal City, VA	Rental	HR	442	11	0.03	900
Pentagon Row	Pentagon City, VA	Rental	Apt	504	8	0.02	900
Metropolitan at Pentagon City	Pentagon City, VA	Rental	HR	325	7	0.02	900
Metropolitan at Pentagon Row	Pentagon City, VA	Rental	HR	326	7	0.02	900
Parc Vista	Pentagon City, VA	Rental	HR	299	10	0.03	900
TOTAL				12,945	428	0.03	
TOTAL Condos				797	24	0.03	
TOTAL Rentals				11946	404	0.03	

* Rounded to nearest hundredth; total do not include North Brunswick; SAT scores=Math + Verbal

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