

Demographic Study and Population Growth Analysis

March 19, 2014

Introduction

Demographics

- ✓ Population
- ✓ School-Aged Population
- ✓ Household Sizes
- ✓ Live Births



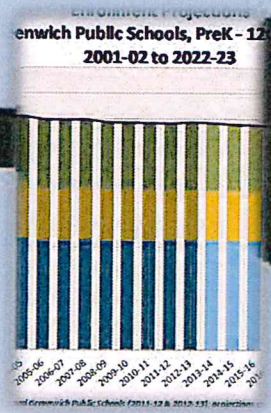
Housing

- ✓ Change in Number of Units
- ✓ Development Potential
- ✓ Projected Growth



Enrollment Patterns and Projections

- ✓ Enrollment Trends
- ✓ By Grade

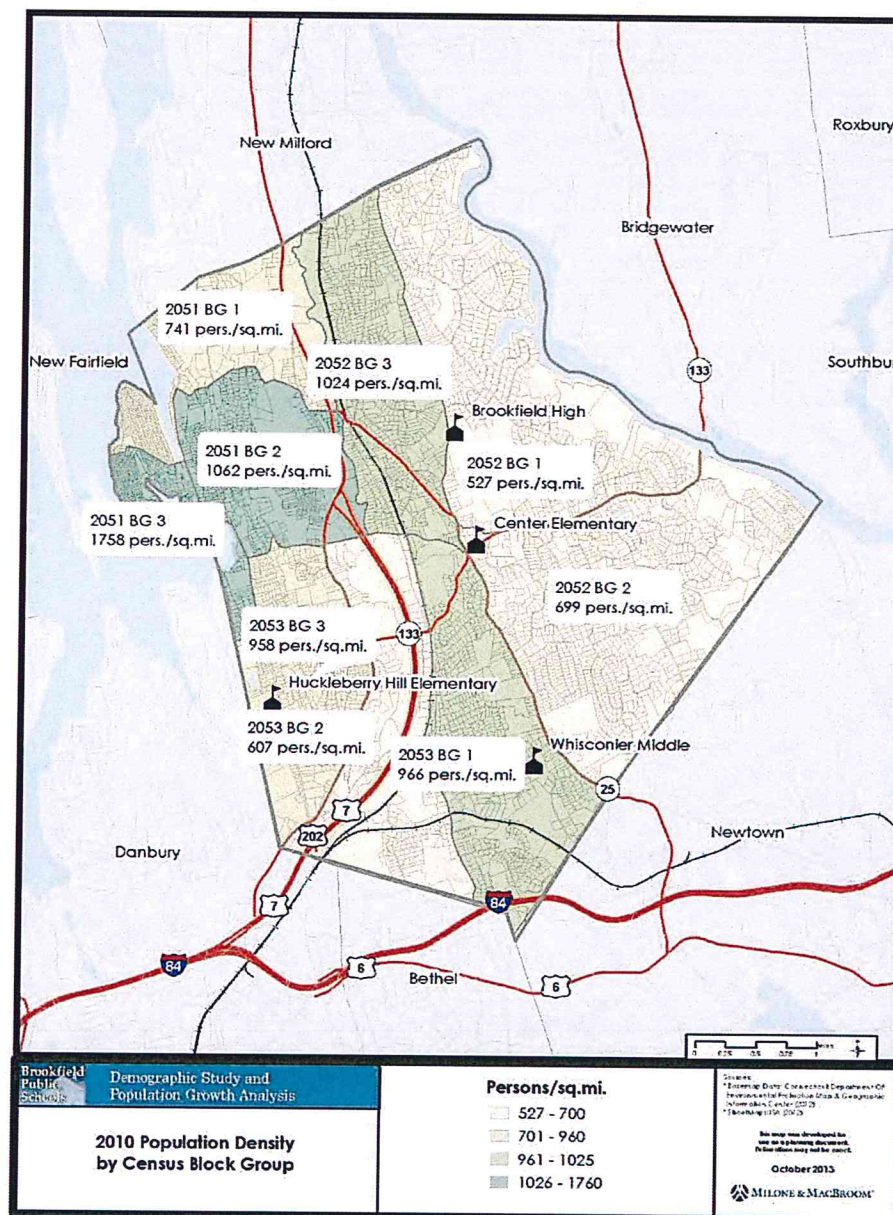


Population Data

- 2000 and 2010 Census Data
- 2012 American Community Survey Data Has 4 – 5.5% Margin of Error for Brookfield at Census Tract Level, Therefore Rely on Decennial Census
- Demographic Data Used to Identify Trends

Population Density

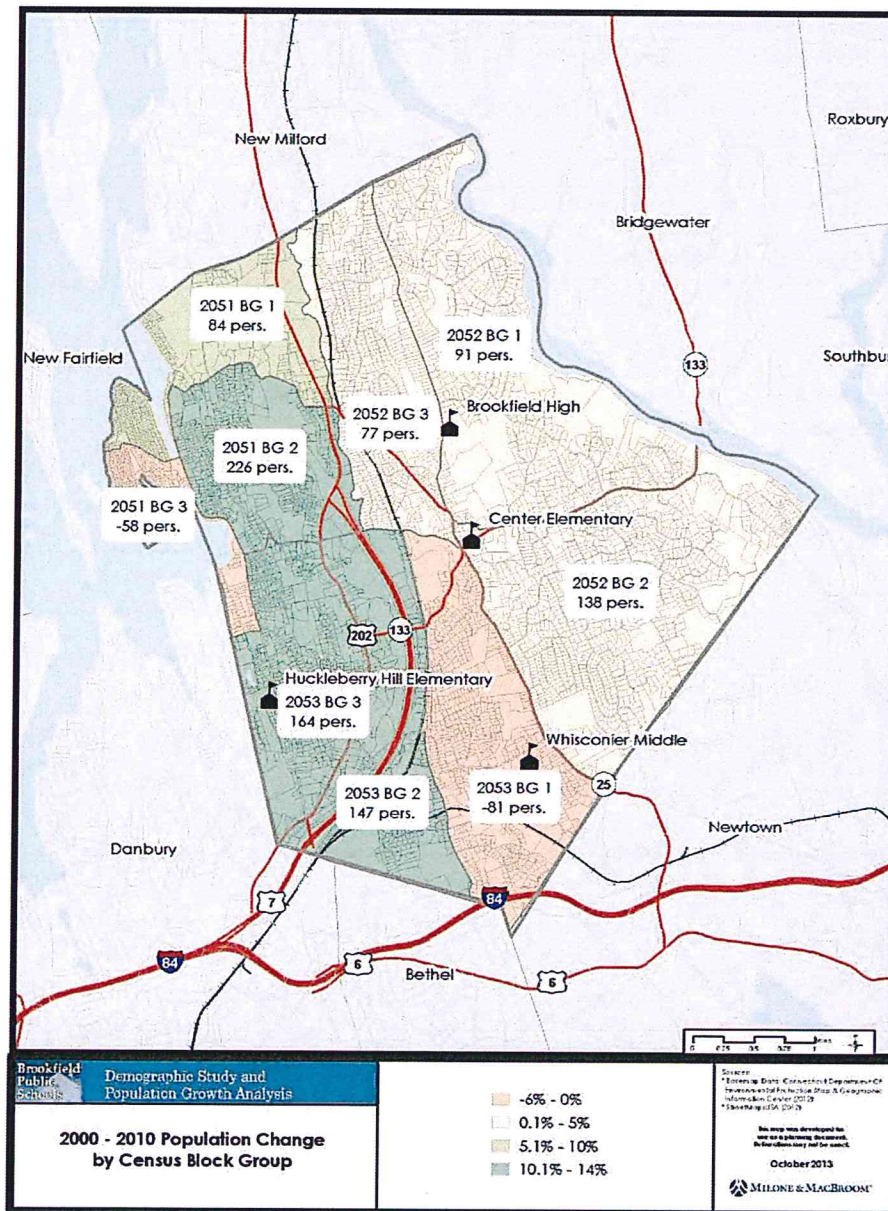
- Population Concentrated Along Routes 7 and 25 Corridor, and Candlewood Lake Area
- Urban Densities (>1,000 People per Sq Mi)



Total Population Change

Block Group	2000 Pop.	2010 Pop.	Change	% Change
2051 BG 1	1,128	1,212	84	7.4%
2051 BG 2	1,567	1,793	226	14.4%
2051 BG 3	1,053	995	-58	-5.5%
2052 BG 1	1,938	2,029	91	4.7%
2052 BG 2	2,752	2,890	138	5.0%
2052 BG 3	2,058	2,135	77	3.7%
2053 BG 1	2,475	2,394	-81	-3.3%
2053 BG 2	1,170	1,317	147	12.6%
2053 BG 3	1,523	1,687	164	10.8%
TOTAL:	15,664	16,452	788	5.0%

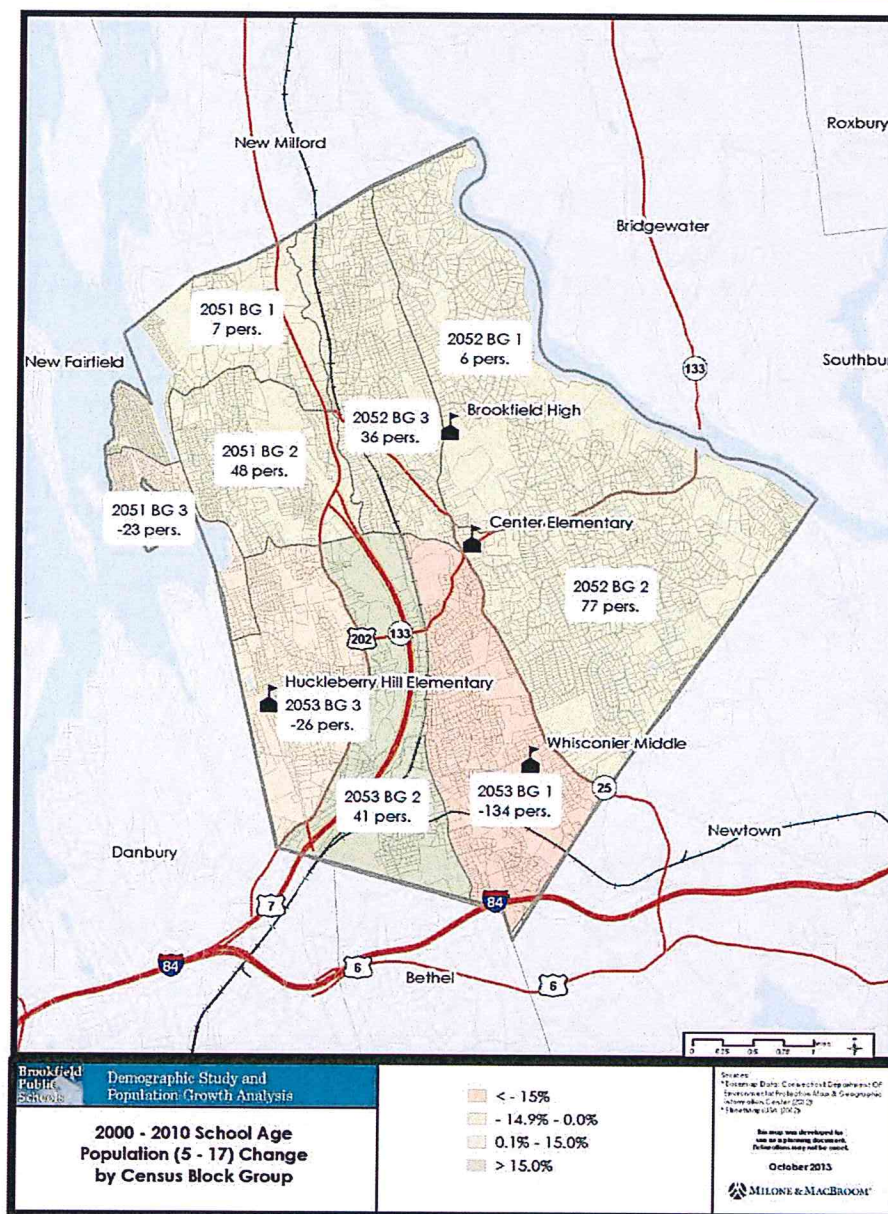
- Overall 5% Increase in Population, 2000 to 2010
- Concentrated in Western Half of Town
- Loss of Population in Area Between Routes 7 and 25



School Age (5-17) Population Change

Block Group	2000 Student Age Pop.	2010 Student Age Pop.	Change	% Change
2051 BG 1	208	215	7	3.4%
2051 BG 2	336	384	48	14.3%
2051 BG 3	192	169	-23	-12.0%
2052 BG 1	467	473	6	1.3%
2052 BG 2	602	679	77	12.8%
2052 BG 3	419	455	36	8.6%
2053 BG 1	555	421	-134	-24.1%
2053 BG 2	156	197	41	26.3%
2053 BG 3	330	304	-26	-7.9%
TOTAL:	3,265	3,297	32	1.0%

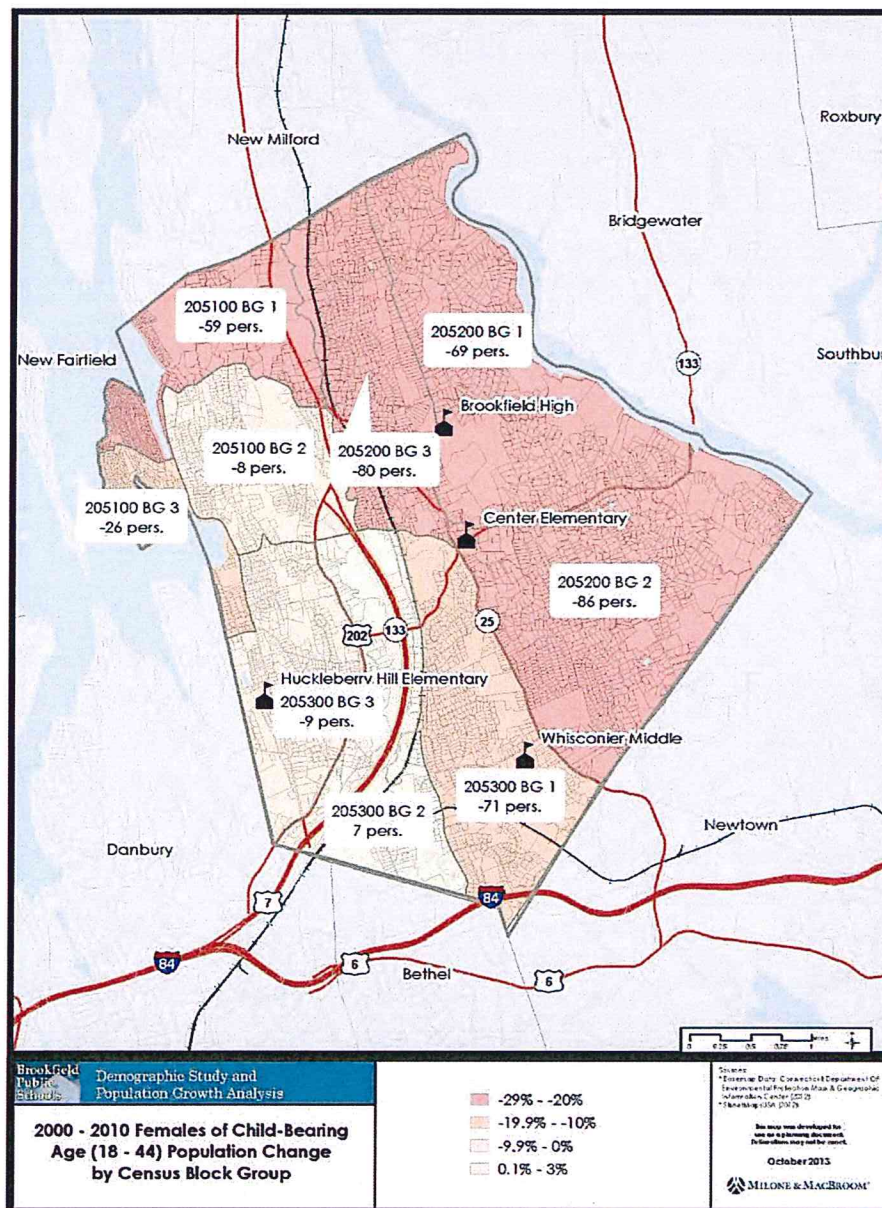
- Slight Increase in Student Population – Less Than Overall Population Increase
- Declines in Areas with Total Population Increase
- Significant Decrease in Area Between Routes 7 and 25



Females of Child-Bearing Age (18-44)

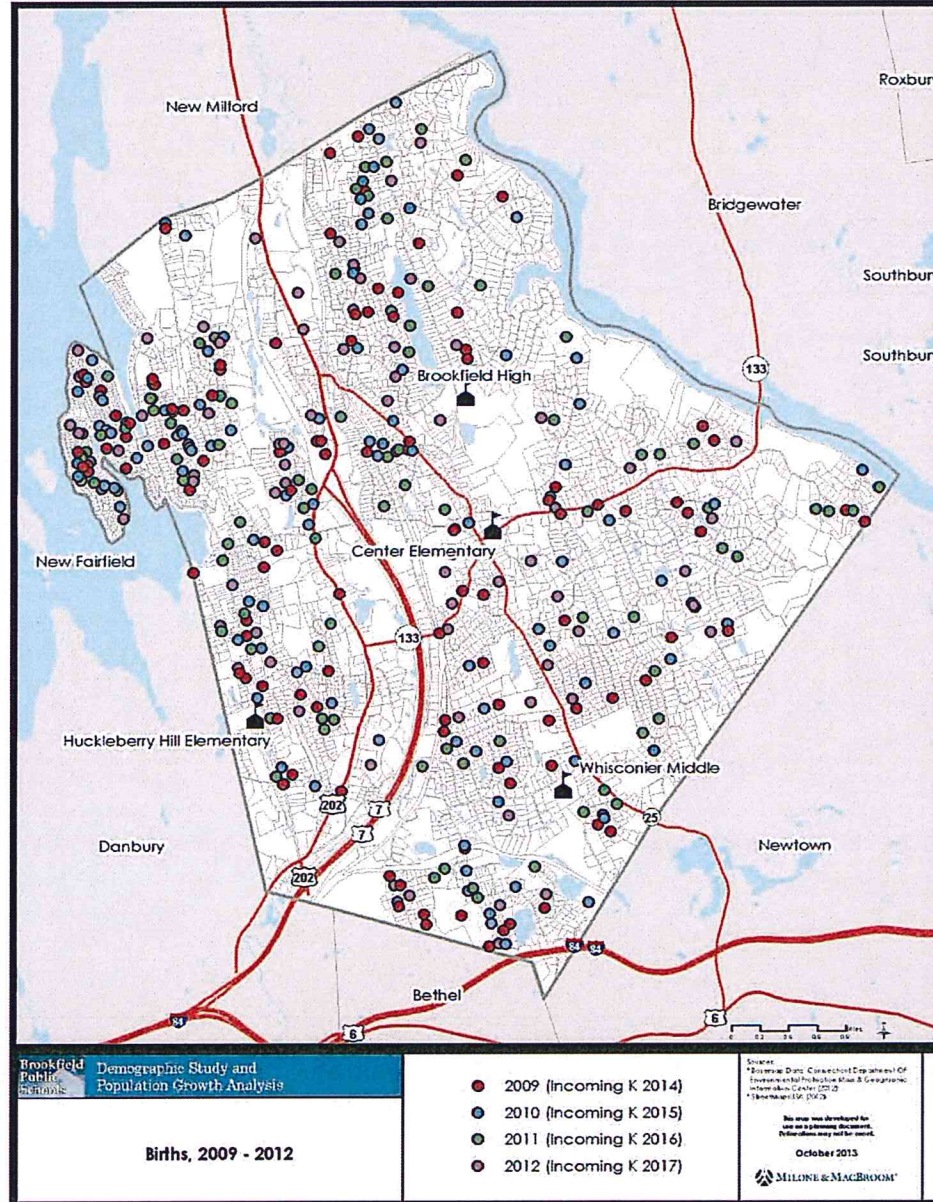
Block Group	2000 Female (18-44) Pop.	2010 Female (18-44) Pop.	Change	% Change
2051 BG 1	204	145	-59	-28.9%
2051 BG 2	305	297	-8	-2.6%
2051 BG 3	188	162	-26	-13.8%
2052 BG 1	326	257	-69	-21.2%
2052 BG 2	417	331	-86	-20.6%
2052 BG 3	366	286	-80	-21.9%
2053 BG 1	409	338	-71	-17.4%
2053 BG 2	256	263	7	2.7%
2053 BG 3	276	267	-9	-3.3%
TOTAL:	2,747	2,346	-401	-14.6%

- Significant Decrease in Females of Child-Bearing Age
- Not Uncommon Throughout Suburban/Rural Communities in State
- Lower Birth Rates May Continue

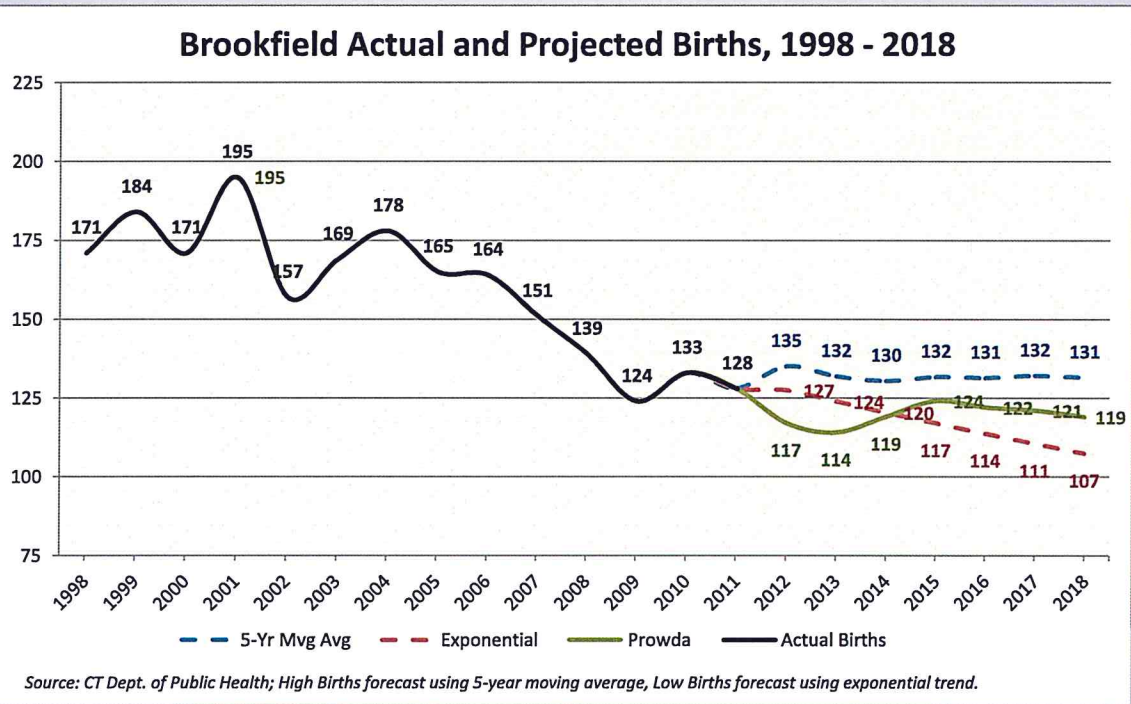


Birth Distribution

Indicators of Next Four Years of Incoming Kindergarten Classes



Births

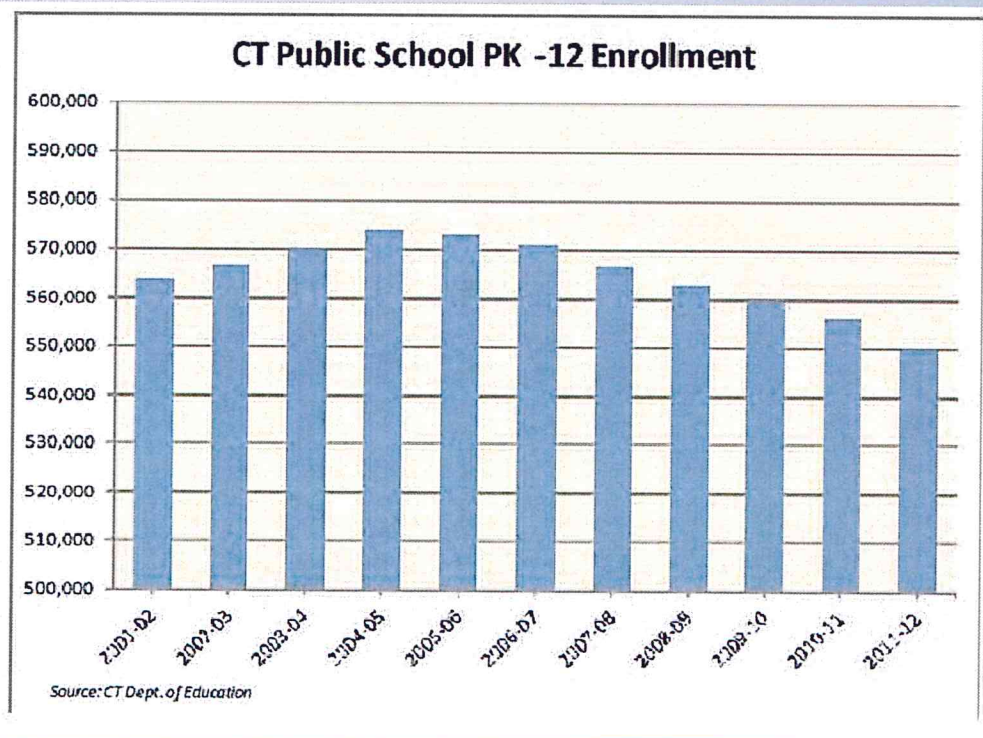


- Decrease in Births Began in 2006 – Earlier than in Many Communities in Connecticut
- Change in 2011 Compared to 2008-10 Was -3%, Compared to -5% for State
- Projected Annual Birth Rate Continues About 20% Below Average Annual Rate of Early 2000s

State & National Trends



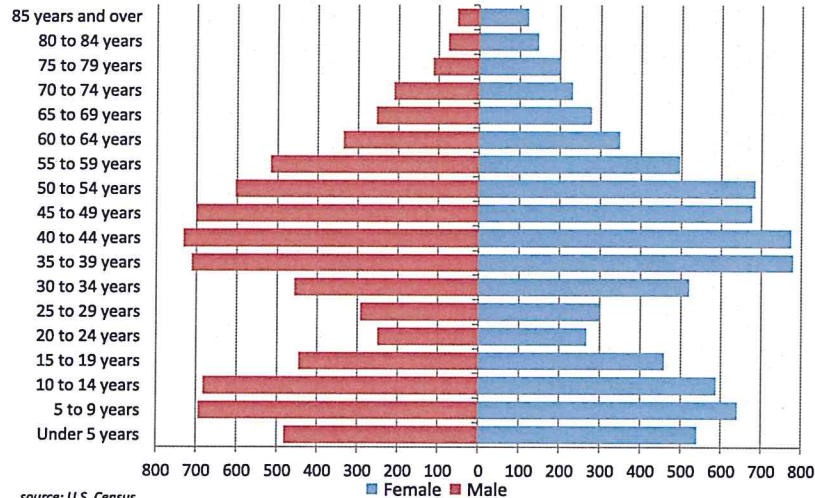
US BIRTH RATES 1909-2008, with BABY BOOM PERIOD HIGHLIGHTED



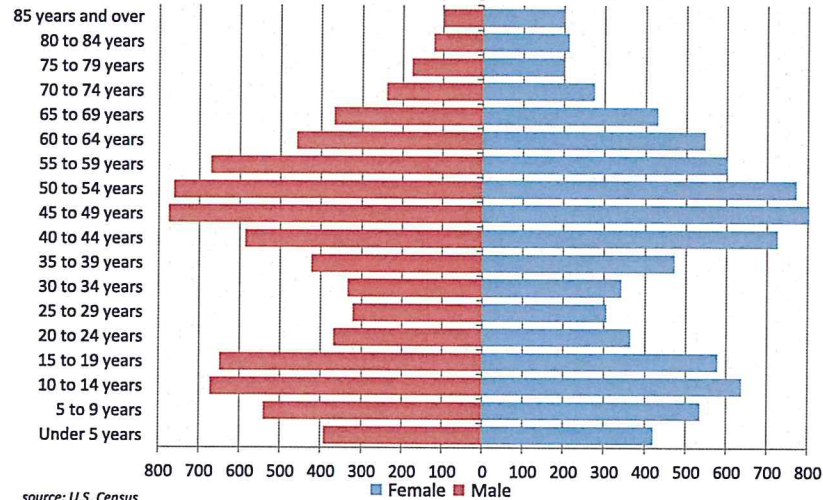
- National Birth Declines From the Early Nineties – Historic Lows
- CT Enrollments Down Over 20,000 in 7 Years

Population by Age and Sex

Brookfield Population by Age and Sex, 2000

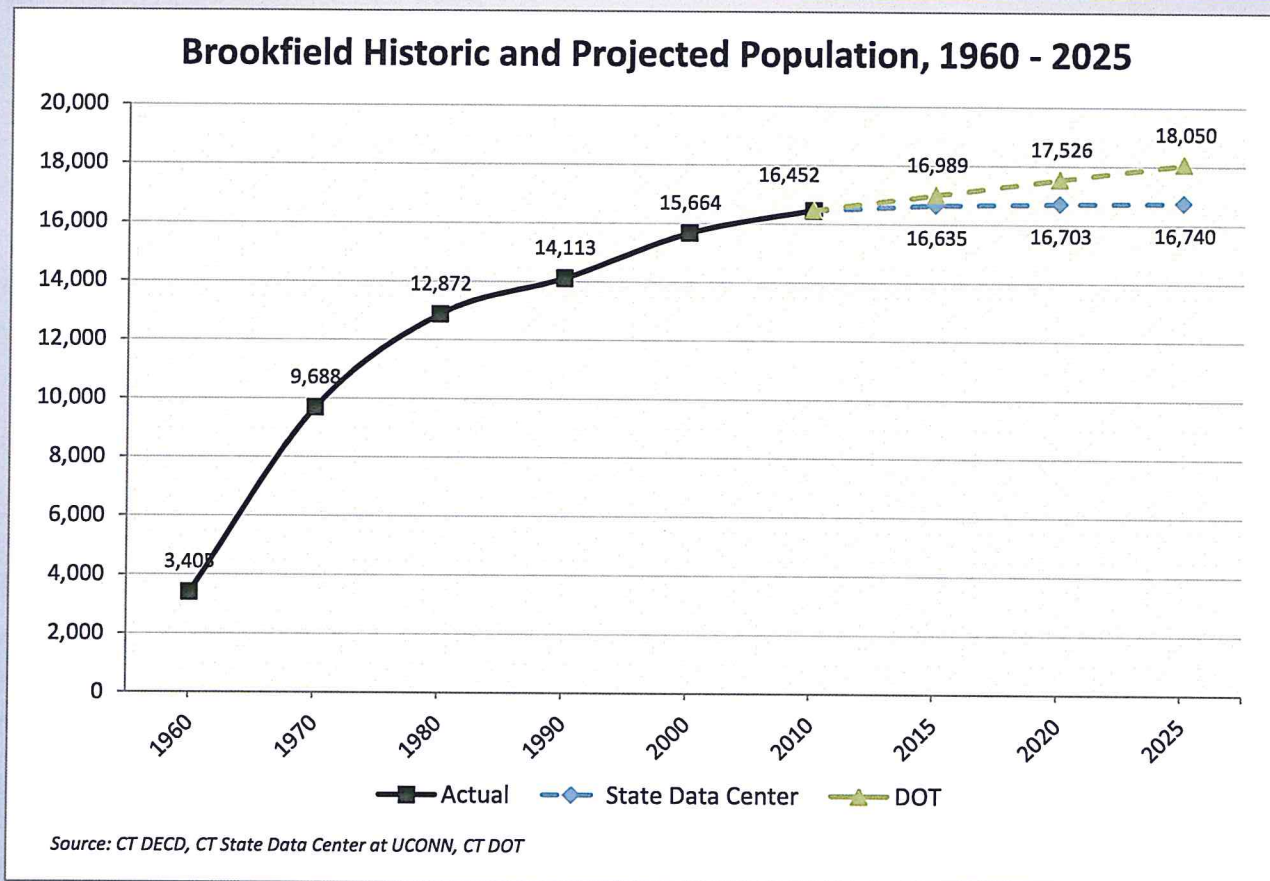


Brookfield Population by Age and Sex, 2010



- Relatively Stable Composition from 2000 to 2010
- Largest Age Groups Are Wage Earners 40+
- 19% Decline in Cohort Age 5-9 Impacts Current Enrollments
- 20% Decline in Population Under Age 5 Indicates Future Decline in Enrollments

Population Projections



- High Projection – DOT
- Low Projection – State Data Center
- Projections Are Close Out to 2020 – Relatively Stable Population

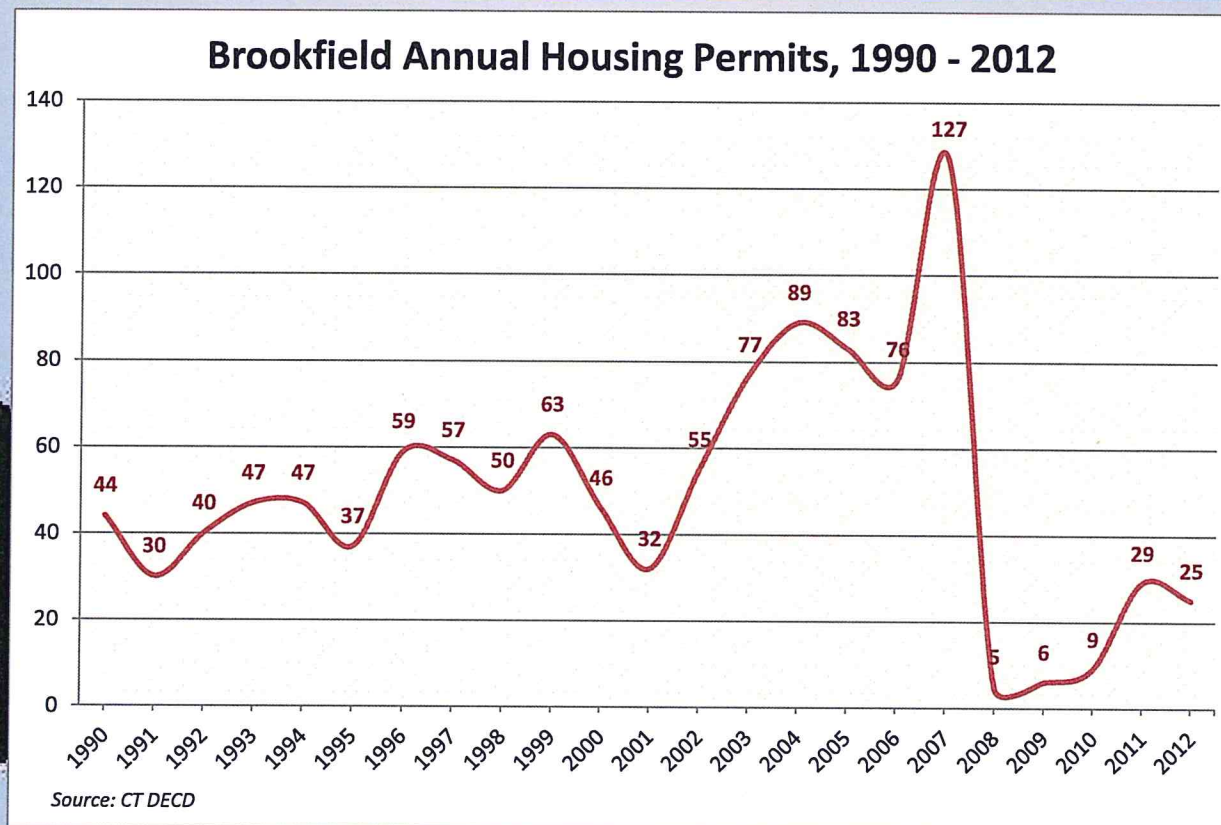
Population Change Summary

- While Total Population Increased from 2000 to 2010, Student Age and Females of Child-Bearing Age Cohorts Decreased
- Annual Resident Births Are Approximately 20% Lower than a Decade Ago
- Population Trends Indicate Declining Enrollments to Be Expected

- Increase in Housing Units Geographically Corresponds to Population Increase (Western Half)
- Housing Units Increased More than Population
- Smaller Households



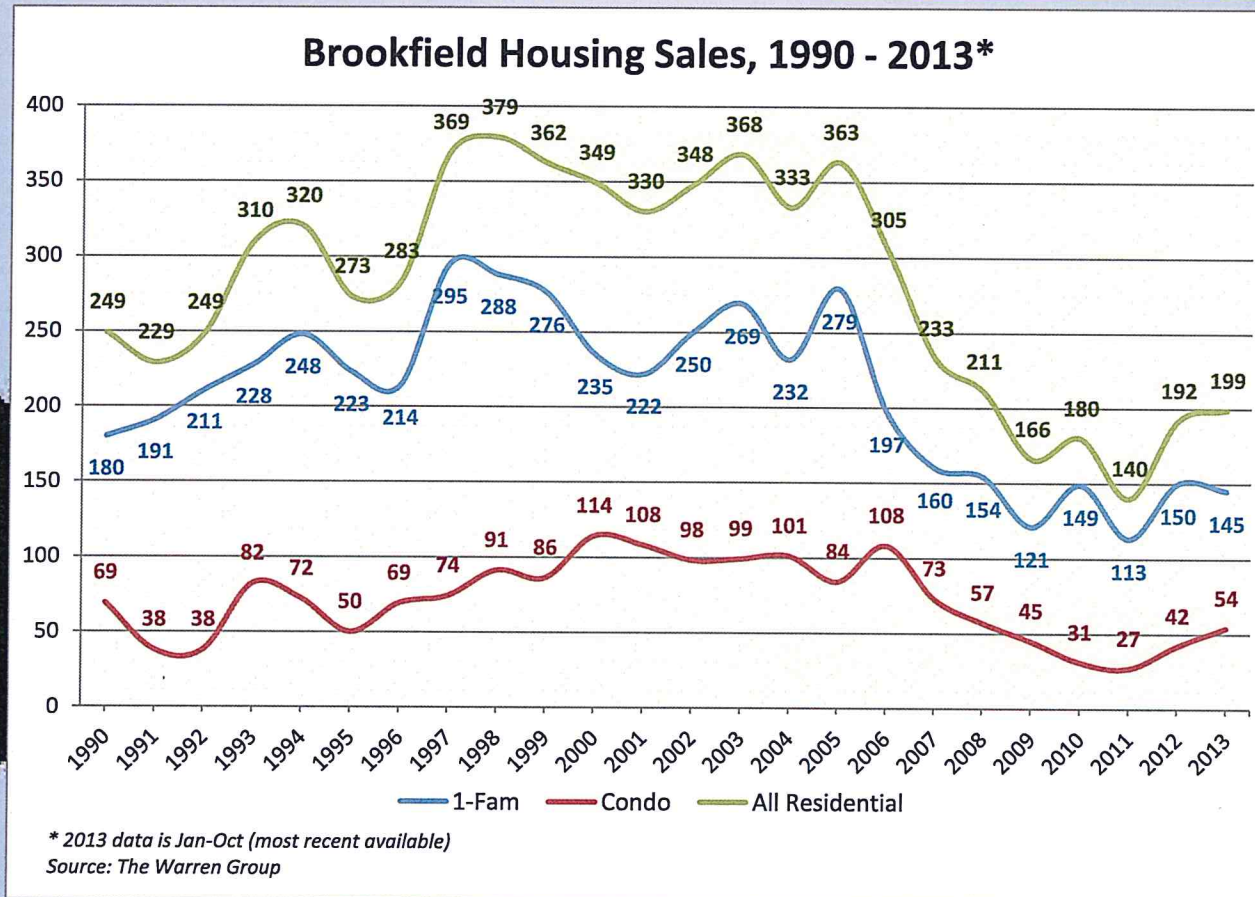
Housing Permits



➤ Annual New Residential Construction Permits Significantly Below Long-Term Average

➤ Slight Rebound Last Two Years

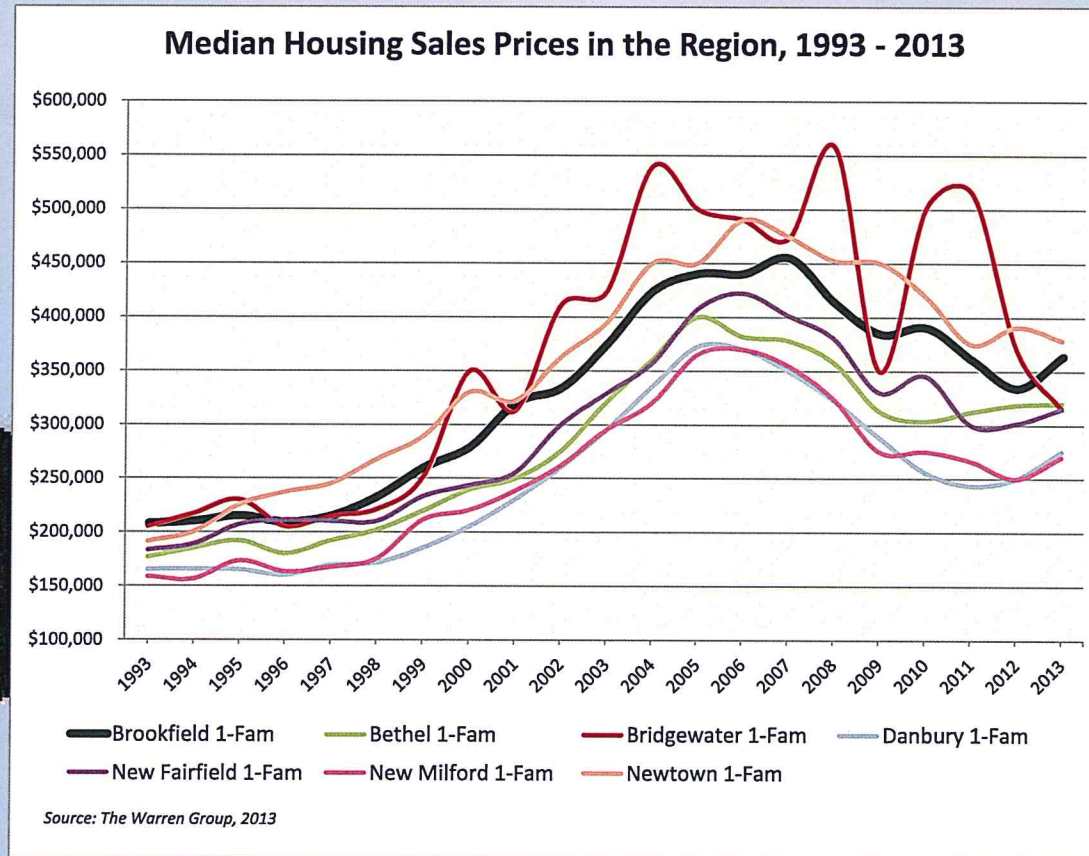
Housing Sales



Housing Sales Beginning to Rebound

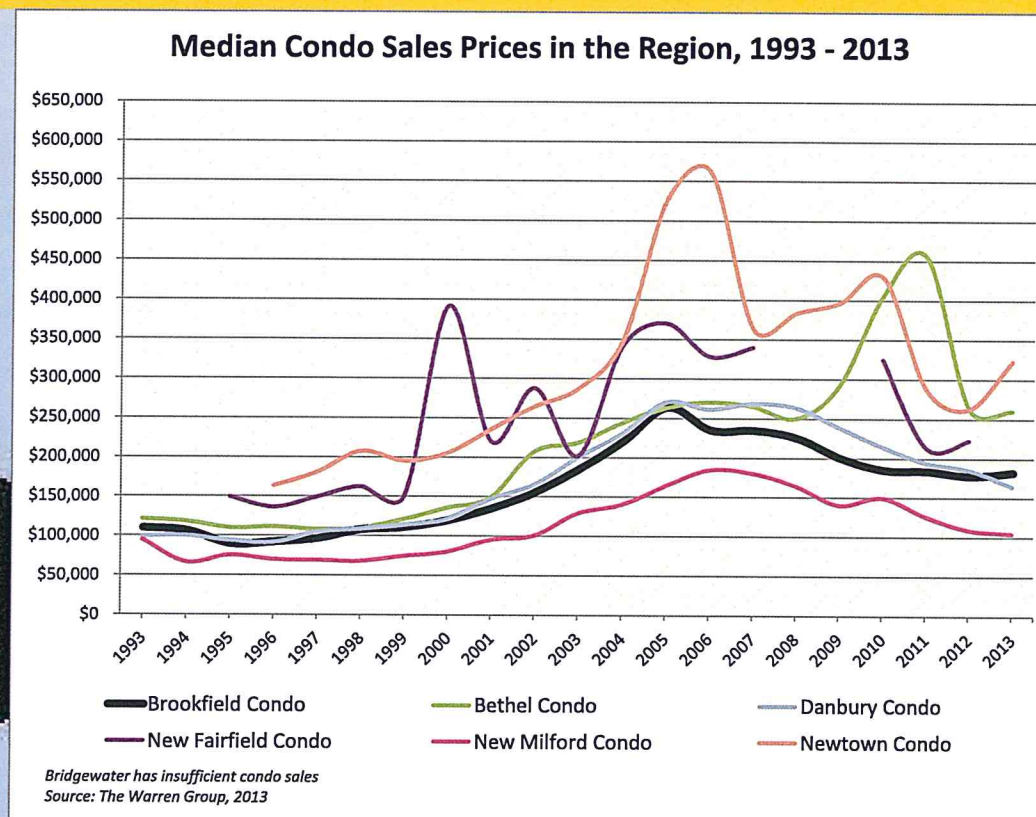
Still 40 -50% Below Sales Levels from a Decade Ago

Housing Sales Prices



➤ Brookfield Consistently Amongst the Highest Priced Single-Family Housing in Immediate Region

Housing Sales Prices



➤ Brookfield Condo Sales Prices More Affordable Within Immediate Regional Context Than Single-Family Sales Prices; However, Relatively Few Condo Sales Annually in Brookfield

Brookfield Public Schools

Demographic Study and Population Growth Analysis

2010 Rental Units As Percent of All Occupied Housing Units by Census Block Group

Legend:

- <5.0%
- 5.1% - 10.0%
- 10.1% - 15.0%
- >15.1%

Map Data:

Census Block Group	Rental Units
2051 BG 1	88 units
2051 BG 2	99 units
2051 BG 3	51 units
2052 BG 1	41 units
2052 BG 3	64 units
2052 BG 2	48 units
2053 BG 3	180 units
2053 BG 2	151 units
2053 BG 1	58 units

Source:
 *American Census Corporation
 *American Census Corporation
 *American Census Corporation
 *American Census Corporation

October 2013

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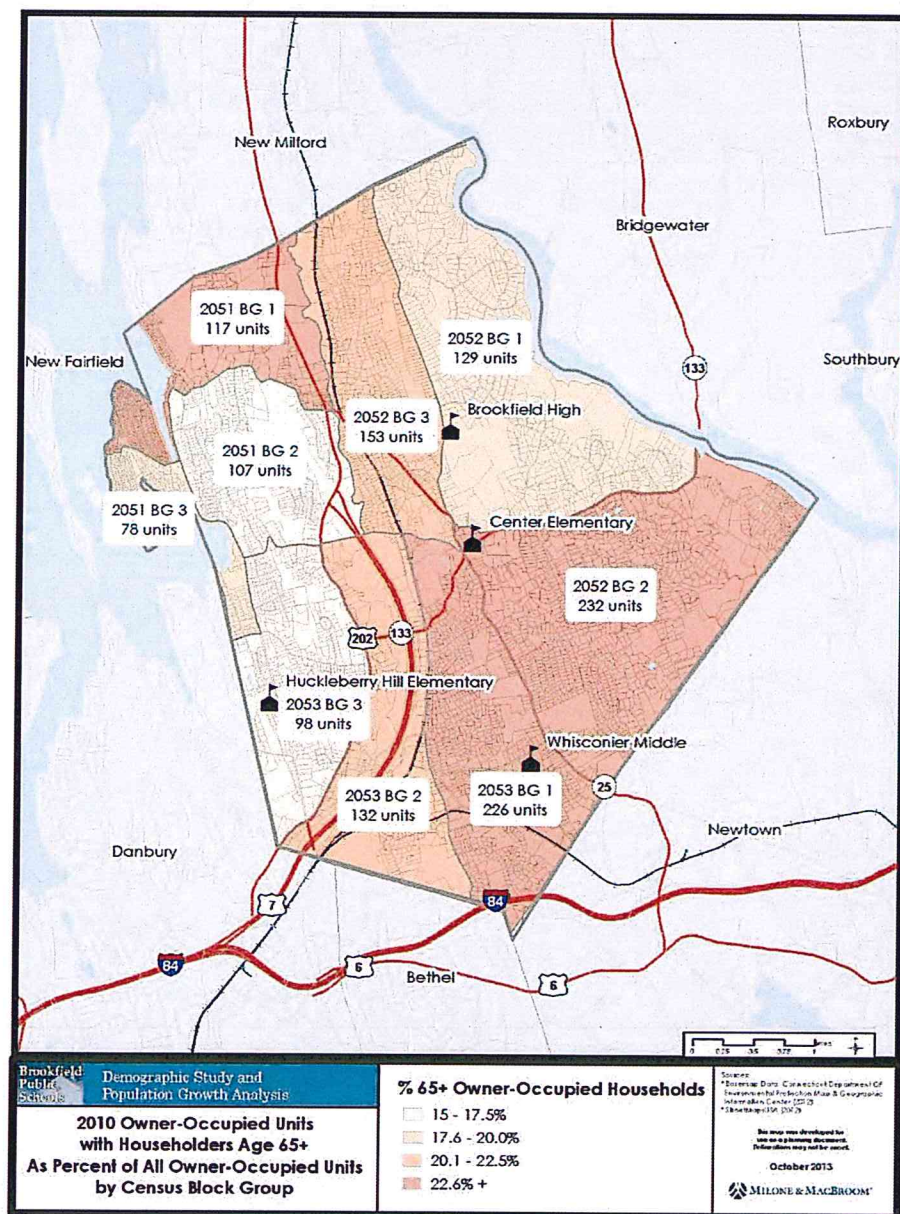


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Age 65+ Ownership Units

Block Group	2010 All Occupied Housing Units	2010 Owner-Occupied Age 65+	% Owner-Occupied 65+
2051 BG 1	491	117	23.8%
2051 BG 2	628	107	17.0%
2051 BG 3	391	78	19.9%
2052 BG 1	681	129	18.9%
2052 BG 2	985	232	23.6%
2052 BG 3	743	153	20.6%
2053 BG 1	902	226	25.1%
2053 BG 2	658	132	20.1%
2053 BG 3	650	98	15.1%
TOTAL:	6,129	1,272	20.8%

Single-Family Ownership
Units with Potential for
Housing Turnover in Next
Ten Years
Potential to Influence
Enrollments If Replaced
with Young Families



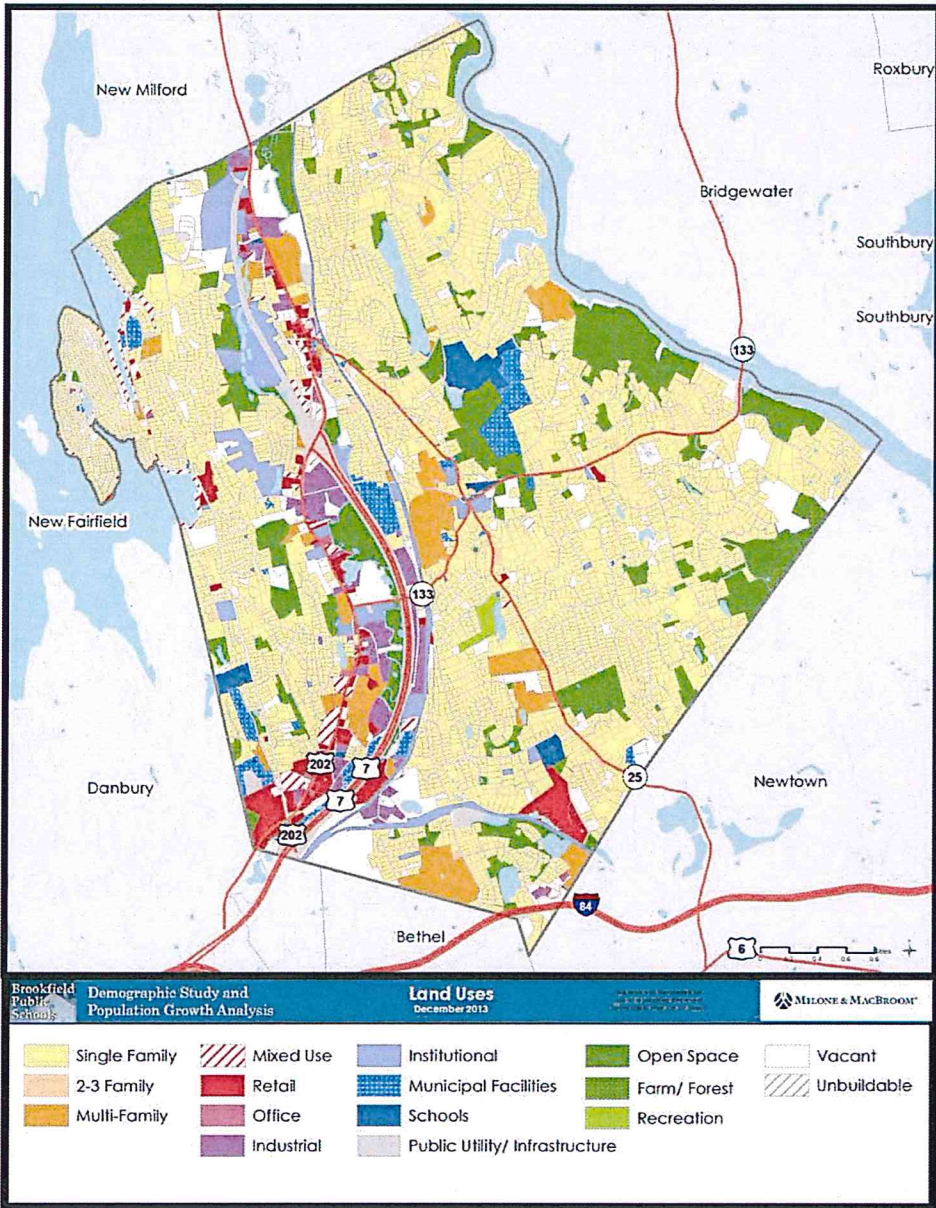
Housing Change Summary

- Housing Units Increased at a Greater Rate than Total Population from 2000 to 2010, 13.5% Vs. 5.0% - Smaller Household Sizes
- Housing Permit Activity Significantly Decreased in 2008, Began to Rebound Slightly in 2011 and 2012 and Housing Sales Began to Rebound in 2012
- Primarily Ownership Units with Significant (20%) Stock Ripe for Turnover Due to Age of Householder When Market Conditions Improve
- Upswing in Housing Activity Could Generate New Enrollment Through In-Migration

Current Land Use

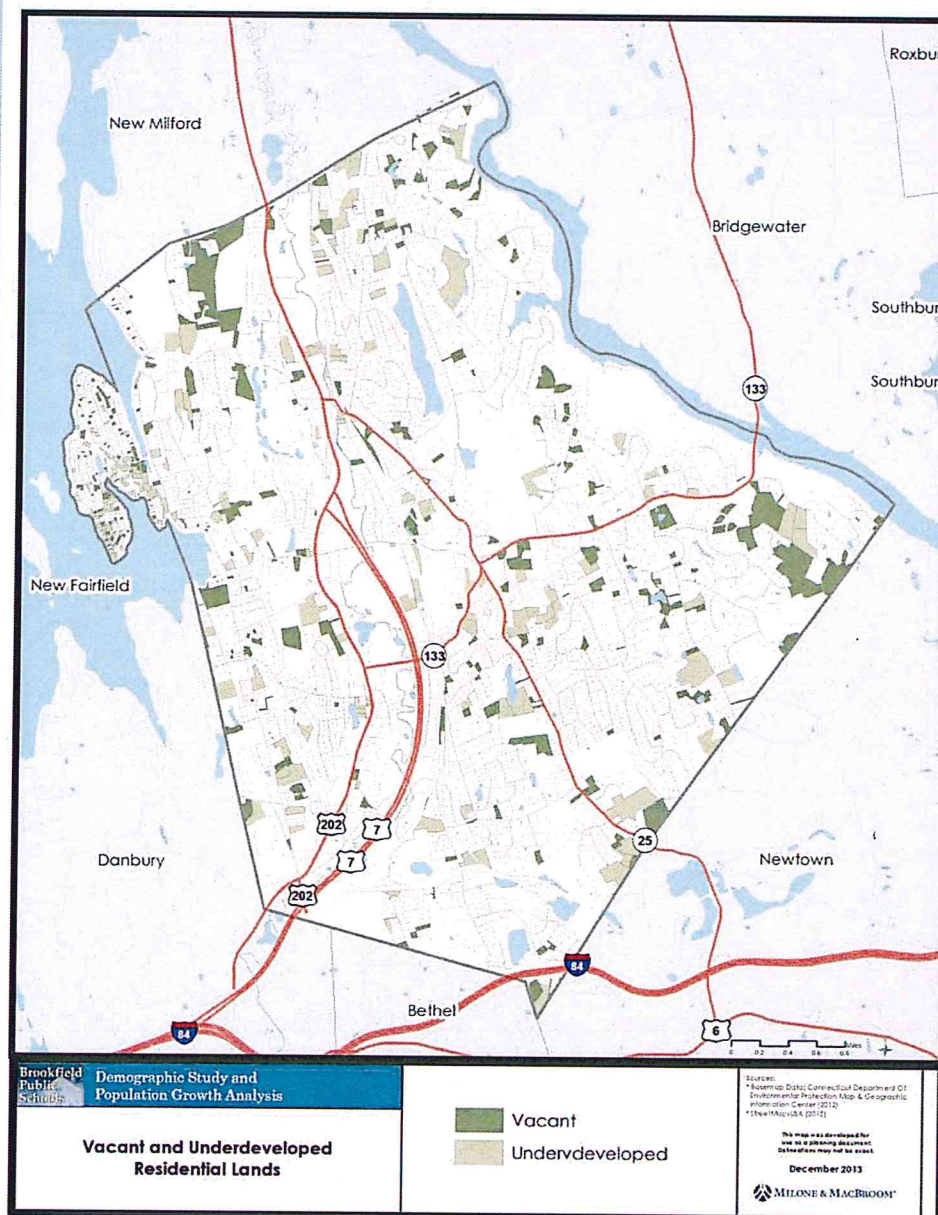
➤ Significantly Built-Out Community

Primarily Single-Family Residential Land Use



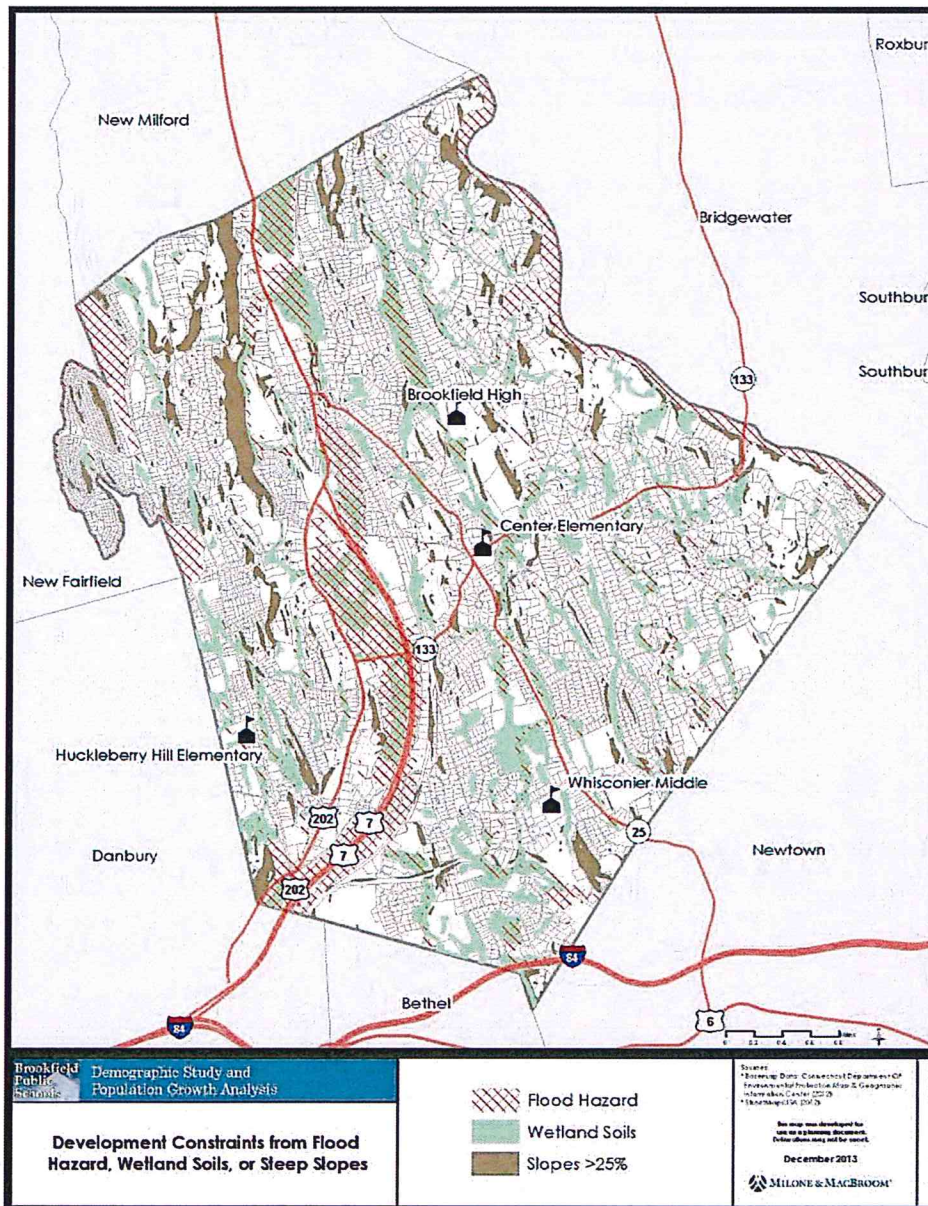
Vacant Residentially Zoned

- Vacant Residential Lands Determined from Assessor's Records and Aerial Photography from UCONN
- Assumed Underdeveloped Parcels Are Single-Family Parcels with 2.5 Times the Minimum Lot Size for Their Zone



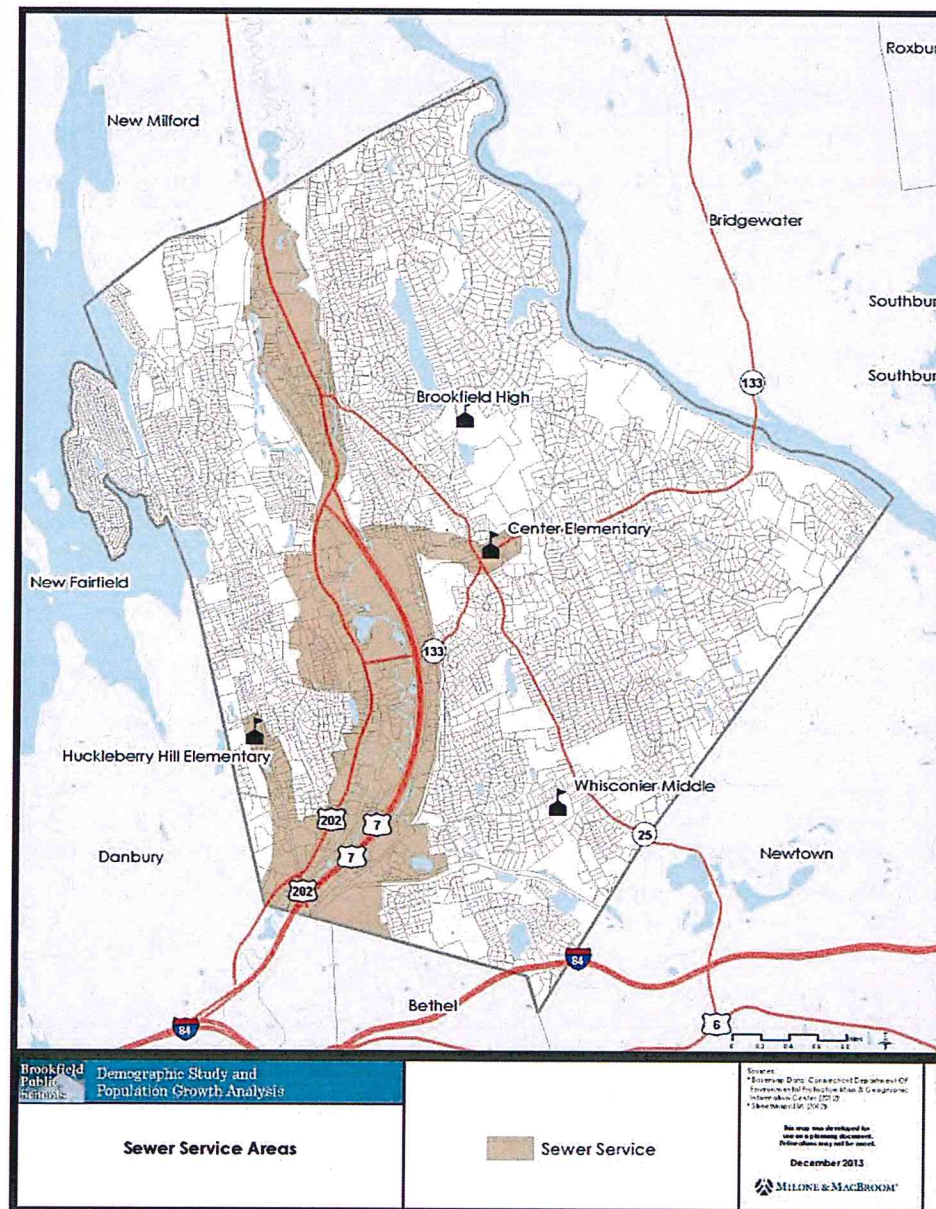
Physical Constraints

- Vacant and Under-Developed Parcels Are Constrained by 100 Year Flood Zones, Wetland Soils, and Steep Slopes



Planned Sewer Service

- Multi-Family Developments Require Connection to Public Sewer and Water
- Assumed Sewer Service Available Throughout Planned Area Shown Here in Buildout Analysis

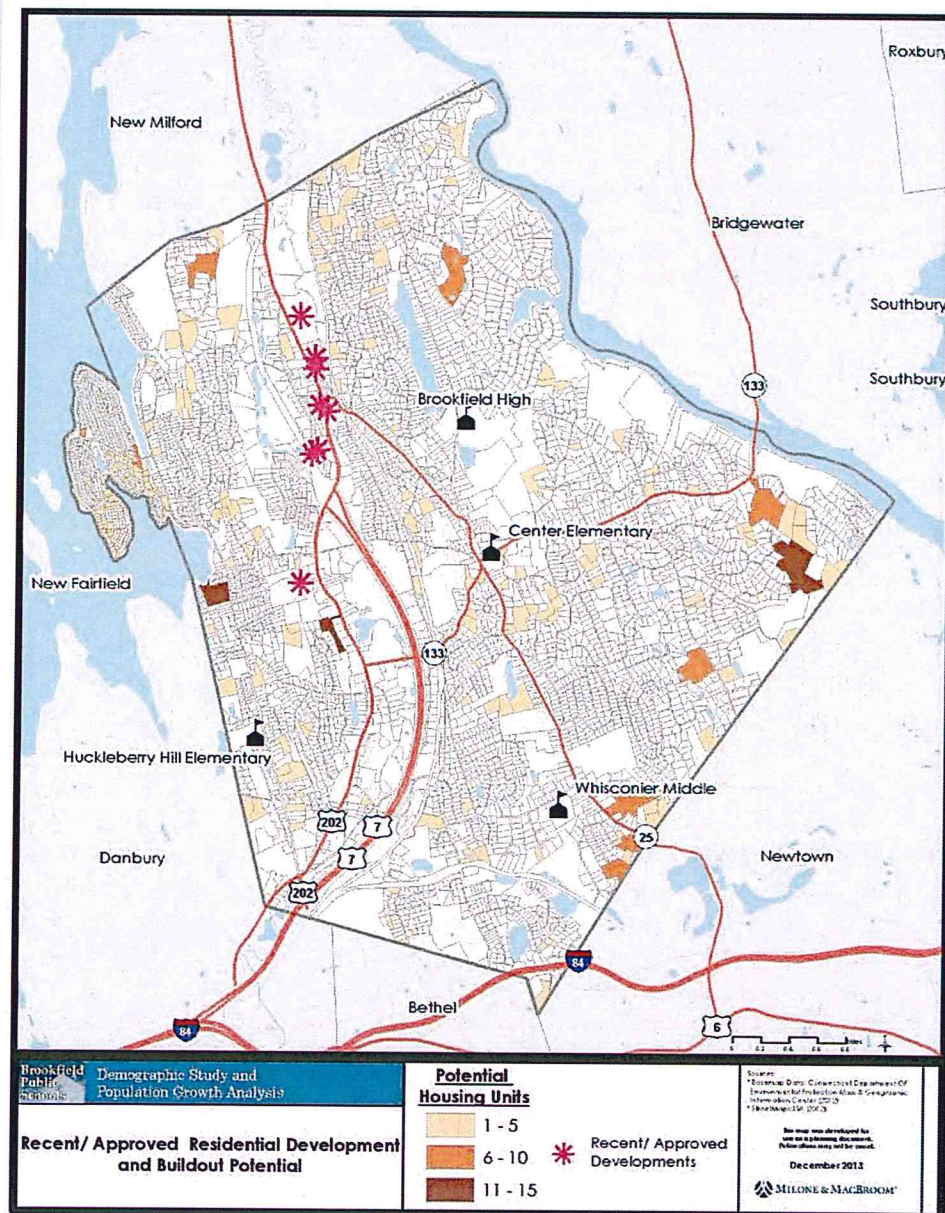


Buildout Assumptions

- Current Zoning
- Factored Out Constrained Lands: Wetlands, 100-Year Floodplains and Slopes Greater than 25%
- Planned Sewer Service Area from Town's Plan of Conservation and Development Limited Potential Multi-Family Development Sites
- 20% Land Area for Infrastructure Factored Into All Buildout Calculations
- Recently Approved and Under-Construction Developments **Not** Included in Buildout Estimates

Buildout Potential

- Total Additional Housing Units at Full Build Out Under Current Zoning – **492 Units**
- Primarily Single-Family Units – 191 on Vacant Lands and 289 on Underdeveloped Lands
- Represents Almost 8% Increase Over Current Housing Inventory



Buildout Potential

Zone	Single Family DU	Multi-Family DU	Vacant Acres	Constrained Acres	Net Acres
R-7	187	0	28.1	7.4	20.7
R-40	139	0	150.9	37.6	113.3
R-60	30	0	49.0	25.0	24.0
R-80	85	12	340.8	101.0	239.8
R-100	39	0	134.9	30.9	103.9
<i>Subtotal</i>	480	12			
Grand Total	492		703.7	201.9	501.8

- Most Vacant and Developable Land is Located in R-80, R-100, and R-40 Zones
- However, R-7 and R-40 Zones Provide the Bulk of Potential New Housing Units
- New Multi-Family Only Buildable in R-80 District

Buildout Potential

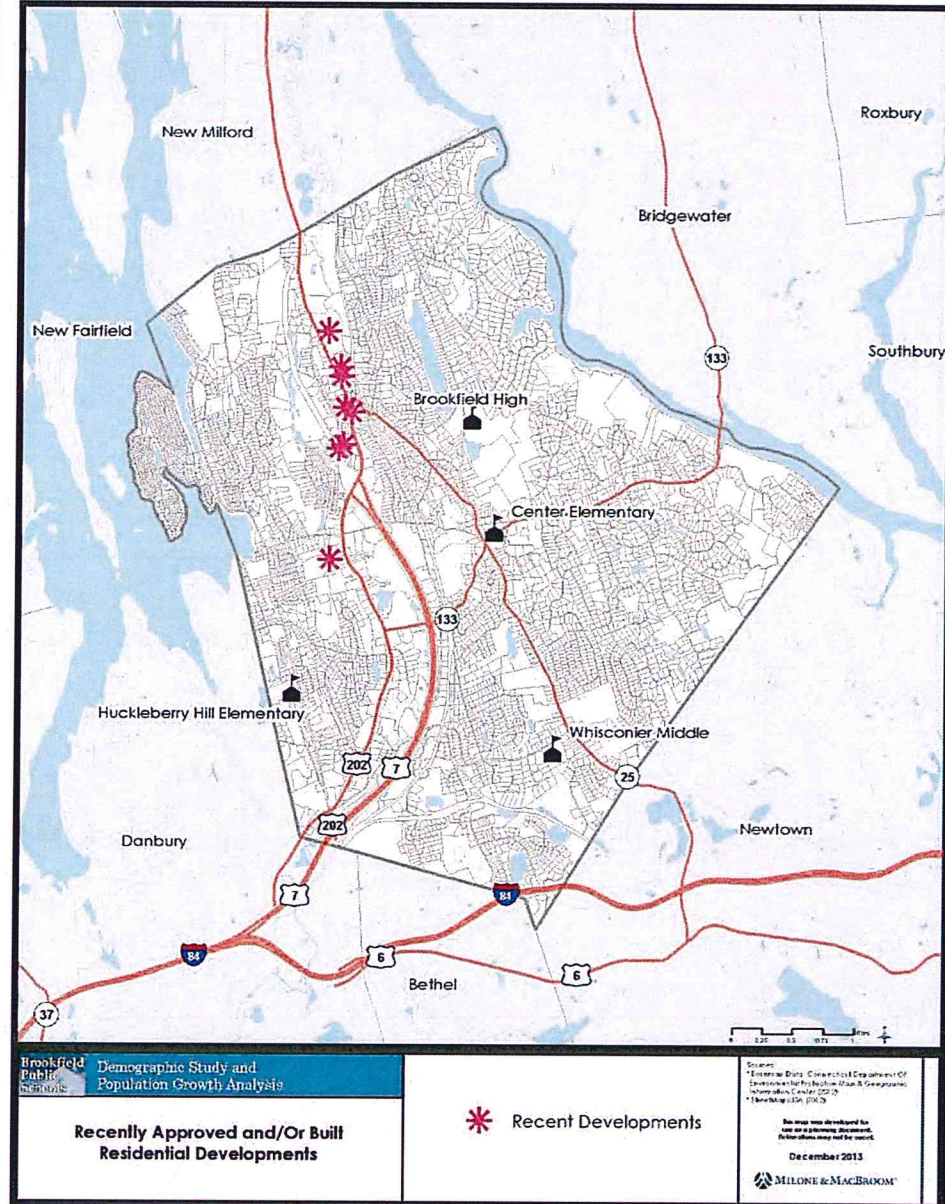
- Applying 2010 Average Household Size of 2.68, Potential for 1,319 Additional Population
- Unit Size and Type Influences Household Size and Presence of School-Aged Children

Recent Residential Approvals

Recent and Approved Developments

Name	Location	Units	Current Status
Oak Meadows	546 Federal Road	125 townhomes	36 units built, 89 in future phases
Mill River Views	793 Federal Road	22 condos	Built
Interview Townhouses	871 Federal Road	42 townhomes and condos	Under construction
Residences at Laurel Hill	40 & 64 Laurel Hill	72 apartments	Approved
Townhomes on Laurel Hill	57 Laurel Hill	13 townhomes	Approved
Brookfield Village	802 & 806 Federal Road	79 apartments	Approved
Greene Acres	857 Federal Road	100 apartments	Approved
Newbury Village	901 Federal Road	119 condos	Partially built

➤ Significant Multi-Family Development Along Federal Road Recently Approved and/or Built



Brookfield Student Field from Recent Condo Developments

Development	Unit Type	Tenure	Price	Students					Births					
				2009	2010	2011	2012	2013	2007	2008	2009	2010	2011	2012
Oak Meadows	2-3 Bedroom	Ownership	\$260-\$360,000	1	1	1	2	5	0	0	0	0	0	0
Mill River Views	2-3 Bedroom	Ownership	About \$290,000 at Initial Sales in Summer/ Fall 2006	11	10	11	9	11	2	0	0	0	1	0
Riverview Townhouses	2-3 Bedroom	Ownership	\$255-\$310,000 Current Listings	0	0	0	1	2	0	0	0	0	0	0
Newbury Village	Age-Restricted	Ownership	\$350-\$560,000 Current Listings	0	0	0	1	2	0	0	0	0	0	1

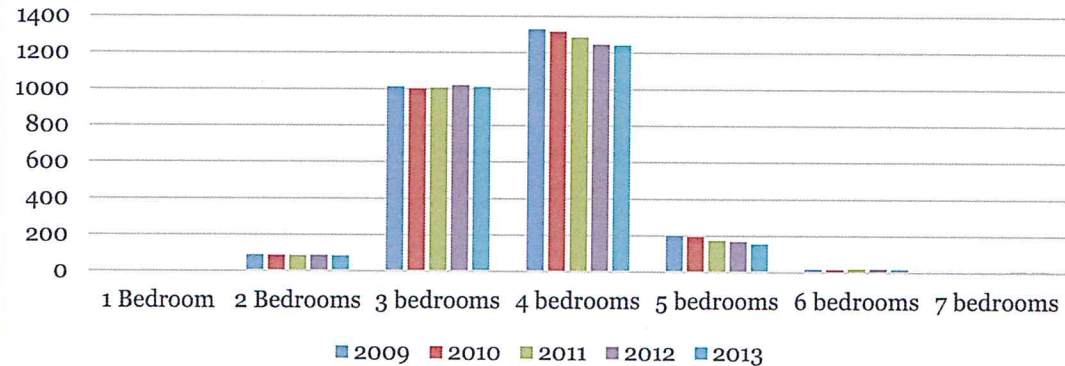
- From Approximately 200 Recently Built Ownership Units, 20 Students Total Enrolled in Brookfield Public Schools in 2013-14
- Can Expect an Increase in the Number of Students Residing at Oak Meadows and Riverview Townhouses as More Units Are Built (Estimate An Additional 25-35 Students)

- Yield from Unbuilt Apartments Will Depend on Unit Styles and Pricing
- Reviewed Yield from Existing Towne Brooke Commons Luxury Apartments Located at 5 Nabby Road
 - 120 Total Units, 1-3 Bedrooms
 - No Recorded Births
 - 2009 – 1 Student
 - 2010 – 3 Students
 - 2011 – 5 Students
 - 2012 – 4 Students
 - 2013 – 4 Students
- If Approved Apartment Developments Also “Luxury” Style and Mix of 1-3 Bedroom Units, Can Expect A Relatively Small Yield of Students

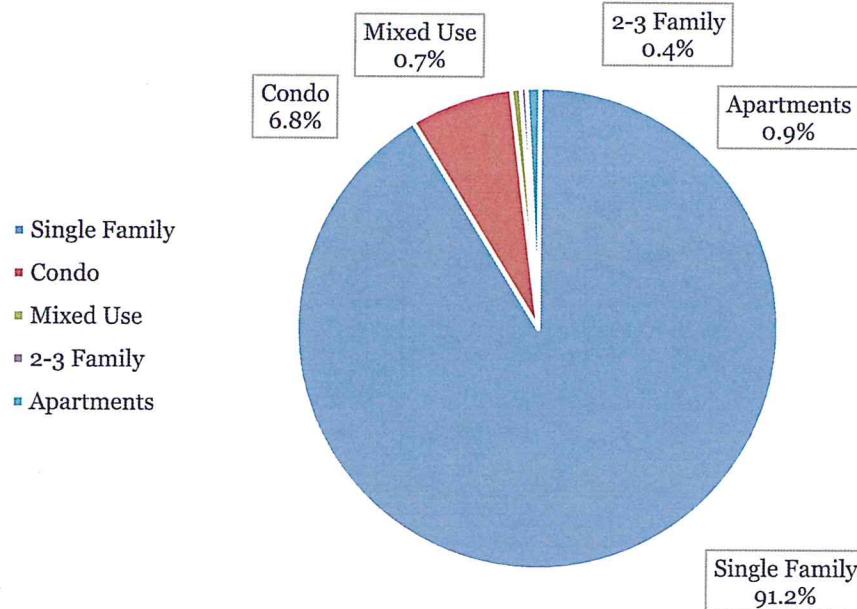
Brookfield Students by Housing Type

➤ Large Majority of Enrollments Are Generated by 3 and 4 Bedroom Single-Family Housing Units

Single-Family Enrollments by Bedrooms, 2009 - 2013



Enrollments by Housing Type, 2013-14

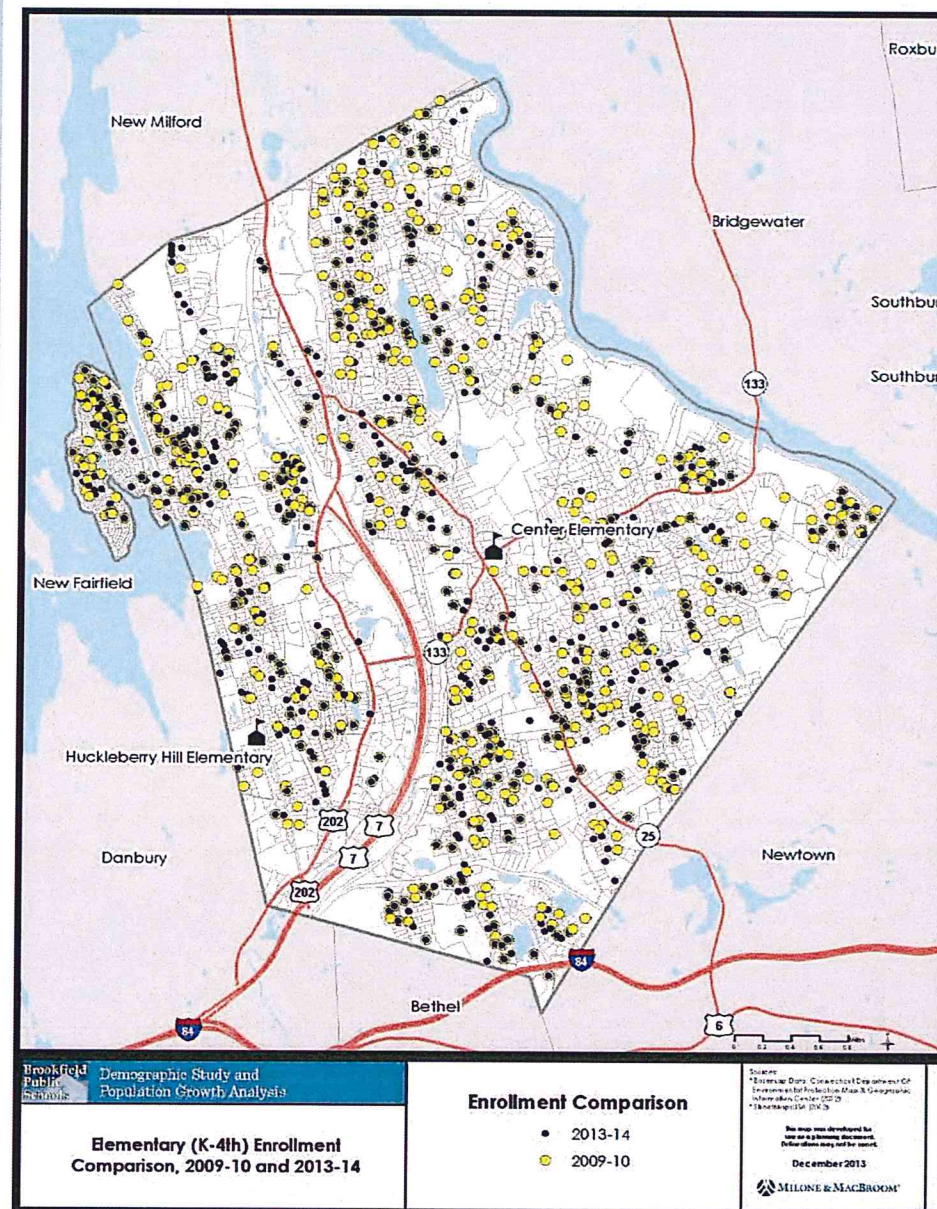


Land Use and Buildout Summary

- Significantly Built Out Community with Potential to Increase Housing Stock by Only 8% at Full Build
- Recent Developments Primarily Multi-Family
 - While Large Unit Numbers, Tend to Experience Lower Student Yields than Single-Family Detached Dwelling Units
 - From Approximately 320 Recently Built Ownership and Rental Complexes, Including Age-Restricted Newbury Village, 24 Students Enrolled in Brookfield Public Schools in 2013-14
 - Enrollment in Brookfield Primarily Generated by 3-4 Bedroom Single-Family Housing Units – Not the Style of Housing In Demand for New Construction; However, An Upswing in Existing Homes Sales Could Generate Additional Enrollments

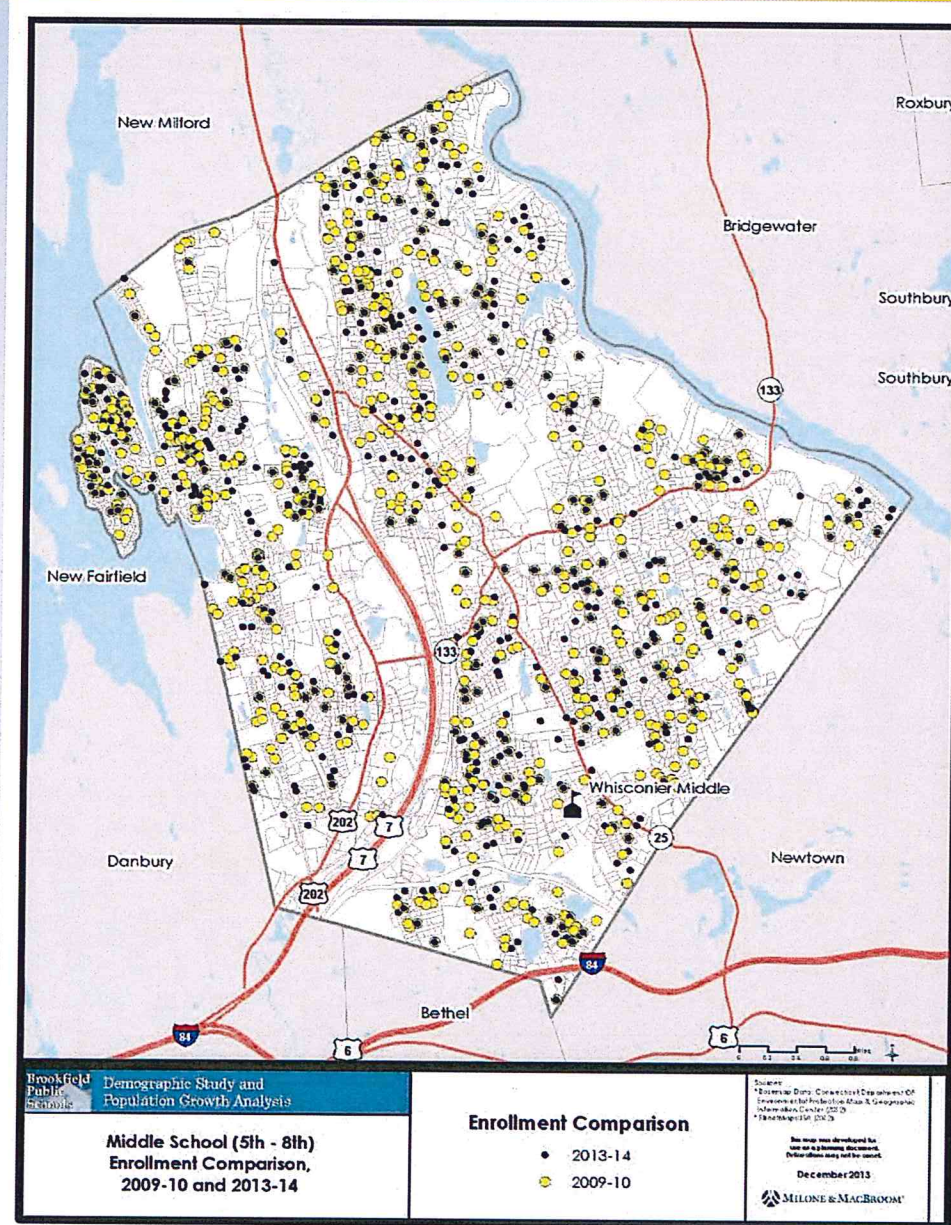
Elementary Enrollment

- Some Neighborhood Clusters Evident
- No Apparent Significant New Enrollment Clusters Resulting from Recent Developments or Housing Turnover



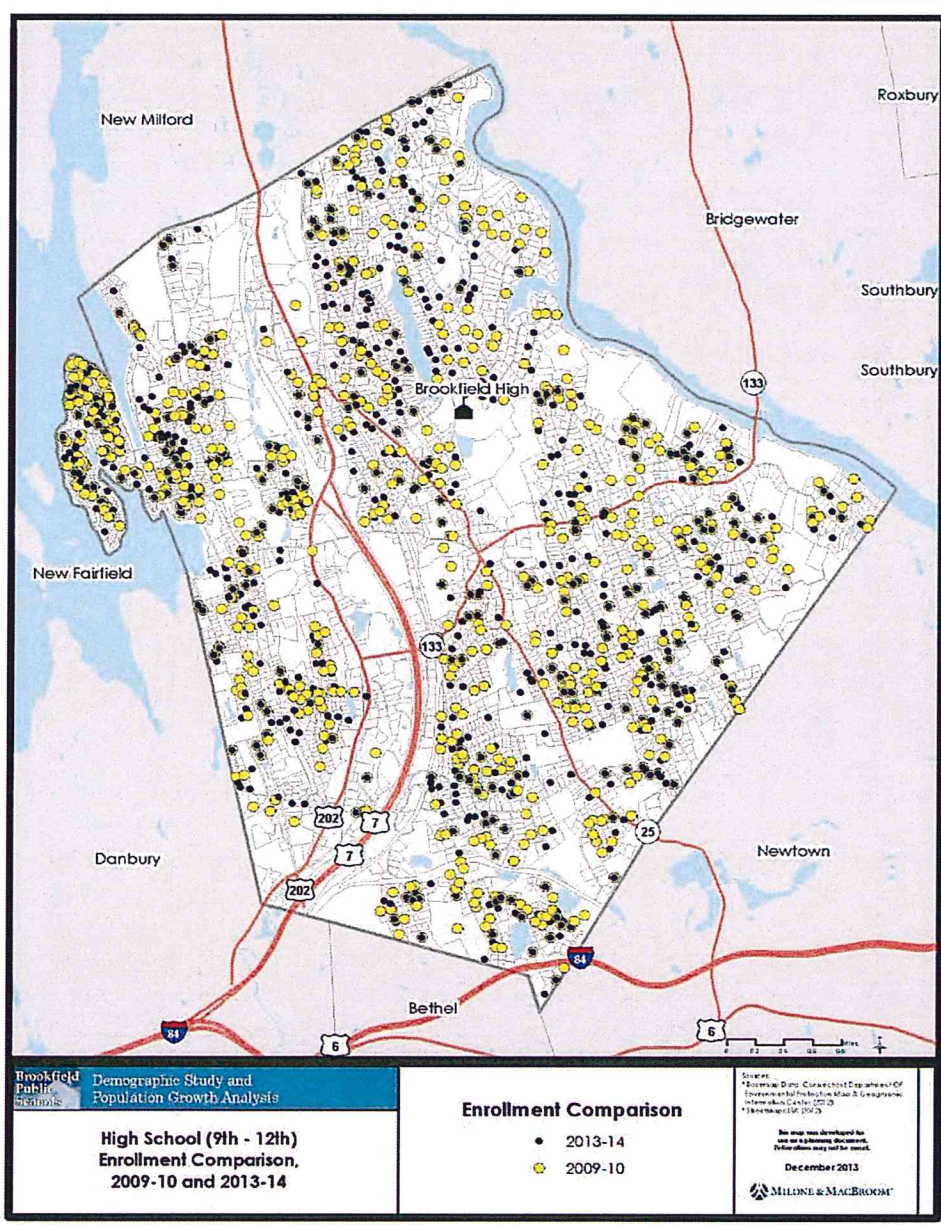
Middle School Enrollment

- Similar to Elementary Enrollments
- No Apparent Significant New Enrollment Clusters Resulting from Recent Developments or Housing Turnover



High School Enrollment

- Similar to Elementary and Middle Enrollments
- No Apparent Significant New Enrollment Clusters Resulting from Recent Developments or Housing Turnover



Enrollment Projections

- Reviewed Dr. Prowda's Projections from October 2013
- Generally Agree with Projections
 - Some Changes in Assumptions (Birth Rates) Produce Slightly Higher Projections Over the Ten-Year Projection Horizon
 - Presents a Range of Enrollment Projections that the District May Want to Consider When Deciding Facilities Issues

Birth – K Growth

- MMI Has Prepared Enrollment Projections for Three Nearby Communities That Introduced Full-Day K More than Two Years Ago
- Reviewed Impacts on Those Districts to Better Estimate Long-Term Effect in Brookfield

Birth – K Growth

- Bethel Had 16.5% Increase in Birth-K Growth Rate Over Previous 3-Year Average When Introduced Full-Day K in 2012-13; Average 12.0% of Resident Enrollment in Private Schools
- New Milford Had a 1.4% Increase in Birth-K Growth Rate Over Previous 3-Year Average When Introduced in 2011-12; Average 6.3% of Resident Enrollment in Private Schools
- Ridgefield Had an Average Increase of 18.7% in B-K Growth Rate in the 4 Years Since Full-Day K Started Over Previous 4 Year Average; Average 11.4% of Resident Enrollment in Private Schools

Birth – K Growth

- Estimate that the Lower the Private School Enrollment, the Less Significant the Long-Term Impact that Full-Day Kindergarten Has on Birth-K Growth Rates
- With Approximately 11.7% of Resident Enrollment in Private Schools, And an 11.3% Increase in Birth-K Growth Rate from the Previous 3-Year Period, It Is Reasonable to Assume the 2-Year Average Birth-K and Last Year K-1 Growth Rate When Projecting Brookfield Enrollments

Projections Assumptions

- Assuming Five-Year Moving Average Birth Projections Maintains Births At An Average of 132 Annually from 2013 to 2013 – Difference of 8 to 18 More than Dr. Prowda's Assumptions
 - While Females of Child-Bearing Age Have Decreased, the Decline in Annual Birth Rates Started Early in Brookfield and May Bottom Out Earlier than Other Communities

Projections Assumptions

- Ran Projections Using the Weighted 3-Year Average Growth Rate Across All Grade Cohorts and 5-Year Average Moving Birth Projections
- Yields Slightly Higher Total Enrollment Projections – Coupled with Dr. Prowda's Original Projections Represent a Plausible Range for Future Enrolls

Year	Birth Year	Births	K	1	2	3	4	5	6	7	8	9	10	11	12	PK	PK-12 Total	Prowda Projections
2014-15	2009	124	141	168	200	221	198	226	232	197	227	204	227	213	233	37	2,724	2,732
2015-16	2010	133	151	153	176	204	230	204	232	236	198	217	206	226	214	37	2,685	2,697
2016-17	2011	128	145	164	160	181	213	238	210	235	237	189	220	205	227	37	2,661	2,673
2017-18	2012	135	153	158	172	164	188	219	244	213	237	227	191	218	206	37	2,628	2,626
2018-19	2013	132	150	166	166	176	171	194	226	248	214	226	229	190	220	37	2,612	2,592
2019-20	2014	130	148	162	175	169	183	176	200	229	249	205	229	228	191	37	2,581	2,549
2020-21	2015	132	150	161	170	179	177	189	181	202	230	238	207	227	229	37	2,577	2,536
2021-22	2016	131	149	162	169	175	186	182	194	184	204	220	241	206	229	37	2,537	2,477
2022-23	2017	132	150	162	170	173	182	192	187	197	185	195	222	239	207	37	2,498	2,419
2023-24	2018	131	149	163	170	174	180	187	197	190	198	177	197	221	241	37	2,481	2,384*

* Formula error on p 19 of Dr. Prowda's report incorrectly sums PK-12 total for this year only.

Enrollment Projections Summary

- Given Current Enrollments, Population and Housing Trends, Enrollment Yields from Recent Developments and Buildout Potential, Can Expect Brookfield Public Schools to Continue to Experience Enrollment Decline
- Data Supports the Enrollment Projections Prepared in Oct. 2013; However, District May Wish to Consider Range of Potential Enrollments When Making Decisions Regarding Facilities