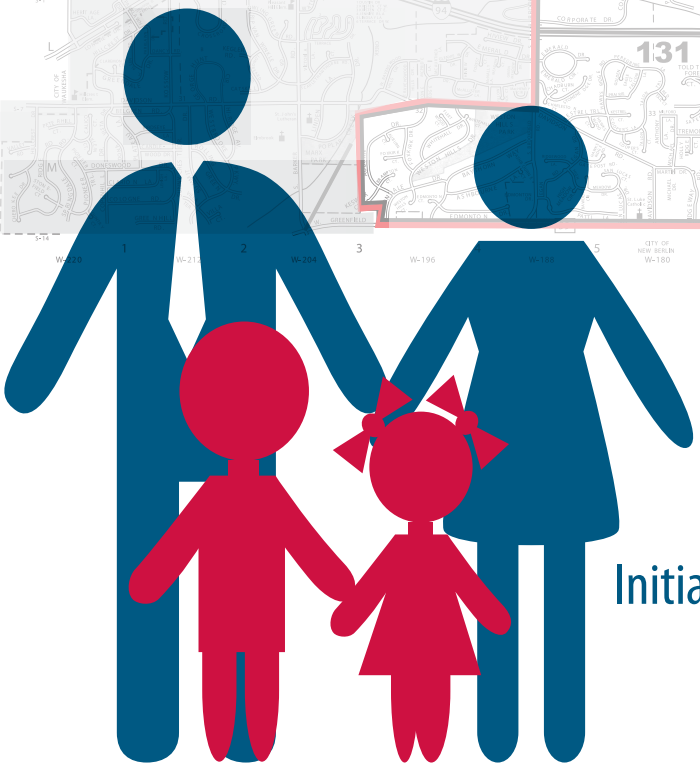
ELMBROOK SCHOOLS

School District of Elmbrook



Elmbrook Enrollment Balancing Task Force Report

Initial Recommendation to the Board of Education

August 16, 2016

TABLE OF CONTENTS

Essential Terminology

Critical Success Factors

Criteria provided by the School Board and weighted by the Task Force to evaluate and compare potential scenarios and solutions.

Grade Progression Ratios

As students move from one grade to the next, the extent to which the number increases or decreases is called the "Grade Progression Ratio." For example, if there are 10 first graders in a tract in 2011-12 then 12 second graders in 2012-13, the first-to-second grade Grade Progression Ratios (1:2) is 12/10 = 1.20. Grade Progression Ratios > 1 typically indicate that students are either moving into the district or switching from private to public school, so we know that Grade Progression Ratios already reflect some degree of housing turnover, new housing, and/or market share fluctuation.

Incremental Data

When numbers are referred to as incremental, it means the numbers are in addition to other sets of data.

Scenario

An idea or combination of ideas that could be evaluated to see impact on enrollment balancing and capacity utilization. Some ideas included variations of grade splitting, moving tracts, splitting or combining tracts, creating lower and upper elementary schools, creating K-8 schools, etc.

Solution

Once scenarios were evaluated and determined to be feasible and attractive options (when evaluated versus the Critical Success Factors), the Task Force narrowed the scenarios down to 1-2 possible solutions to analyze in more depth before finalizing its recommendation to the School Board.

Third Friday Data

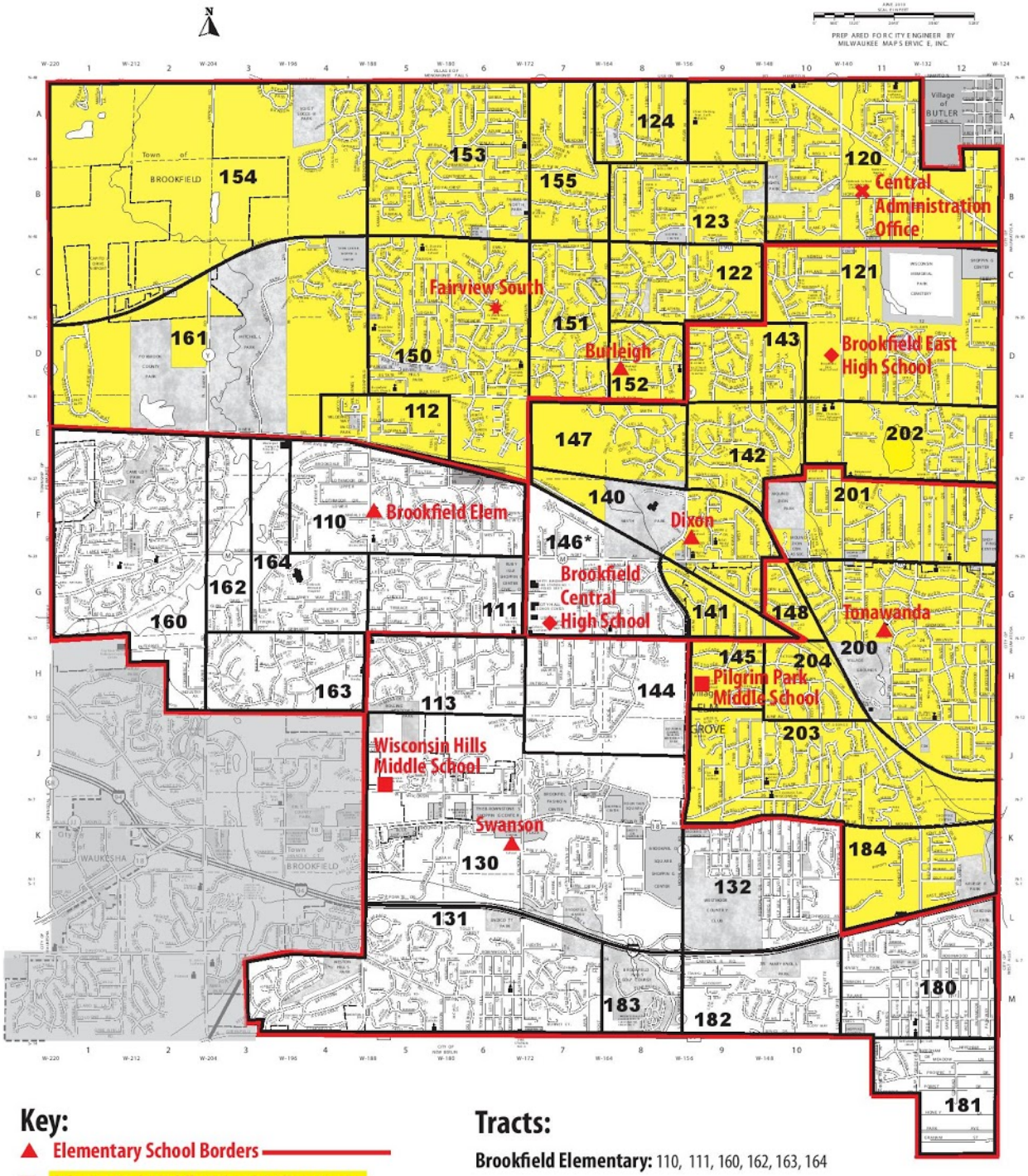
Wisconsin public school districts are required to count students for membership purposes on the 3rd Friday in September and 2nd Friday in January and report the data to the Department of Public Instruction. These numbers are typically used as the official enrollment records for school districts.

Tracts

The district is divided into 42 tracts, which are groupings of neighborhoods. Residents of each tract are assigned to elementary, middle, and high schools. Because the tract data and placements were so vital to the work of the Task Force, a current boundary map is shown on the following page and a current and proposed boundary map is shown in Section 5: Initial Task Force Recommendation.

ELMBROOK SCHOOLS
School District of Elmbrook

District Boundary & Tract Map



Key:

- ▲ Elementary School Borders
- ■ Pilgrim Park Middle School (Yellow Area)
- ◆ Brookfield East High School (Yellow Area)
- ■ Wisconsin Hills Middle School (White Area)
- ◆ Brookfield Central High School (White Area)
- ✷ Fairview South (Special Education cooperative serving six counties)
- ✖ Central Administration Office

Black Border Delineates Tracts

Tract 146* – Has the option to attend Pilgrim Park & Brookfield East but must provide own transportation.

Tracts:

Brookfield Elementary: 110, 111, 160, 162, 163, 164

Burleigh: 112, 120, 122, 123, 124, 150, 151, 152, 153, 154, 155, 161

Dixon: 121, 140, 141, 142, 143, 146*, 147, 202

Swanson: 113, 130, 131, 132, 144, 180, 181, 182, 183

Tonawanda: 145, 148, 184, 200, 201, 203, 204

Questions about boundaries should be directed to:
Elmbrook Schools – 262.781.3030

Section 1: Executive Summary

Introduction

In 2013, Elmbrook began experiencing an increase in resident enrollment. This accelerated over the last few years as birth rate, housing market and residential development increased. Two of the elementary schools (Brookfield Elementary and Swanson Elementary) are at or over functional capacity, while two of the elementary schools have space (Burleigh Elementary and Dixon Elementary). If the district does not change boundaries, it is anticipated that enrollment at Swanson Elementary and Brookfield Elementary may exceed functional capacity by 10-20% by 2020-21. The Task Force's recommendation is to move students in Tracts 113 and 144 to Dixon Elementary, split Tract 111, and move students living in the eastern portion of Tract 111 to Dixon Elementary in 2017-18. The preschool program will be moved from Dixon Elementary to Burleigh Elementary. All secondary school assignments do not change with this recommendation. It is further recommended that capacity expansion at the elementary level be evaluated for 2020-21, as it is projected that enrollment growth may pressure district capacity.

History and Task Force Charge

History and Current Situation

Since the District's inception in 1964, enrollment balancing strategies have been used to respond to increasing and decreasing enrollment. Monitoring enrollment fluctuation is critical for all school districts in their effort to deliver quality educational services effectively and efficiently. Just as enrollment can change over time, so too can school capacity utilization. It is in the district's best interest to design schools that adapt to changing enrollment and classroom needs as new requirements and practices are implemented. A Task Force was formed to examine enrollment trends and new capacity pressures across the district.

For more information, see Section 2: History

Task Force Purpose and Charge

By February 2016, the Board of Education agreed that examining district-wide enrollment trends was necessary and approved the formation of a District Enrollment Balancing Task Force. Due to increased enrollment at our elementary schools, the Task Force was charged with making recommendations to the Board of Education that will balance enrollment for the next five years (or more). The specific charge included:

> *By December 1, 2016 the Task Force will present a recommendation to the Board of Education for balancing enrollment for the five elementary schools to determine school placements for students beginning with the 2017-2018 school year. This recommendation will also identify any deviations from the current feeder system from Elementary to Middle and High Schools.*

The Task Force was given a set of directives by the Board of Education that it later refined and prioritized into Critical Success Factors that were used to guide the process that led to the recommendation. The Critical Success Factors in weighted order were:

- Enrollment recommendations do not exceed 90% of elementary school current capacity and 80% of secondary schools current capacity for five years (calculated in the student enrollment capacity ranges)
- Impact the smallest number of families and offer choice if possible/feasible
- Develop new K-5 tract boundaries that balance enrollments across all five elementary schools
- Provide for grandfathering of families, if possible and appropriate, to reduce the short-term impact on families
- Honor the current feeder path of families and students currently enrolled in the District from Elementary to Middle to High School as much as possible
- Honor "time on the bus" transportation policy
- Take into consideration the potential for expansion to the current preschool program

For more information, see Section 3: Task Force Purpose and Charge

Review Process

Capacity Summary

To estimate the number of students each school can effectively educate, two different capacity measures were used to create a range based on standard industry methodologies and Elmbrook class size guidelines. Square Footage Capacity was calculated by dividing available academic space square footage by best practice square footage allowances per student. This created the lower end of the capacity range. The other capacity measure, Class Size Capacity, was calculated by multiplying the number of classrooms by the number of students suggested by the Elmbrook Board policy related to class size. This provided the upper end of the capacity range. Because all spaces cannot be used all of the time and fluctuations in elementary student populations will occur, an assumption that academic spaces can be used 90% of the time was factored in to both capacity calculations to give a realistic, functional capacity. The table below shows the capacity at each elementary school at the end of the 2015-16 school year based on the two measures. More information can be found in Table 1.

School	2015-16 Ending Enrollment	End of Year - % capacity based on square foot	End of Year - % capacity based on class size
Brookfield Elementary	615	100%	95%
Burleigh Elementary	641	79%	74%
Dixon Elementary (with preschool)	364	66%	63%
Swanson Elementary (prior to cafeteria expansion)	818	119%	107%
Tonawanda Elementary	368	89%	81%

Enrollment Analysis and Process

In order to understand the dynamics of enrollment across the district and develop actionable recommendations, both macro and micro levels of projection methodology were used. The macro-level projections focused on 10 years of data and the micro-level projections focused on 5 years of data.

The Task Force analyzed data around four accelerators:

- ***Increasing Births to Residents*** - Birth rates are approaching a 25 year high. The 2020-21 kindergarten class is likely to be the biggest kindergarten class in over 13 years, as those students were born to residents in 2015-16. As more children are born in the district, stay in the district, and attend school in the district (both public and private), the need to plan for increases at every building will be necessary.
- ***Existing Housing Turnover*** - Home sales in 2015 were at a ten year high and K-12 resident enrollment has been increasing as sales have increased rapidly since 2012. The analytical hypothesis was that older community members were leaving Brookfield and Elm

Grove and families moved in and began to attend Elmbrook Schools. This has the potential for certain neighborhoods to have higher turnover than others, potentially causing unexpected enrollment bubbles.

- ***Rise of New Residential Housing*** - The district has experienced growth in multifamily and single family housing starts since 2011. In 2008-2012, single family development averaged 19 new homes per year and in 2013-2015, the average climbed to 47 new homes. In 2016-17, 65-98 incremental students in K-12 are projected to enroll from new housing and 131-164 in 2018-19.
- ***Increased Market Share*** - While total resident enrollment first decreased (2004-2011) and then increased (2012-2016), the School District of Elmbrook's market share (% of resident students choosing to attend the Elmbrook Schools) increased from 72.8% to 77.4% (+4.6%) since 2004-05. Each percentage gain of market share experienced by the district resulted in an additional 80-95 students. If the market share trend of the last five years continues, the district's market share could reach 80%, which would add approximately 160-220 students.

Enrollment projections were adjusted as appropriate based on the accelerator data analysis. The Task Force used these projections to develop and evaluate scenarios that balance enrollment, manage capacity, and align to the Critical Success Factors. A multi-phased solution emerged from the scenario data.

For more information, see Section 4: Task Force Review Process

Recommendations and Next Steps

Recommendation

This is a multi-phase recommendation and is a realignment of tracts among existing elementary schools. It includes moving tracts from Swanson Elementary and Brookfield Elementary to create necessary capacity to relieve existing capacity pressures and anticipated increases in enrollment. In addition, it calls for an annual analysis of enrollment to best plan for any necessary capacity expansion. All components of this recommendation begin in 2017-2018. The details to this recommendation include:

Phase 1:

- Assign Tracts 113 and 144 from Swanson to Dixon and move students in those tracts beginning September 1, 2017. Middle and High School pathways for students in Tracts 113 and 144 remain unchanged, with students attending Wisconsin Hills Middle and Brookfield Central High School.
- The Task Force recommends splitting Tract 111 into two tracts. Students in the western section would remain at Brookfield Elementary. Students in the eastern section, now Tract 115 (North Avenue, Calhoun, Gebhardt, Norhardt), would attend Dixon Elementary.
- Move the 4-Year-Old Preschool program from Dixon to Burleigh.
- All tract changes would be accompanied by grandfathering for 2017-2018 4th graders and 2018-2019 5th graders with parent provided transportation to the grandfathered school. The district is also assessing the costs of other transportation options.
- Families living in Tracts 113 and 144 that were impacted by the redistricting in 2011 would have the option to remain at their current school with parent provided transportation. The district is also assessing the costs of other transportation options.

Phase 2:

- In addition to the recommendation, the Task Force offers the following consideration:
    - Annually report out enrollment trends using the new projection formula, so as to inform planning for capacity increases that range from additions at multiple schools (permanent and/or temporary) or a replacement school.

For more information, see Section 5: Initial Task Force Recommendation

Communication Plan

The district will continue to seek feedback from parents, staff, and community members through Board meeting discussions, open forums, and Principal chats. The Board of Education could make a decision as early as October 2016, but dialogue may continue and a final decision may not be made until December 2016.

For more information, see Section 6: Next Steps

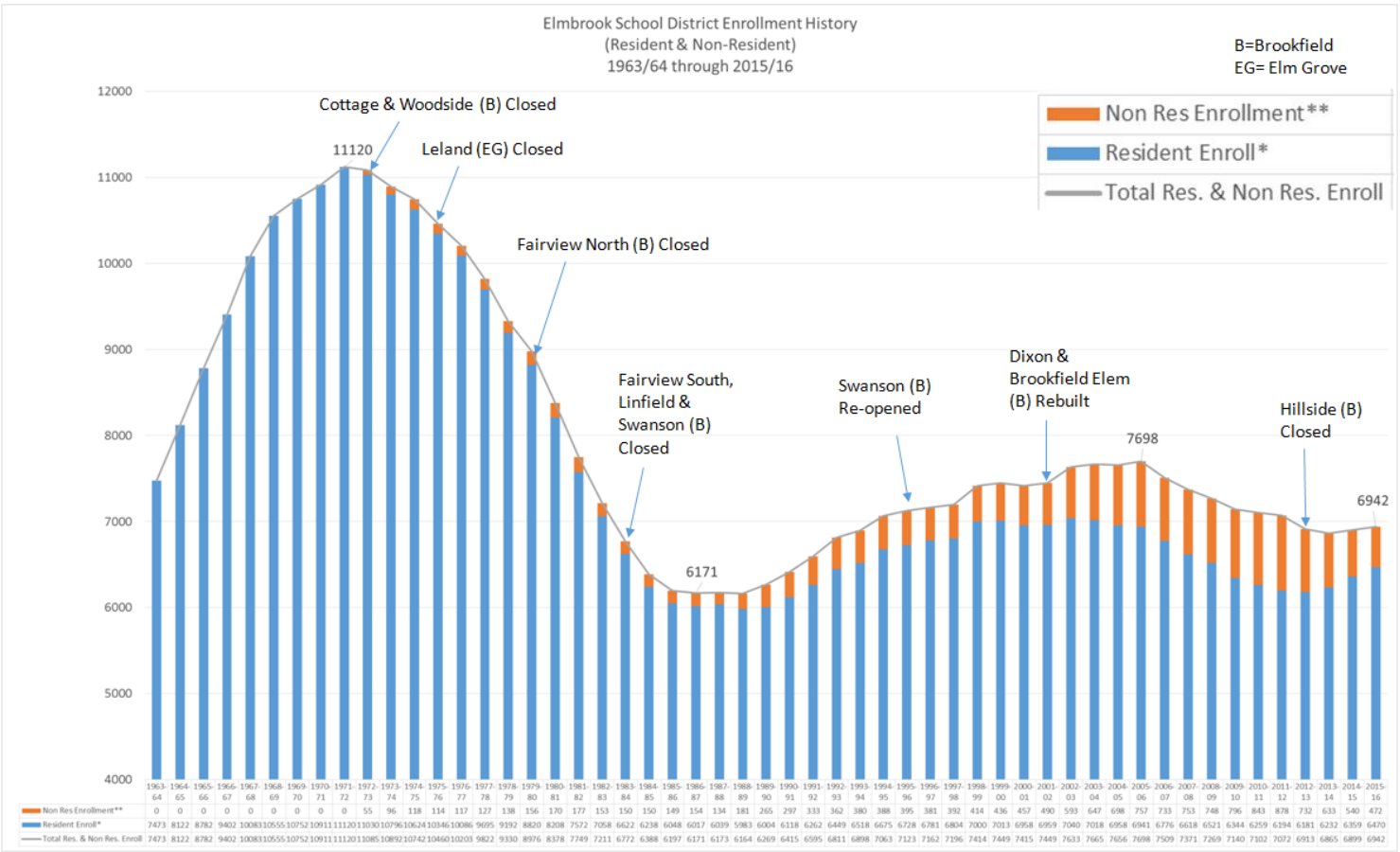
Section 2: History

History of Enrollment Balancing Management

Evolution of Enrollment

Since the District's inception in 1964, enrollment balancing strategies have been used to respond to increasing and decreasing enrollment. As residential development in Brookfield and Elm Grove expanded in the 1950s and 1960s, the School District of Elmbrook grew to over 11,000 students in 1971-72. It then realized a steady enrollment decline in the 1970's and 1980's that resulted in seven school closures. As enrollment increased again in the late 1980's and 1990's, three schools were re-opened. Responding to enrollment fluctuation is critical for all school districts in their effort to deliver quality educational services effectively and efficiently. The chart below shows the district's history of enrollment fluctuations and the facility adjustments made to adjust for the fluctuations.

Chart 1: Elmbrook School District Enrollment History



In 2012, the School District of Elmbrook closed Hillside Elementary School based on declining enrollments since 2006 and projections forecasting additional decline through 2015. However, in contrast to enrollment projections, enrollment began to increase in 2013 as the housing market rebounded, high births from 2007-2010 entered kindergarten, and market share grew.

It has been approximately five years since the District's last major enrollment and capacity balancing decision, which is consistent with the pattern of change for the last 50 years. The history shows that this is an ongoing process and needs to be revisited regularly based on unpredictable fluctuations in the factors or accelerators that drive enrollment.

Evolution of Capacity Utilization

Just as enrollment can change over time, so can school capacity utilization. For example, in the 1990s, schools had to accommodate technology advances and created computer labs. Today, there is little need for computer labs because many students have individual devices or laptops. It is in the district's best interest to design schools that adapt to changing enrollment and classroom needs as new requirements and practices are implemented. Additional information on Historical Perspectives on School Capacity is available in the "Analysis of Building Capacity - EUA" report in the Appendix.

Current Situation

Capacity Pressure at Swanson Elementary School

The School District of Elmbrook's administration had been monitoring the gradual enrollment growth from residents on the south and west sides of the district, specifically around Brookfield Elementary and Swanson Elementary Schools. During the summer of 2015, resident enrollment jumped significantly causing capacity pressure at Swanson Elementary School and some capacity pressure at Brookfield Elementary School throughout the 2015-16 school year.

Swanson Enrollment Analysis Committee Recommendation

The biggest challenge with the Swanson Elementary School enrollment growth was that additional classroom space had been added three times over many decades, but the common spaces, like the gym and cafeteria were not expanded to match the growth in student enrollment. For example, in 1996, 22 classrooms were added, but no additional square footage was added to the cafeteria or gym. While there were enough classrooms for every Swanson student, there was not enough space for every student to eat lunch in the cafeteria in three periods, so an overflow space was temporarily used for the 2015-16 school year. For specific information on the Swanson additions, see "Swanson Building Additions" in the Appendix.

Based on district data, Applied Population Laboratory projections, and the Eppstein Uhen Capacity Report, in March 2015, the Board of Education approved the recommendation of the Swanson Enrollment Analysis Committee to add additional capacity at Swanson Elementary School for the 2016-17 school year. The current cafeteria was expanded to a multi-purpose room to be used for gym space if needed. The added capacity allowed for a balance of classroom and common space at Swanson, increasing the functional capacity from 693 to 795 students. The "School Enrollment Projections Series for the School District of Elmbrook - APL" report can also be found in the Appendix.

From Swanson Growth To District Growth

While the Swanson Enrollment Analysis Committee analyzed the enrollment and housing trends in Fall of 2015, it uncovered more areas of growth, specifically at Brookfield Elementary School. As a result, the Swanson Enrollment Analysis Committee recommended forming a broader district-wide Task Force to examine enrollment trends and new housing impact on district enrollment. The district secured two data analysts to assist in further analyzing housing data, birth rates, market share, and other enrollment growth drivers. Furthermore, this new analysis approach allowed the district to monitor the leading indicators closely to more accurately predict significant enrollment changes in future years.

It is likely the Enrollment Balancing Task Force will recommend that the district develop a long-term facilities plan that will identify permanent capacity to handle fluctuations over the next 20+ years. The School District of Elmbrook should determine the right level of permanent capacity that will fit into the general operating range and modify the buildings accordingly. With an increase in older residents in Brookfield and Elm Grove, existing housing turnover is likely to increase, which will likely generate more families entering district schools.

SECTION 3: TASK FORCE PURPOSE AND CHARGE

Section 3: Task Force Purpose and Charge

Task Force Purpose and Charge

Task Force Purpose

Due to increased enrollment at the elementary schools, the District Enrollment Balancing Task Force worked to address current enrollment balancing challenges by making a recommendation(s) to the Board of Education on balancing enrollment for the next five years (or more).

Task Force Charge

By December 1, 2016 present a recommendation to the Board of Education for balancing enrollment for the five elementary schools to determine school placements for students beginning with the 2017-2018 school year. This recommendation will also identify any deviations from the current feeder system from Elementary to Middle to High Schools.

This Task Force used all data and information available; enrollment trends, housing data, birth and census information, residential housing developments, surveys, listening sessions and population trend predictions to inform its recommendation(s).
The following board-adopted critical success factors guided the task force work:

1. Develop new K-5 tract boundaries that balance enrollments across all five elementary schools
2. Enrollment recommendations do not exceed 85% of the school's current capacity for 5 years
3. Honor the current feeder path of families and students currently enrolled in the District from Elementary to Middle to High School as much as possible
4. Impact the smallest number of families
5. Provide for grandfathering of families, if possible and appropriate, to reduce the short-term impact on families
6. Take into consideration the potential for expansion to the current preschool program

Task Force Guidelines

- Operate transparently - posting notice of meetings in advance and minutes following each meeting
- Solicit feedback from a variety of stakeholders; including staff, current and future elementary school parents, and other parents/residents in the District
- Base decisions and recommendations on the data and information available
- Seek recommendations in the best interest of all stakeholders
- Recommendations will be made based on consensus
- Develop and execute a communication plan

Task Force Membership

Task Force Members volunteered their time and were identified through a process and ultimately selected by the Board of Education. Membership in the task force included:

- Board Member Representative(s)
- Parent representative(s) from each school in the District - determined from an open application process
- Two community members without children currently in the District
- Administrator from Elementary School(s)
- Assistant Superintendent for Finance, Operations and HR - Chair and/or Superintendent
- District staff members to support data analysis
- External Facilitator

Board Members:

Jean Lambert – Board Member
Scott Wheeler – Board Member

Parent Representatives:

Franklin Onwubuariri – Dixon Elementary School
Bridget Mangan – No Students Currently in District
David Frank – Tonawanda Elementary and Pilgrim Park Middle School
Paul Neumeier – Swanson Elementary School
Thomas Schaefer – Brookfield Elementary School
John Schnabl – Swanson Elementary School and Wisconsin Hills Middle School
Jeff Wurster – Burleigh Elementary School
Sarah Sagert – Brookfield Elementary School
Silvia Pasquini – Dixon Elementary School
Stephen Taipala – Wisconsin Hills Middle School and Brookfield Central High School
Danny Thomas MD, MPH – Swanson Elementary School and Wisconsin Hills Middle School
Karen Wolff – No Students Currently in District, Attend Private School
Heather Paradis – Tonawanda Elementary School
Bill Aslin – Brookfield East High School

Elmbrook School District Representatives:

Kori Hartman – Swanson Elementary School Principal
Jeanne Siegenthaler – Dixon Elementary School Principal
Daniel Westfahl – Brookfield Elementary School Principal
Lisa Rettler – Wisconsin Hills Middle School Principal
Andrew Farley – Brookfield East High School Principal
Erik Kass – Assistant Superintendent for Finance, Operations, and Human Resources

Ex Officio Members:

Lisa Mellone – Brookfield Central High School and City Alderperson
Mark Hansen – Superintendent

Task Force Purpose and Charge Summary

In 2013 Elmbrook began experiencing an increase in resident enrollment. This accelerated over the last few years as birthrate, housing market and residential development increased. Two of our elementary schools (Brookfield Elementary and Swanson) are at or over functional capacity. Two of our schools have space (Tonawanda and Dixon). If the district does not change boundaries, it is anticipated that enrollment at Swanson Elementary and Brookfield Elementary may exceed functional capacity by 10-20% by 2020-21. We have an imbalance that needs to be addressed.

- Elmbrook remains committed to being a destination district.
- Projected enrollment growth require us to proactively shift student attendance areas.
- Due to the success of Elmbrook Schools and its reputation, an in-depth analysis has identified the reasons for Elmbrook's significant growth which includes increasing birth rates and housing growth.
- A group of over 25 people, representing all schools and the community at large, finalized and submitted recommendations for the Board of Education's consideration.
- In the near term, space exists at other schools to relieve crowding at Swanson and Brookfield Elementary.
- Impacting the smallest number of families, maintaining secondary pathways, and keeping elementary schools below 90 percent of full capacity were guiding principles.
- Utilizing other district property was thoroughly evaluated, and would disrupt a significant number of families, it was found to be financially prohibitive, and would not efficiently address our enrollment imbalance.

Section 4: Task Force Review Process

Key Process and Methodology

Timeline

The Task Force created an initial timeline that outlined the steps necessary to successfully generate the ideas and scenarios that would lead to the initial recommendation to the Board of Education. A second timeline was created to outline the steps to complete after the scenarios were identified that would lead to generating community input following the initial recommendation. A third timeline identified the steps necessary to lead to a final Board decision.

The timelines depict the thorough analysis and thoughtful approach the Task Force took to provide a meaningful, data-driven recommendation to the Board that best met the weighted Critical Success Factors and long-term approach for the District.

Chart 2: Timeline 1 - Leading to Scenario Generation

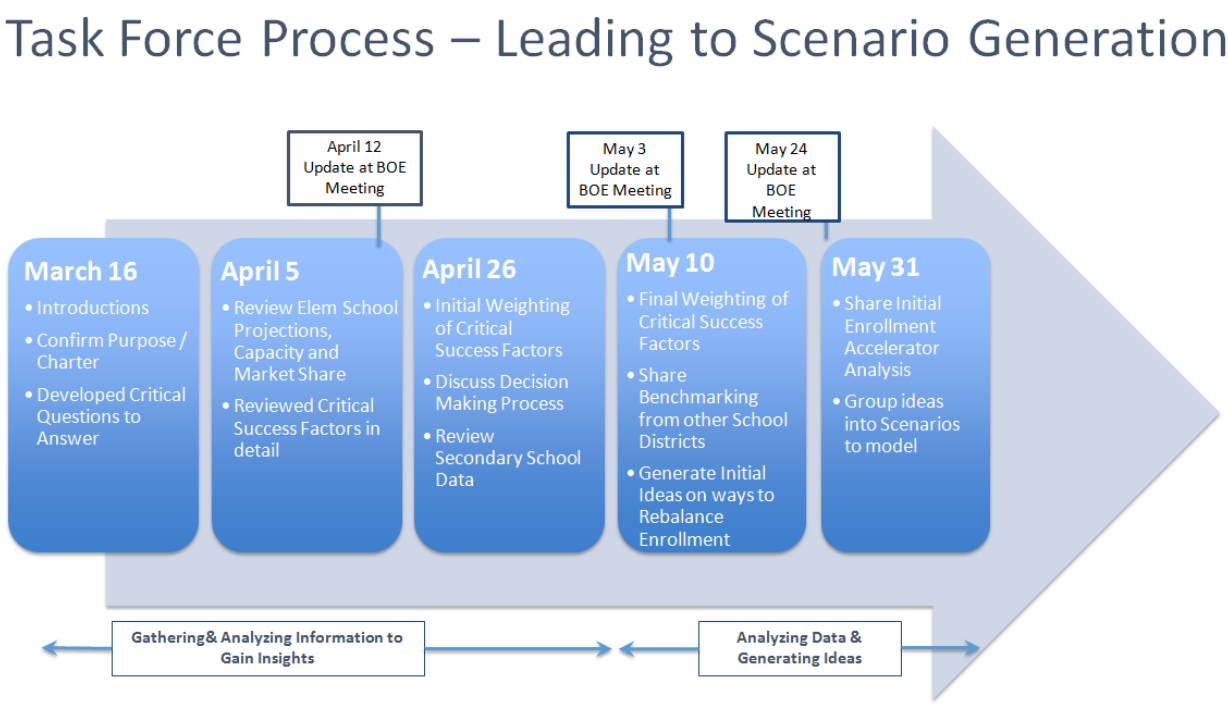


Chart 3: Timeline 2 - Scenarios to Board Recommendation

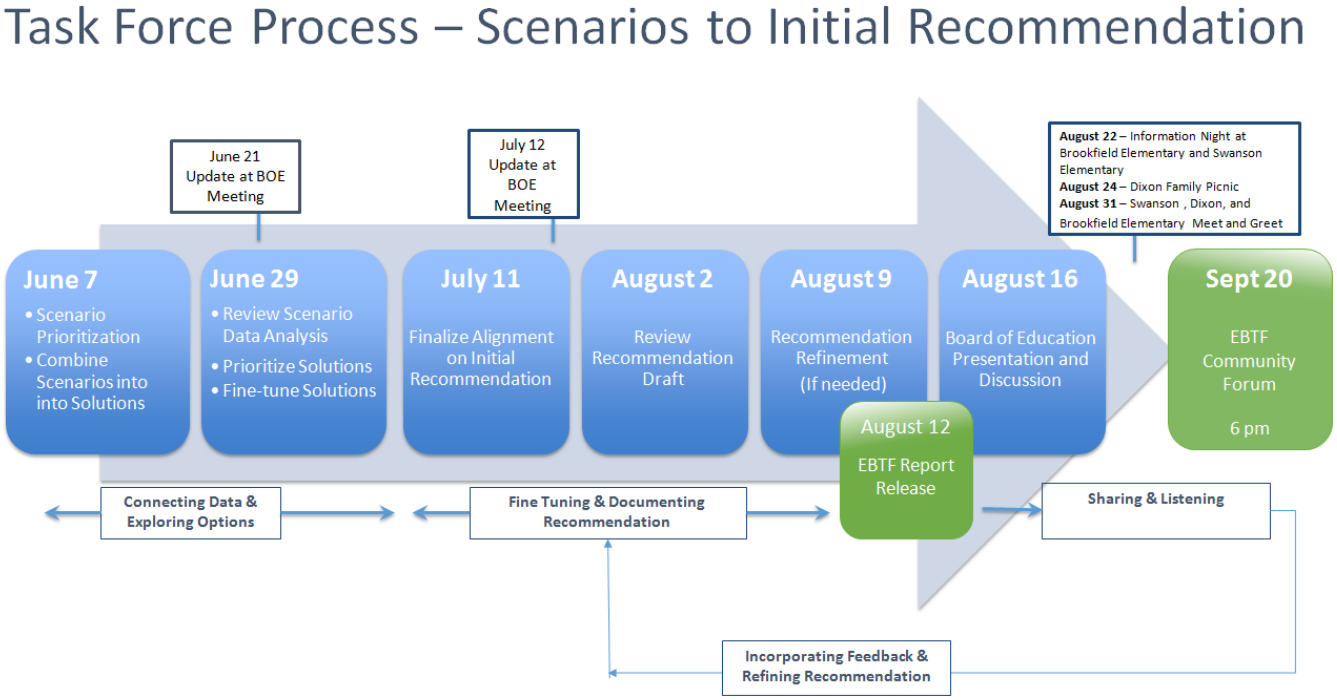
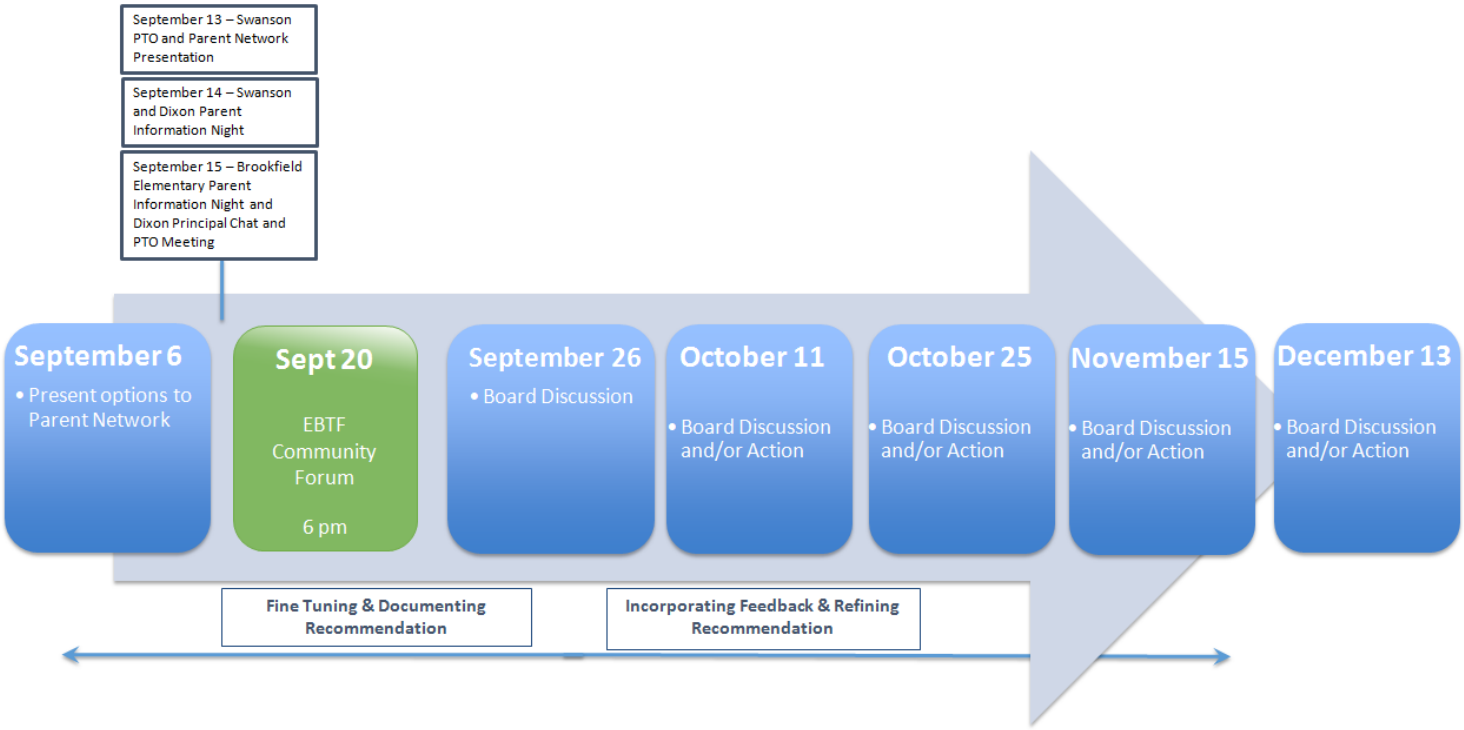


Chart 4: Timeline 3 - Board Recommendation to Board Decision



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Critical Success Factors

Prior to the first meeting, the Board of Education provided the Task Force with a list of Critical Success Factors, which would serve as the guiding principles the Task Force was expected to use to analyze scenarios and make recommendations. The Critical Success Factors were as follows:

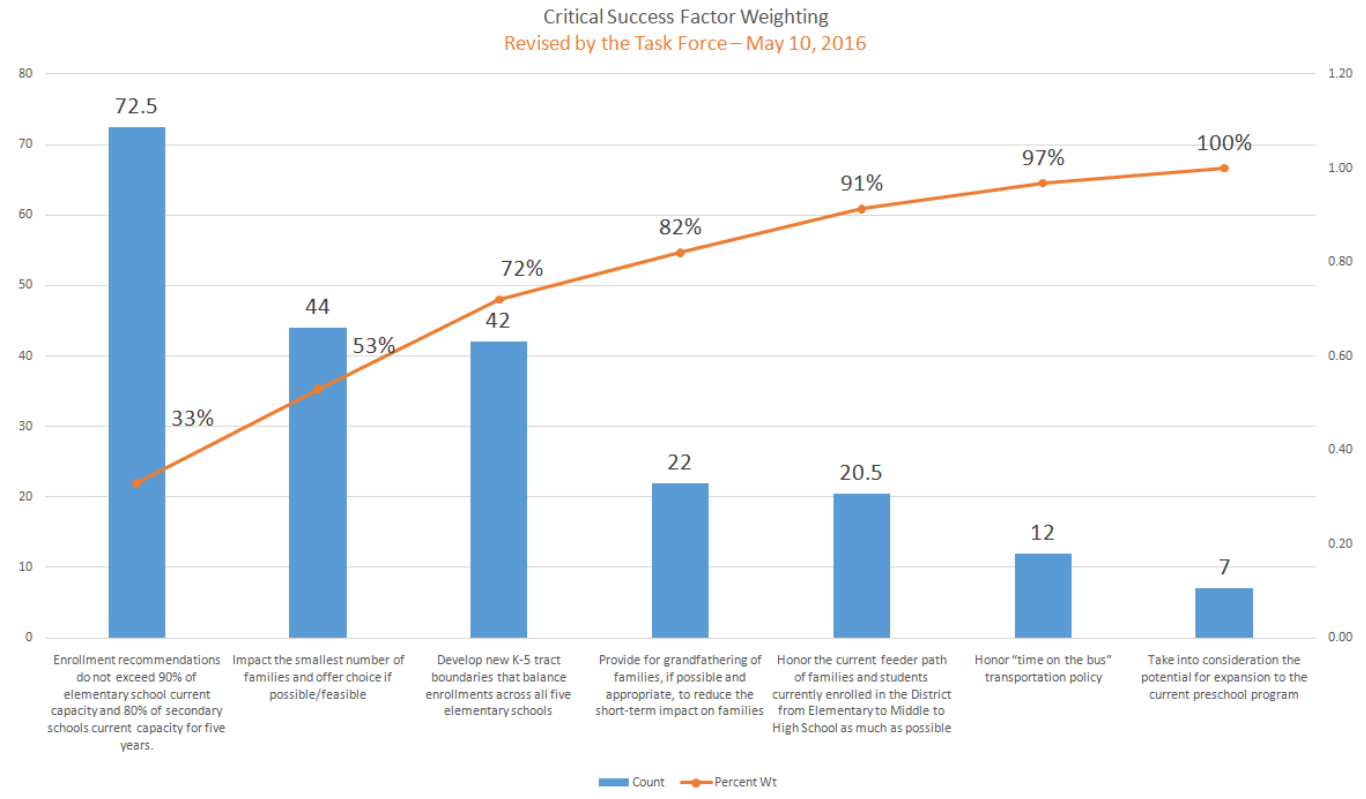
- Develop new K-5 tract boundaries that balance enrollments across all five elementary schools
- Enrollment recommendations do not exceed 90% of elementary school current capacity and 80% of secondary schools current capacity for five years
- Honor the current feeder path of families and students currently enrolled in the District from Elementary to Middle to High School as much as possible
- Impact the smallest number of families and offer choice if possible/feasible
- Provide for grandfathering of families, if possible and appropriate, to reduce the short-term impact on families
- Take into consideration the potential for expansion to the current preschool program
- Honor "time on the bus" transportation policy

In May of 2016, the Task Force used a consensus decision making process to prioritize and weight the Critical Success Factors for use when analyzing the scenarios that would ultimately become the recommendation to the Board of Education. It was important to do this so the Task Force had a way to clearly see how the different options presented would affect families, schools, and capacity utilization.

The weighting was done to show the importance of each Critical Success Factor. When options were presented, the weighted Critical Success Factors would show the Task Force how aligned the option was with the already-decided on priorities. As shown in Chart 5 below, the Task Force determined that the following Critical Success Factors were weighted as the most vital to meet in order to be successful:

- Enrollment recommendations do not exceed 90% of elementary school current capacity and 80% of secondary schools current capacity for five years
- Impact the smallest number of families and offer choice if possible/feasible
- Develop new K-5 tract boundaries that balance enrollments across all five elementary schools

Chart 5: Critical Success Factor Weighting (May 10, 2016)



Key Process and Methodology

When the Elmbrook Enrollment Balancing Task Force was created in February 2016, it was tasked with addressing current enrollment imbalances and capacity pressures by making a recommendation(s) to the Board of Education on balancing enrollment for the next five years (or more).

Enrollment Projections

In order to understand the dynamics of enrollment across the district and develop actionable recommendations, two levels of projection methodology were used:

- Macro Level Projections
  - Used 10 years of historic enrollment data to calculate district-wide Grade Progression Ratios in order to project 5-10 years forward
  - Used 10 years of historic enrollment data to calculate school-level Grade Progression Ratios in order to project 5-10 years forward
- Micro Level Projections
  - Used 5 years of historic enrollment data to calculate school-level Grade Progression Ratios in order to project 5 years forward
  - Used 5 years of historic enrollment data to calculate tract and sub-tract-level Grade Progression Ratios in order to project 5 years forward
  - Analyzed historical data and trends for Accelerators: area births, new housing, housing turnover and market share, in order to understand the impact of each and perform sensitivity analyses

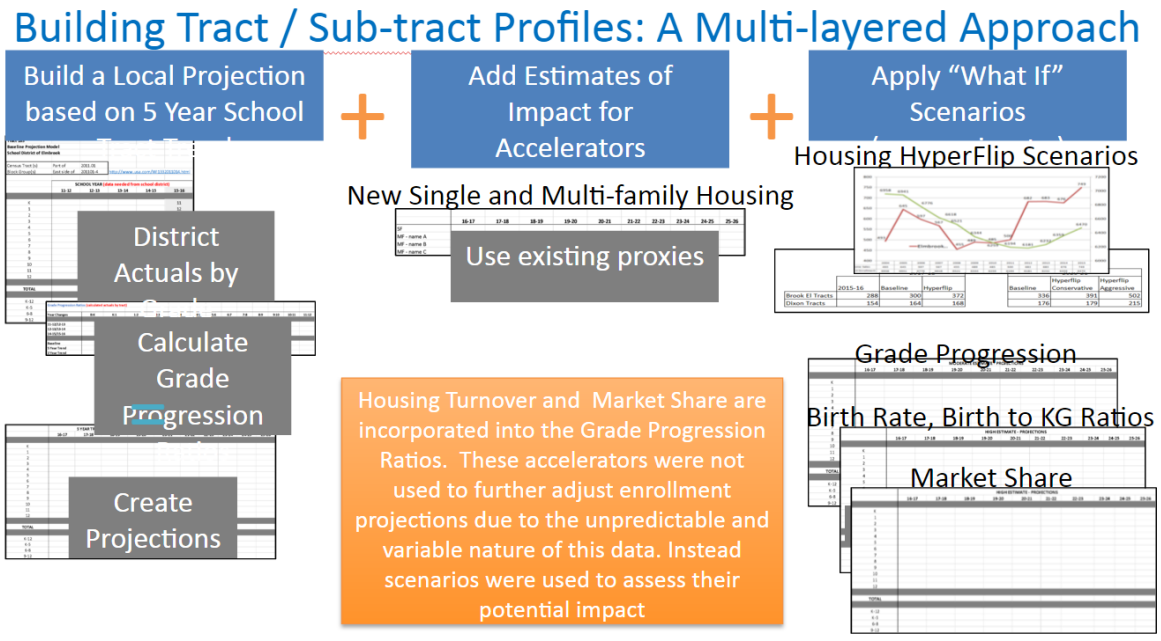
Capacity

In addition to enrollment projections, the Task Force needed to understand capacity in order to ensure the appropriate space to provide a quality educational experience for the projected students. More detailed information on the facility and classroom capacity analysis is discussed below.

Reviewing Best Practices

In addition to building its own data sets, the Task Force also reviewed data and reports from other school districts who recently experienced enrollment and/or capacity challenges to benchmark other's' processes and best practices (see the Acknowledgements in the Appendix). Several lessons learned included methods for doing neighborhood/tract-level projections, analyzing local demographics, and estimating the impact of new residential housing. For more detailed information, see "Benchmarking Other Districts" in the Appendix.

Chart 6: Building Tract / Sub-Tract Profiles



Tract Projections

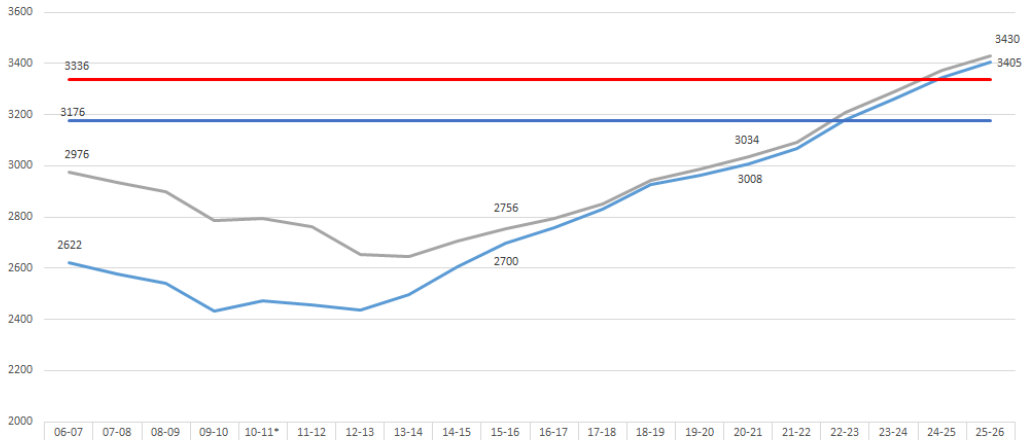
The Task Force determined that the only way it would be able to make an accurate and actionable recommendation to the Board regarding enrollment balancing and capacity management was to analyze the enrollment dynamics of each tract. The data analysts created a multi-layered approach to understand the dynamics of each tract, as outlined in Chart 6.

At the first meetings, the Task Force reviewed enrollment and capacity charts to gain a clear understanding of the current situation and projections. Although the Task Force focused on elementary and district projections relative to capacity, it also spent time reviewing middle and high school data, to understand the impact of growing elementary enrollment as those students progressed into the middle and high schools.

As the team analyzed and discussed the data further, it became apparent that solutions that both balance enrollment and manage capacity across the district, was imperative.

The Task Force's data revealed that multiple elementary schools would have a high likelihood of reaching capacity within the next five years, so simply moving students from one school to another would not completely solve the District's enrollment challenge. The graph below illustrates that elementary schools are projected to reach capacity by 2022-23, without factoring any enrollments from substantial new housing developments.

Chart 7: Elementary School Enrollment Projections and Capacity without Impact of Substantial New Residential Housing



	06-07	07-08	08-09	09-10	10-11*	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	24-25	25-26
Enrollment - Resident	2622	2577	2543	2431	2475	2455	2437	2499	2607	2700	2757	2832	2926	2965	3008	3068	3182	3263	3347	3405
Enrollment - Non Resident	354	358	355	356	318	306	216	148	101	56	39	21	17	21	26	25	25	25	25	25
Enrollment - Total	2976	2935	2898	2787	2793	2761	2653	2647	2708	2756	2796	2853	2943	2986	3034	3093	3207	3288	3372	3430
Capacity based on Sq Ft (of the 5 remaining schools)	3176	3176	3176	3176	3176	3176	3176	3176	3176	3176	3176	3176	3176	3176	3176	3176	3176	3176	3176	3176
Capacity based on Class Size (of the 5 remaining schools)	3336	3336	3336	3336	3336	3336	3336	3336	3336	3336	3336	3336	3336	3336	3336	3336	3336	3336	3336	3336
SF Capacity Utilization (of the 5 remaining schools)	94%	92%	91%	88%	88%	87%	84%	83%	85%	87%	88%	90%	93%	94%	96%	97%	101%	104%	106%	108%
Class Size Capacity Utilization (of the remaining schools)	89%	88%	87%	84%	84%	83%	80%	79%	81%	83%	84%	86%	88%	90%	91%	93%	96%	99%	101%	103%

Actuals | Projected (without New Housing Impact)

Facility and Classroom Capacity Analysis

In the Fall of 2015, the district determined it needed to create a committee to review enrollment trends and recommend solutions to the Board of Education for the 2016-2017 school year at Swanson Elementary School. At that same time, the district also commissioned the Applied Population Laboratory (APL) at the University of Wisconsin-Madison to provide updated projections on enrollment and housing trends in Brookfield and Elm Grove, and hired Eppstein Uhen Architects to provide a comprehensive capacity analysis of all schools in the district using a consistent methodology.

To estimate the number of students each school can effectively educate, two different capacity measures were used to create a range based on standard industry methodologies and Elmbrook class size guidelines.

Square Footage Capacity

Square Footage Capacity was calculated by dividing available academic space square footage by best practice square footage allowances per student. This created the lower end of the capacity range.

Class Size Capacity

The other capacity measure, Class Size Capacity, was calculated by multiplying the number of classrooms by the number of students suggested by the Elmbrook Board policy related to class size. This provided the upper end of the capacity range.

Capacity by School Board policy is outlined in School District of Elmbrook Board Policy 6151-Class Size and states the targets for staffing needs at each school. It should be noted that determining class size is a fluid process that is based on several factors, including capacity and staffing needs. As class sizes rise, the district will split classes and/or add staff. The complete "Class Size Report 2016" can be found in the Appendix.

Because both capacity calculations assume that all spaces cannot be used one hundred percent of the time and that fluctuations in elementary student populations will occur. To adjust for these expectations and to meet the Task Force's Critical Success Factor of balanced capacity, an assumption that academic spaces can be used 90% of the time was factored in to both capacity (Square Foot and Class Size) calculations to give a realistic, functional capacity.

Table 1 below shows a comparison of the capacity range based on square footage capacity and class size capacity by looking at the beginning and ending enrollment for the five elementary schools. The table shows where the current capacity pressures exist and the enrollment growth that occurred over the course of the school year.

Table 1: Enrollment and Capacity Summary

	K-5 2015-16 Enrollment (Resident and Nonresident)		Student Enrollment Capacity Range (at 90% of maximum)		Capacity Utilization			
School	Starting Enrollment (First Friday in Sept. 2015)	Ending Enrollment (June 9, 2016)	By area/ square foot	By class size, based on School Board Policy	Start of Year Capacity Utilization		End of Year Capacity Utilization	
					% capacity based on area/ square foot	% capacity based on class size	% capacity based on area/ square foot	% capacity based on class size
Brookfield Elementary	607	615	617	648	98%	94%	100%	95%
Burleigh Elementary	633	641	816	863	78%	73%	79%	74%
Dixon Elementary (with preschool)*	367	364	555	575	66%	64%	66%	63%
Swanson Elementary (with cafeteria expansion)	793	818	775	795	102%	100%	106%	103%
Swanson Elementary (prior to cafeteria expansion)	793	818	686	767	116%	103%	119%	107%
Tonawanda Elementary	364	368	413	455	88%	80%	89%	81%

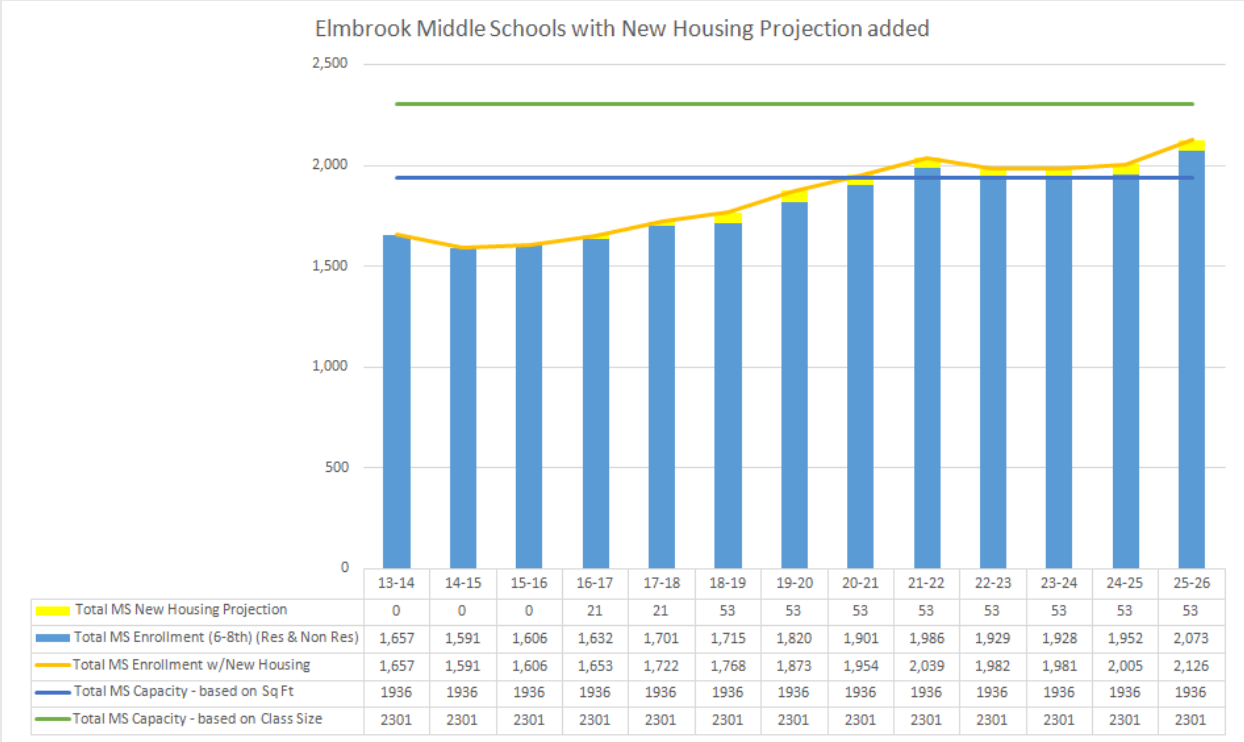
*Dixon Elementary School hosts the District's Preschool program. The table above reflects the capacity needed to continue the program.

Middle and High School Capacity

Enrollment projections at the middle and high school were analyzed and it was determined that capacity pressure would not be significant enough to warrant changing the feeder paths to balance middle school enrollments. As enrollment continues to increase at the elementary

school level, enrollment capacity should be monitored at the middle and high school. Current projections show the middle schools getting close to the low end of the target capacity range by 2020-21, the end of the Task Force's five year timeframe for recommendation (see Chart 8 below). Since middle schools have more flexibility to manage capacity pressures than at the elementary school level, and because it was at the end of the projected timeframe, and still within the target capacity range, it was decided that feeder paths should not be changed at this time. It may be necessary to review the projections at the secondary level in the future. Based on analysis, Brookfield Central is not projected to reach the low end of the target capacity until 2022-23 and Brookfield East is not projected to have capacity pressure. School specific data can be found in the "Middle and High School Historic and Projected Enrollment" in the Appendix and more information can be found in the "Analysis of Building Capacity – Middle and High Schools - EUA" report in the Appendix.

Chart 8: Middle School Historic and Projected Enrollment with New Housing Projections (2013-2026)



	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	24-25	25-26
Total MS New Housing Projection	0	0	0	21	21	53	53	53	53	53	53	53	53
Total MS Enrollment (6-8th) (Res & Non Res)	1,657	1,591	1,606	1,632	1,701	1,715	1,820	1,901	1,986	1,929	1,928	1,952	2,073
Total MS Enrollment w/New Housing	1,657	1,591	1,606	1,653	1,722	1,768	1,873	1,954	2,039	1,982	1,981	2,005	2,126
Total MS Capacity - based on Sq Ft	1936	1936	1936	1936	1936	1936	1936	1936	1936	1936	1936	1936	1936
Total MS Capacity - based on Class Size	2301	2301	2301	2301	2301	2301	2301	2301	2301	2301	2301	2301	2301

Capacity Analysis Summary

The table above reflects that Brookfield Elementary and Swanson Elementary were at or over capacity at the end of the 2015-16 school year. The cafeteria and gym expansion at Swanson Elementary that occurred in the summer of 2016 was necessary to allow for the capacity of the cafeteria to match the capacity of the classrooms. While this solution addresses concerns with lunch and gym space, enrollment capacity concerns may continue. Eppstein Uhen Architects have confirmed that the district has the ability to add square footage to Dixon Elementary, Brookfield Elementary, Swanson Elementary, and Burleigh Elementary. It's estimated that each square foot of new construction will cost $250.

Understanding Enrollment Projections

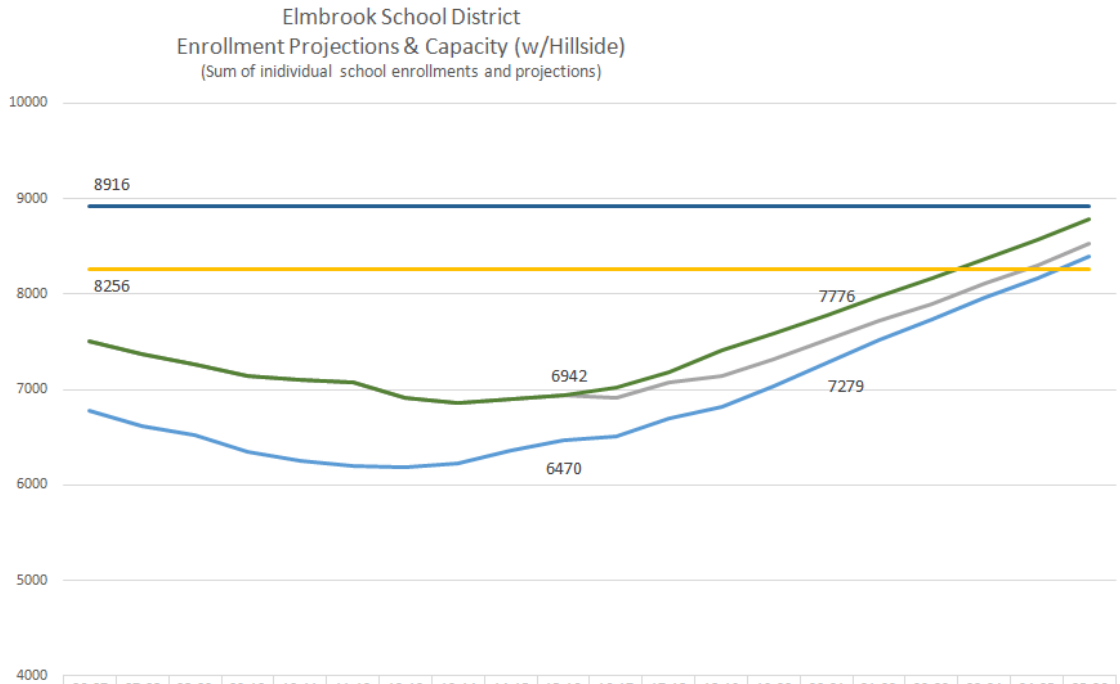
Upon creating the Task Force, the Board of Education expected to see a five year plan for balancing capacity across the District. Although the Task Force wanted to focus on solutions that would work for the next five to ten years, it was understood that projections that far out are typically far less accurate so it focused mainly on the next five years to ensure impact through the 2020-21 school year.

During the analysis, it became evident that the elementary schools may reach and exceed capacity well before the 2025-26 school year. While benchmarking other districts, the primary factors, or current accelerators, commonly driving enrollment fluctuations were identified as the following:

- Increasing Births to Residents
- Existing Housing Turnover
- Rise of New Residential Housing
- Increased Market Share

Enrollment projections were based on five years of birth data, historical five year average birth to kindergarten ratios and Grade Progression Ratios, which incorporate the impact of housing turnover, and market share change. The Grade Progression Ratio does show the impact of some planned housing developments, but not all future residential housing. Because significant new housing is in process or being proposed, new housing was added incrementally to the projections based on the Grade Progression Ratios starting in 2016-17. This growth is projected to continue, as shown in the chart below. The "Elementary School Enrollment Projections and Capacity" graphs can be found in the Appendix.

Chart 9: Elmbrook School District Enrollment Projections and Capacity



	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	24-25	25-26
Enrollment - Resident	6776	6618	6521	6344	6259	6194	6181	6232	6359	6470	6503	6698	6822	7032	7279	7519	7736	7959	8161	8390
Enrollment - Total (w/o major new housing)	7509	7371	7269	7140	7102	7072	6913	6865	6899	6942	6919	7079	7146	7321	7514	7715	7900	8110	8304	8529
Enrollment - Total with Major New Housing	7509	7371	7269	7140	7102	7072	6913	6865	6899	6942	7017	7176	7408	7583	7776	7977	8162	8372	8566	8791
Capacity based on Sq Ft (not incl Hillside Capacity)	8256	8256	8256	8256	8256	8256	8256	8256	8256	8256	8256	8256	8256	8256	8256	8256	8256	8256	8256	8256
Capacity based on Class Size (not incl. Hillside Cap.)	8916	8916	8916	8916	8916	8916	8916	8916	8916	8916	8916	8916	8916	8916	8916	8916	8916	8916	8916	8916

Grade Progression Ratio Sensitivity Analysis

A sensitivity analysis was performed to understand the impact of Grade Progression Ratios variance on enrollment projections. The analysis showed that a small swing of a likely +/- 2% could result in a 5-10% enrollment shift and an unlikely +/- 5% shift could result in a +/- 20% enrollment shift by 2020-21, as shown in Chart 10 below. This data highlighted the need for ongoing monitoring of enrollment data and trends to understand shifts in grade progression trends so the district can accurately adjust to changing enrollment.

Chart 10: Sensitivity Analysis for Grade Progression Ratios

	2015-16 Actuals			
	K-5 Total	6-8 Total	9-12 Total	Total
Res. Only	2,687	1,454	2,332	6473

GPRs +/- 5% 2020-21 Impact (highly unlikely)

	2020- 21 Projection			
	Residents Only - **With** New Housing			
GPRs	K-5 Total	6-8 Total	9-12 Total	Total
2% lower	2,793	1,374	1,896	6,063
5 Yr Avg	3,222	1,825	2,489	7,536
2% higher	3,564	2,231	3,078	8,874
GPRs	Projected Enrollment Impact			Total
2% lower	-13%	-25%	-24%	-20%
2% higher	11%	22%	24%	18%

GPRs +/- 2% 2020-21 Impact (likely)

	2020- 21 Projection			
	Residents Only - **With** New Housing			
GPRs	K-5 Total	6-8 Total	9-12 Total	Total
2% lower	3,003	1,596	2,202	6,801
5 Yr Avg	3,222	1,825	2,489	7,536
2% higher	3,311	1,938	2,673	7,921
GPRs	Projected Enrollment Impact			Total
2% lower	-7%	-13%	-12%	-10%
2% higher	3%	6%	7%	5%

New housing is projected to add only 262 incremental students to the 2020-21 total, based on 8 new MF and 1 new SF development that are in process, approved and/or are being planned

Accelerator Analysis & Conclusions

Overview

As previously mentioned, the enrollment projections incorporate the impact of birth rates, birth to kindergarten ratios, and Grade Progression Ratios (housing turnover and market share change) and the data in this section further analyzes these accelerator's impact on enrollment projections.

Accelerator #1 - Increasing Births to Residents

The Task Force did a thorough review of the Wisconsin Department of Health Services' actual birth data (not projected) of children born to parents residing in the district. The number of births to residents has been steadily increasing since 2007, with a significant increase in 2011. The children born to parents residing in the district from 2011 through 2015 are at a 25 year high.

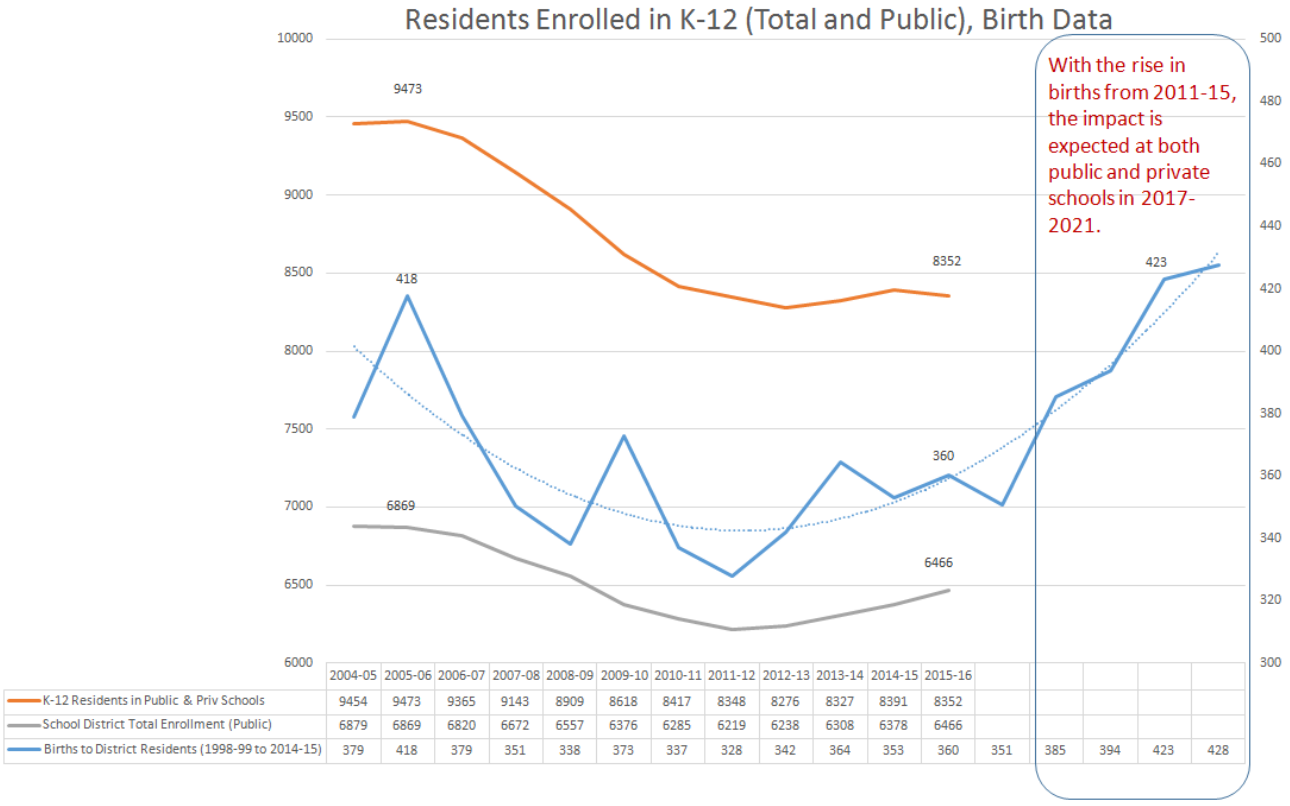
These students are expected to enroll in kindergarten in 2017-18 through 2020-21, which are projected to result in record-high kindergarten classes during these four years. For comparison purposes, the last time birth rates were this high, was 2002-03 and 2005-06. At that time:

- Total resident enrollment in the district was around 6,900 students, approximately 450 more than in 2015-16. See Chart 11 below.
- Kindergarten enrollment ranged from 429 to 489 students which is 20 to 60 more students than were enrolled in 2015-16

As more children are born in the district, stay in the district, and attend school in the district (both public and private), the need to plan for increases at every building will be necessary.

Birth rate is a key component to enrollment projections as it is based on actual data, and correlates strongly and consistently with future enrollments. This correlation can be seen in Chart 11 below. The birth numbers in Chart 11 correspond with the births from five years prior and are lined in this way to demonstrate how that birth year affects kindergarten enrollments (i.e., the births in 1998-99 affect the 2004-05 kindergarten class.)

Chart 11: Residents Enrolled in K-12 (Total and Public), Birth Data



	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16					
K-12 Residents in Public & Priv Schools	9454	9473	9365	9143	8909	8618	8417	8348	8276	8327	8391	8352					
School District Total Enrollment (Public)	6879	6869	6820	6672	6557	6376	6285	6219	6238	6308	6378	6466					
Births to District Residents (1998-99 to 2014-15)	379	418	379	351	338	373	337	328	342	364	353	360	351	385	394	423	428

Birth Rate Sensitivity Analysis

In order to estimate the impact of increasing births on enrollment, a sensitivity analysis was performed using a range of Birth-to-Kindergarten Ratios (B:K) and is displayed in Table 2 below. This range of projections is also shown on Chart 11 above. Note that for projections, the "Average of the Last 5 Years" numbers were used.

Table 2: Birth Rate Sensitivity Analysis Results

Birth Years	School District Births (Source: APL)	Kindergarten Year	If B:K = Low of last 5 years 1.04	If B:K = Average of last 5 years 1.12	If B:K = High of last 5 years 1.18
2010-11	351	2016-17	363	392	415
2011-12	385	2017-18	399	431	456
2012-13	394	2018-19	407	440	466
2013-14	423	2019-2020	438	473	501
2014-15	428	2020-2021	443	478	506

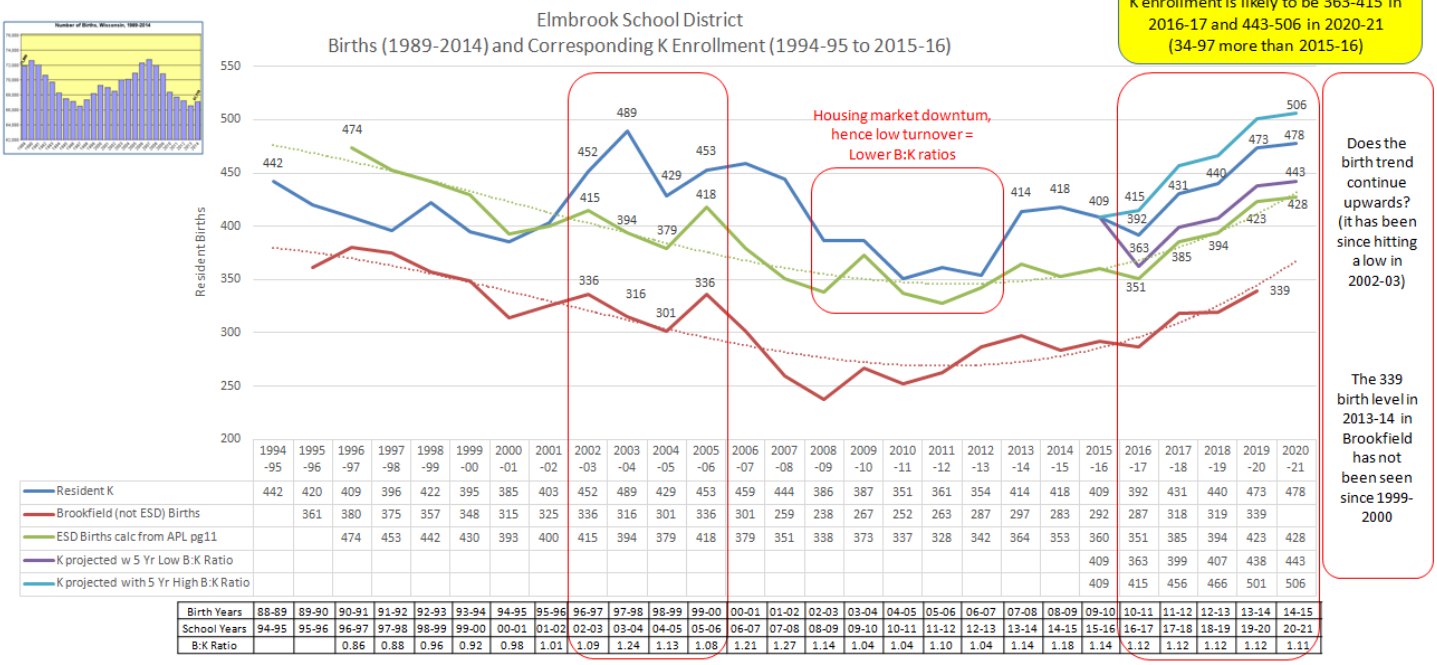
Birth Rate Data Conclusion

As seen in Chart 12 below, birth rates are approaching a 25 year high. After a one year drop in 2016-17, three to four years of enrollment growth is projected. The 2020-21 kindergarten class is likely to be the biggest kindergarten class in over 13 years, as those students were born to residents in 2014-15, and will enroll in private and public schools.

Chart 12: Birth Rates Approaching 25 year High

Births are approaching a 25 year high

We are expecting a 1 year dip in 2016-17, followed by 3-4 years of high growth



	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
Resident K	442	420	409	396	422	395	385	403	452	489	429	453	459	444	386	387	351	361	354	414	418	409	392	431	440	473	478
Brookfield (not ESD) Births		361	380	375	357	348	315	325	336	316	301	336	301	259	238	267	252	263	287	297	283	292	287	318	319	339	
ESD Births calc from APL pg11			474	453	442	430	393	400	415	394	379	418	379	351	338	373	337	328	342	364	353	360	351	385	394	423	428
K projected w 5 Yr Low B:K Ratio																						409	363	399	407	438	443
K projected with 5 Yr High B:K Ratio																						409	415	456	466	501	506

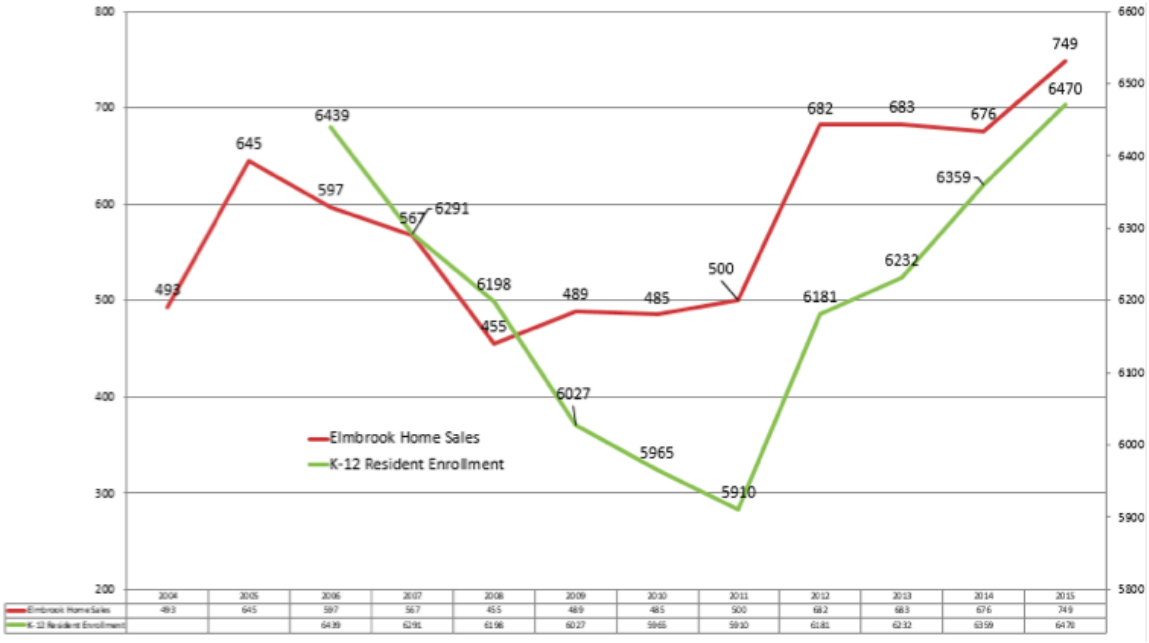
Birth Years	88-89	89-90	90-91	91-92	92-93	93-94	94-95	95-96	96-97	97-98	98-99	99-00	00-01	01-02	02-03	03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15
School Years	94-95	95-96	96-97	97-98	98-99	99-00	00-01	01-02	02-03	03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21
B:K Ratio			0.86	0.88	0.96	0.92	0.98	1.01	1.09	1.24	1.13	1.08	1.21	1.27	1.14	1.04	1.04	1.10	1.04	1.14	1.18	1.14	1.12	1.12	1.12	1.12	1.11

7/26/2016

Accelerator #2 - Existing Housing Turnover

Home sales have been quickly increasing since 2012. Projections prior to 2012 used Grade Progression Ratios that incorporated a very low housing turnover market. Chart 13 below shows that home sales in 2015 were at a ten year high and the K-12 resident enrollment has been correspondingly increasing as sales increased since 2012. The analytical hypothesis was that older community members were leaving Brookfield and Elm Grove and families moved in and began to attend Elmbrook Schools. This has the potential for certain neighborhoods to have higher turnover than others, therefore, the Grade Progression Ratios may underestimate the enrollment in these neighborhoods potentially causing unexpected enrollment bubbles for some elementary schools.

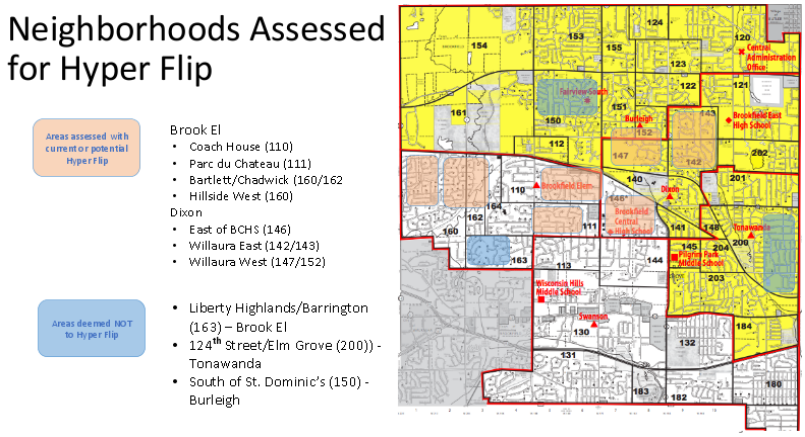
Chart 13: Existing Home Sales: Enrollment Moves with MLS Sales



To analyze these potential bubbles, demographic data and realtor input identified neighborhoods that were turning over, or had the potential to turn over, at a faster rate than the progressions were showing. Additionally neighborhoods that showed both enrollment growth and high turnover were identified as potential proxy neighborhoods.

Existing and potential "hyper turnover" neighborhoods were identified in the Brookfield Elementary and Dixon Elementary. All of the "Housing Turnover Data" can be found in the Appendix.

Chart 14: Hyper Flip Neighborhoods



The data analysts completed a sensitivity analysis applying Grade Progression Ratios from high growth proxy neighborhoods to "potential hyper turnover" neighborhoods Additional scenarios were looked at comparing Grade Progression Ratios from the proxies' aggressive growth time periods (two years) to longer, more stable periods (five years).

The table below shows enrollment projections for Brookfield Elementary and Dixon Elementary where "potential" hyper housing turnover could occur using proxy Grade Progression Ratios from tracts that had experienced significant growth in enrollment and housing sales. The data shows the differences in projected enrollment that could occur based on the housing turnover and this scenario analysis resulted in a possible incremental 46 students to Brookfield Elementary in 2017-18 and 15 students Dixon Elementary in 2017-18.

Table 3: Housing Turnover Sensitivity Analysis Using Different Grade Progression Ratio Proxies

School	Year	2 Year Avg Tract GPR for 1st 2 years, then 5 Year GPR			2 year Tract GPR		
		Baseline Tract	Proxy Tract	Potential Incremental Growth	Baseline Tract	Proxy Tract	Potential Incremental Growth
Brookfield Elementary	2017-18	326	372	46	326	372	46
	2020-21	346	420	73	387	502	115
Dixon Elementary	2017-18	168	183	15	168	183	15
	2020-21	173	179	7	177	215	38

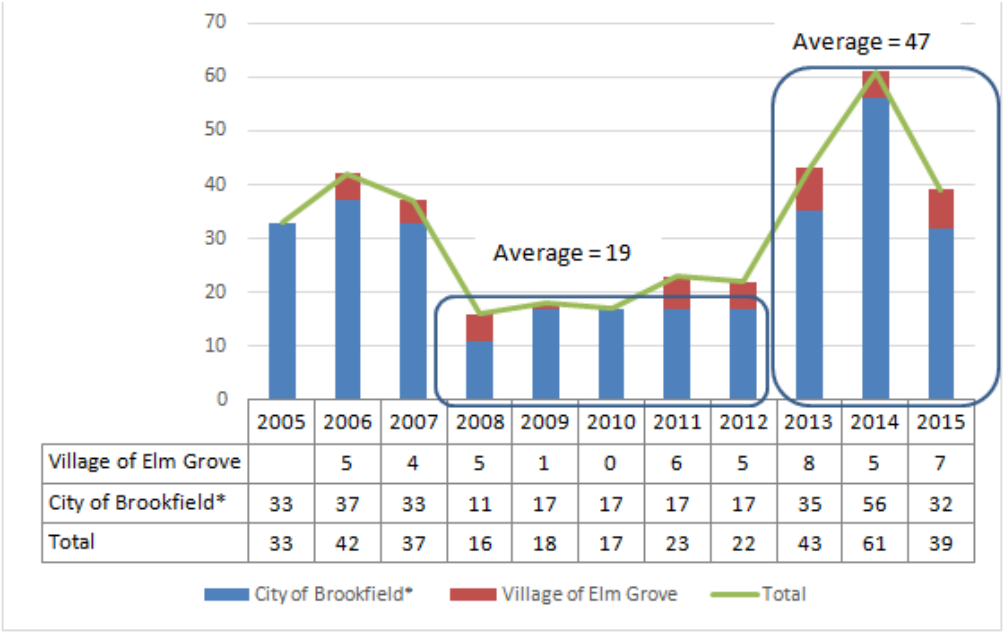
Record Housing Turnover Conclusion

This is incremental growth to the enrollment projections that was not incorporated into the final enrollment projections because of the unpredictability of the market and data dynamics and the difficulty in isolating this accelerator from others in the Grade Progression Ratio. However, because this accelerator has the potential to accelerate student growth in some geographies the Task Force further analyzed this data and recommends ongoing monitoring of housing turnover data and trends. This monitoring will assess pockets of student enrollment growth that might require school capacity adjustments sooner than anticipated to accommodate this accelerated growth.

Accelerator #3 - Rise of New Residential Housing

The district has experienced growth in multifamily and single family housing starts since 2011. In 2008-2012, single family development averaged 19 new homes per year and in 2013-2015, the average climbed to 47 new homes. The new Linfield Crossing development of 25 homes is included in the 2013 and 2014 housing starts shown below in Chart 15; none of the Elmbrook Estates homes (46 lots with building starting in 2016) are included in Chart 15 below.

Chart 15: Single Family New Housing Starts - 2005-2015



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Village of Elm Grove		5	4	5	1	0	6	5	8	5	7
City of Brookfield*	33	37	33	11	17	17	17	17	35	56	32
Total	33	42	37	16	18	17	23	22	43	61	39

Recently Completed New Home Impact

In late 2013, permits started to come in for a new single family residential housing development in Brookfield, in Tract 180, called Linfield Crossing. In total, 25 lots were permitted and by summer 2016, all lots were filled with single family homes. The district started to see students from Linfield Crossing homes in 2015-16.

The data analysts decided to use Linfield Crossing as a proxy for determining new home density, as it is made of new, affordable homes, that will attract families that would attend public schools, giving the district an accurate student density profile of these types of houses. It was determined that the density of K-12 students in Linfield Crossing for 2015-16 was 0.64 students per unit, or 16 students in 25 homes.

Any future residential housing developments that have similar qualities as Linfield Crossing would likely yield approximately the same number of students per home. The only new major single family development included in projections are the 46 lots comprising Elmbrook Estates in Tract 120 that began development in 2016[1]. For more information on the new residential housing impact, see "New Single Family Housing Impact Data" in the Appendix.

New Residential Housing Effect on Elementary Enrollment

The City of Brookfield and Village of Elm Grove have nine major future housing developments in process, including 742 multi-family units (441 of which are 2 and 3 bedroom units) and 46 single family units. To project the potential impact on student enrollment, student density in existing residential housing developments were analyzed in depth to create benchmarks for projecting potential enrollments for new residential housing developments. The analysis was limited to the developments with two and three bedroom units of similar size to the planned future developments. Given the uncertainty of the students living in the future developments, a density range was created for a low and moderate impact of student enrollment to include in the future forecast. In 2016-17, 65-98 incremental students in K-12 are projected to enroll from new housing and 131-164 in 2018-19. The data presented below in Table 4 shows this impact the new developments are projected to have on school enrollment by elementary school geography and academic year. For more detailed information on Table 4, see "Detailed New Residential Housing - Estimated Impact" in the Appendix.

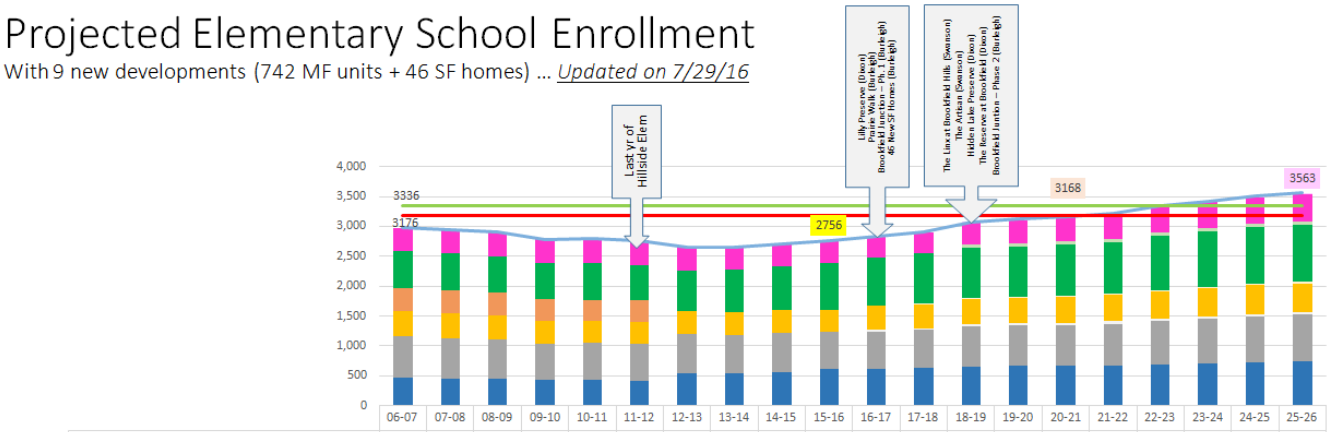
Table 4: New Residential Housing - Estimated Impact

New Single Family and 8 new multi-family developments in process or being proposed.				**Low Impact Estimate (based on average # of students over 5 years in all 2-3 bedroom units)**				**Moderate Impact Estimate (based on density of students in 2015-16 in all 2-3 bedroom units)**			
Major Residential Development	**Tract**	**Current School**	**Units**	**K-5**	**6-8**	**9-12**	**Total**	**K-5**	**6-8**	**9-12**	**Total**
2016-17 First Year of Occupancy 1 Single Family Development 3 Multi-family Developments	121, 161, 112, 120	Dixon and Burleigh	46 111 (2-3 bedroom)	31	15	20	65	46	21	31	98
2017-18 First Year of Occupancy No incremental units				0	0	0	0	0	0	0	0
2018-19 First Year of Occupancy 5 Multi-family Developments	184, 183, 130, 202, 112	Tonawanda, Swanson, Dixon, Burleigh	330 (2-3 bedroom)	66	30	34	131	87	32	45	164

[1] It should be noted that when projecting Elmbrook Estates, the data analysts used a Low Density estimate of 0.47 based on the district-wide density and used a Moderate Density estimate of double that or 0.93. The average of these is 0.70, which is close to the 0.64 determined in the Linfield Crossing proxy, so the projections were not modified.

The district is calculating the elementary school capacity based on square footage, which is currently at 87%. The current projections show major new housing impact to utilize approximately 4% of additional elementary school capacity. Chart 16 below shows the new housing impact by elementary school and academic year.

Chart 16: New Residential Housing Effect on Elementary Enrollment Projections



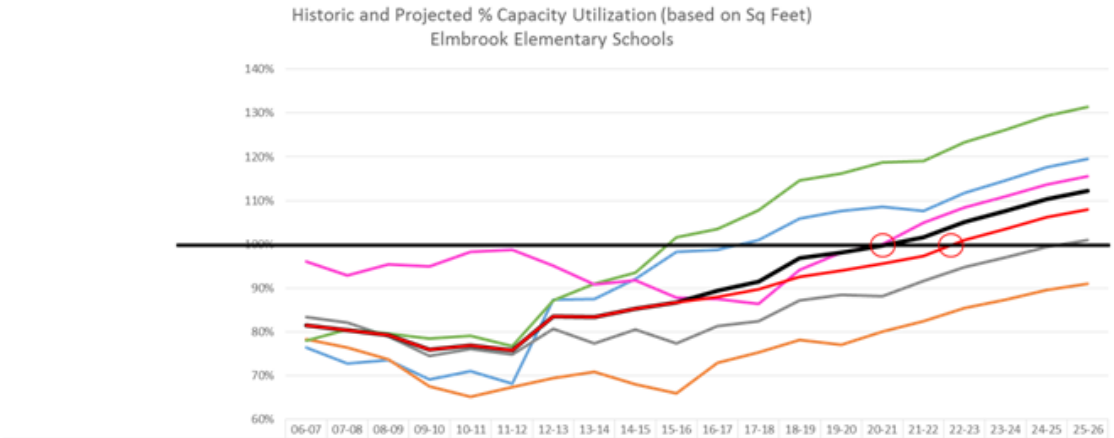
	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	24-25	25-26
Tonawanda Elem - Additional New Housing Est.	0	0	0	0	0	0	0	0	0	0	0	0	21	21	21	21	21	21	21	21
Tonawanda Elem - Total Enrollment	397	384	394	392	406	408	393	375	379	363	361	357	368	384	392	412	427	437	449	456
Swanson Elem - Additional New Housing Est.	0	0	0	0	0	0	0	0	0	0	0	0	52	52	52	52	52	52	52	52
Swanson Elem - Total Enrollment	605	625	617	609	614	595	676	706	725	788	802	835	836	848	869	871	903	926	950	967
Hillside Elem - Total Enrollment	386	383	379	375	351	352	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dixon Elem - Additional New Housing Est.	0	0	0	0	0	0	0	0	0	0	13	13	20	20	20	20	20	20	20	20
Dixon Elem - Total Enrollment	435	424	409	375	362	374	386	394	378	366	392	398	414	408	424	438	454	465	477	485
Burleigh Elem - Additional New Housing Est.	0	0	0	0	0	0	0	0	0	0	33	33	40	40	40	40	40	40	40	40
Burleigh Elem - Total Enrollment	681	670	645	609	621	611	659	632	658	632	631	640	672	682	679	707	734	752	771	784
Brookfield Elem - Additional New Housing Estimate	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Brookfield Elem - Total Enrollment (Res & Non Res)	472	449	454	427	439	421	539	540	568	607	610	623	653	664	670	665	689	707	725	737
Total Elementary w/ New Housing Projection	2976	2935	2898	2787	2793	2761	2653	2647	2708	2756	2842	2898	3076	3119	3168	3226	3341	3421	3506	3563
Capacity based on Sq Ft	3176	3176	3176	3176	3176	3176	3176	3176	3176	3176	3176	3176	3176	3176	3176	3176	3176	3176	3176	3176
Capacity based on Class Size	3336	3336	3336	3336	3336	3336	3336	3336	3336	3336	3336	3336	3336	3336	3336	3336	3336	3336	3336	3336
Total Elem Enrollment (w/o Major New Housing)	2976	2935	2898	2787	2793	2761	2653	2647	2708	2756	2796	2853	2943	2986	3034	3093	3207	3288	3372	3430
Total Elem - Additional New Housing Estimate	0	0	0	0	0	0	0	0	0	0	46	46	133	133	133	133	133	133	133	133

Note: A full page version of this graph can be found in the Appendix.

Rise of New Residential Housing Conclusion

The district is aware of and planning for, the 742 multi-family units and 46 single family units that are in process. Using historic new housing development estimates in the district, current elementary schools were projected to reach capacity by 2022-23. With the recent acceleration of new housing in process or development or being planned, adjusted enrollment projections accelerates the timeline to reach capacity by one to two years earlier, as shown in the graph below.

Chart 17: Historic and Projected Percentage of Capacity Utilization Based on Square Feet



	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	24-25	25-26
Brookfield Elem w/ New Housing Projection	76%	73%	74%	69%	71%	68%	87%	88%	92%	98%	99%	101%	106%	108%	109%	108%	112%	115%	118%	120%
Burleigh Elem w/ New Housing Projection	83%	82%	79%	75%	76%	75%	81%	77%	81%	77%	81%	82%	87%	88%	88%	92%	95%	97%	99%	101%
Dixon Elem w/ New Housing Projection	78%	76%	74%	68%	65%	67%	70%	71%	68%	66%	73%	75%	78%	77%	80%	83%	85%	87%	90%	91%
Swanson Elem w/ New Housing Projection	78%	81%	80%	79%	79%	77%	87%	91%	94%	102%	104%	108%	115%	116%	119%	119%	123%	126%	129%	131%
Tonawanda Elem w/ New Housing Projection	96%	93%	95%	95%	98%	99%	95%	91%	92%	88%	87%	86%	94%	98%	100%	105%	108%	111%	114%	116%
Total Elem w/ New Housing Projection	82%	80%	79%	76%	77%	76%	84%	83%	85%	87%	89%	91%	97%	98%	100%	102%	105%	108%	110%	112%
Total Elem WITHOUT New Housing Projection	82%	80%	79%	76%	77%	76%	84%	83%	85%	87%	88%	90%	93%	94%	96%	97%	101%	104%	106%	108%

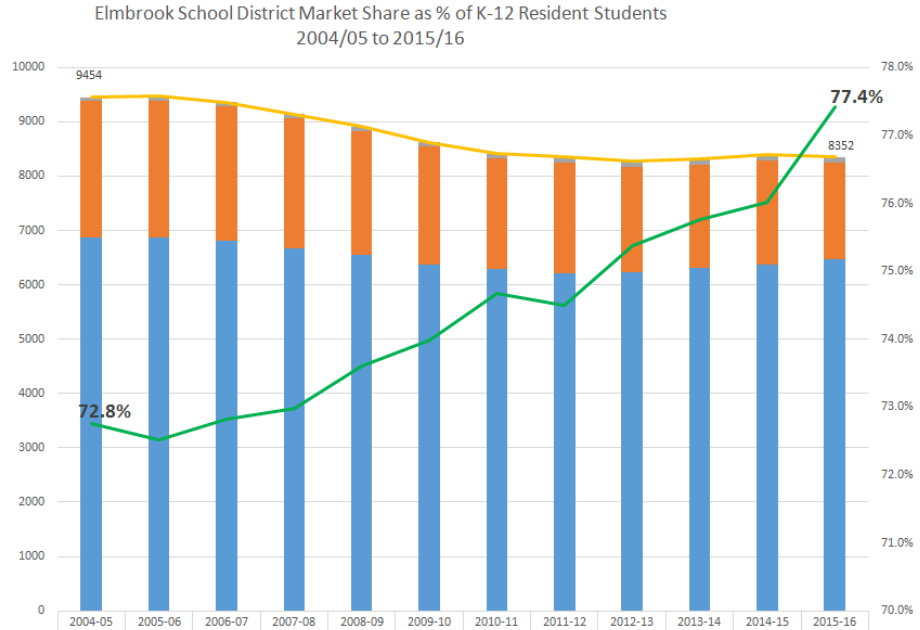
7/29/2016

Accelerator #4 - Increased Market Share

Although the total number of K-12 residents in the district had been declining since 2004, the market share of students attending the public schools has markedly increased by 4.6 percentage points over that same time, from 72.8% to 77.4%, as shown in Chart 18 below.

As shown earlier in Chart 12, with recent increased birth rates in Brookfield and Elm Grove, larger kindergarten classes are expected, so public and private enrollment is expected to increase accordingly.

Chart 18: Elmbrook School District Market Share



	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
OE/Ch 220 Out Enrollment*	66	81	73	77	78	77	88	98	110	116	103	103
Private & Parochial Enrollment	2509	2523	2472	2394	2274	2165	2044	2031	1928	1903	1910	1783
ELMBROOK 5K-12	6879	6869	6820	6672	6557	6376	6285	6219	6238	6308	6378	6466
Total Students	9454	9473	9365	9143	8909	8618	8417	8348	8276	8327	8391	8352
ESD	72.8%	72.5%	72.8%	73.0%	73.6%	74.0%	74.7%	74.5%	75.4%	75.8%	76.0%	77.4%

Increased Market Share Conclusion

While total resident enrollment first decreased (2004-2011) and then increased (2012-2016), the School District of Elmbrook's market share (% of resident students choosing to attend the Elmbrook Schools) increased from 72.8% to 77.4% (+4.6%) since 2004-05. Each percent gain of market share experienced by the district resulted in an additional 80-95 students. If the market share trend of the last five years continues, the district's market share could reach 80%, which would add approximately 160-220 students.

The Grade Progression Ratios averaged for the past 5 years and used for the projections include the enrollment increases seen from market share gains, so incremental impact from market share is not added into projections.

Accelerator Conclusions

The combination of rising birth rates, housing turnover, new residential housing, and increased market share have highlighted the need to balance enrollment and manage capacity at the elementary schools. To summarize, enrollment projections use historical birth rates, birth to kindergarten (B:K) ratios, and historical Grade Progression Ratios to project future enrollments. Incremental enrollment impact was estimated for new residential housing only. Housing turnover and market share are included in the Grade Progression Ratios, but should have ongoing monitoring systems in place to identify significant impact to enrollment change.

Analysis Process and Tract Level Projections

Idea Generation and Prioritization

After the Task Force studied and analyzed the enrollment, housing, and birth rate data as well as benchmarking other school districts, several ideas were generated and discussed as possible options to help balance enrollment. These ideas including changing tract school assignments, moving 5th grade to the middle schools (evaluating different grade splits), and housing all district kindergarten and 1st graders at an elementary school (creating lower and upper elementary schools). The data analysts then modeled those ideas against the data projections as well as rough cost estimates to determine the impact of these options. The Task Force reviewed the high level estimated impact to prioritize the ideas for further analysis using the Critical Success Factors as well as considering cost estimates. Options were narrowed based on capacity limitations, cost requirements, and significant family disruption. Two ideas were prioritized by the Task Force to pursue with additional analysis and data modeling: 1) shift student tract school assignments to balance enrollments across elementary schools and 2) add capacity to the elementary schools. For more information on this process, see the "Task Force Scenario Initial Analysis"and "Scenarios to Recommendations Infographic" documents in the Appendix.

Reopening Hillside

Reopening Hillside Elementary was a heavily considered option for the Task Force. Given Hillside's location on the far west side of the district and projected enrollment growth on the southern side of the district, the subsequent ripple effect to other schools would cause significant student and family disruption. This disruption, coupled with the significant cost at approximately $4 million dollars to bring the school to the current academic and environmental standards of the other elementary schools, caused this idea to be tabled to pursue less disruptive and cost effective options.

Scenario Development and Evaluation

In the summer of 2016, many scenarios were created and analyzed based on the enrollment projections and accelerator data. Initially, five illustrative scenarios were presented to the Task Force to assess relative to the Critical Success Factors. After the Task Force evaluated the initial five scenarios, they identified seven more for in-depth analysis.

In the third iteration, Task Force members reviewed data on schools that were over and under capacity and tract movement and division data. These two data points helped the Task Force identify the final scenario that was analyzed in more detail as a potential solution to recommend to the Board of Education.

Importance of Tract Level Projections and Analysis

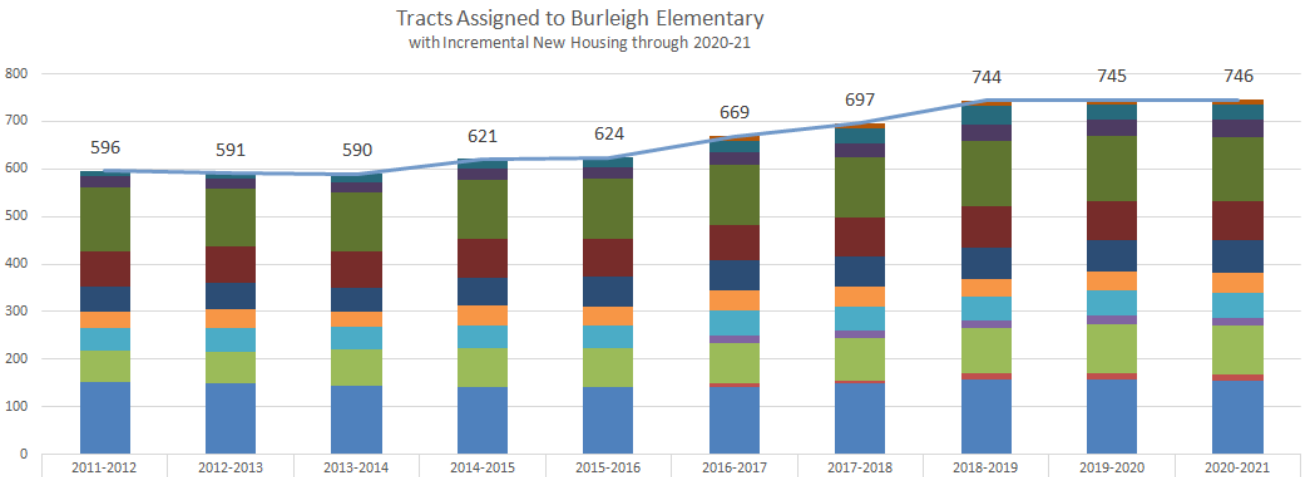
The Task Force identified the need for specific tract-level projections and analysis that could result in actionable and thoughtful scenarios to balance enrollment. The Task Force used Third Friday enrollment data as a baseline for all enrollment projections. However, that number is not always the accurate number of students in the classroom, which can change based on open enrollment, interdistrict transfer, student withdrawal, and student additions throughout the year. The numbers in this report are as close as the Task Force could get to actual enrollment numbers at a tract level.

The tract data includes the tracts assigned to each school and only includes Third Friday enrollment data from 2015. After analyzing the data, the Task Force assessed:

- the impact of reallocating tracts from over capacity schools to under capacity schools, in addition to forecasting that impact over the next five years.
- the impact of each of the 15 scenarios on capacity and student and family disruption.
- school level projection, tract level projection, five year enrollment history, and five year plus enrollment data for each elementary, middle, and high school in the district.

As shown in Chart 19 below, the Task Force reviewed historical and projected tract data to determine where each school's enrollment is contributed from and understand the tracts that would have the most impact on balancing across the district. For data on all schools, see the "Elementary Tract Projection and Analysis" document in the Appendix.

Chart 19: Burleigh Elementary Tract Projection and Analysis - Example



	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021
Trct 161 NH	0	0	0	0	0	10	10	10	10	10
Tract 161	11	10	19	21	20	24	33	41	31	32
Tract 154	25	22	20	22	25	26	28	33	35	37
Tract 153	133	121	124	125	126	126	126	137	136	134
Tracts 151 & 152	75	77	77	83	78	74	81	87	82	80
Tracts 124 & 155	52	57	51	58	65	63	65	67	67	70
Tract 123	35	39	32	41	39	42	42	38	39	42
Tract 122	48	50	45	48	48	52	48	49	53	52
Tract 120 NH	0	0	0	0	0	17	17	17	17	17
Tract 120	65	65	77	81	81	86	89	95	104	101
Tracts 112 & 151 NH	0	0	0	0	0	6	6	13	13	13
Tracts 112 & 150	152	150	145	142	142	143	150	157	157	156
Total w/ New Hsg	596	591	590	621	624	669	697	744	745	746

Over/Under Capacity Data

According to the capacity analysis, Brookfield Elementary will be at capacity for the 2017-18 year and Swanson Elementary is projected to be over capacity. By 2020-21, Swanson Elementary, Brookfield Elementary, and Tonawanda Elementary are projected to be over-capacity and Burleigh Elementary and Dixon Elementary are projected to be under capacity.

The Task Force used the projected capacity estimates, shown in Chart 20 below, to focus scenarios for analysis. The capacity for Dixon Elementary assumes that preschool students move to Burleigh Elementary.

Chart 20: Over/Under Capacity by Elementary School

Students Under/Over Capacity	2017-18		2020-21	
	Square Feet	Class Size	Square Feet	Class Size
Brook El	0	31	-72	-41
Burleigh	119	166	70	117
Dixon	204	235	159	190
Swanson	-52	-32	-154	-134
Tonawanda	50	92	-4	38
District	300	471	-27	144

- Givers: Brook El and Swanson
- Takers: Dixon, Burleigh, Tonawanda

Students Under/Over Capacity	2017-18		2020-21	
	Square Feet	Class Size	Square Feet	Class Size
PPMS	107	302	6	201
WHMS	179	349	68	238
District	287	652	74	439

Students Under/Over Capacity	2017-18		2020-21	
	Square Feet	Class Size	Square Feet	Class Size
BCHS	216	311	263	358
BEHS	331	371	245	285
District	287	652	74	439

Scenario Levers
- Shifting Tracts/Splitting Tracts
- Feeder Shifts
- Adding Capacity

Based on its central location and proximity to Swanson Elementary and Brookfield Elementary tracts, as well as its designation as a swing school, it was determined that Dixon Elementary would play a key role in realignment efforts to balance enrollment. To increase Dixon Elementary's capacity, discussion ensued around moving the preschool program to Burleigh Elementary. Because of the synergy with the Early Childhood program at Burleigh, as well as the capacity and facility space compatibility, the Task Force decided to recommend that the preschool program move from Dixon Elementary to Burleigh Elementary starting in 2017-18. This recommendation provides additional capacity at Dixon Elementary and was carried through all scenarios analyzed and recommended.

Tract Reassignment and Division Data

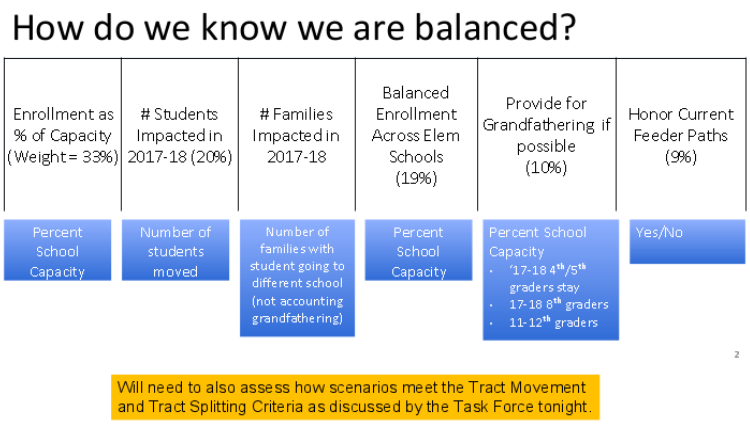
The task force developed criteria and factors to consider when reassigning a tract to a different school. Based on this data, tracts were identified that could be reassigned with limited disruption. The data related to this decision can be found in Table 5 below.

Table 5: Tract Reassignment and Division Factors

Tract Division - Criteria/Factors to Consider	Tract Movement - Criteria/Factors to Consider
• High Density (less than 200 houses) • Natural geographic split • Neighborhood continuity • Proximity to new/existing school • Transportation times • Pending development that would yield more families • Visual organization	• Proximity – distance, transportation • Honoring communities and neighborhoods • Balances enrollment • Grandfathering Impact • High Density • Growth Projections • Number of families

Finally, the Task Force had to determine how it would assess scenarios relative to one another. The chart below shows that the Task Force used the Critical Success Factors to compare scenarios and to determine which scenario to develop as a detailed solution to recommend to the Board of Education.

Chart 21: How do we know we are balanced?



Scenario Evaluation to Multi-Phased Solution

Task Force members assessed many scenarios against the Critical Success Factors to identify which scenario would have the least amount of disruption to families and would ultimately lead to more balanced capacity at each school. The Task Force reached consensus, within individual groups, on the scenario that best aligned to the Critical Success Factors. For the complete set of data, see the "Scenario Evaluation with Critical Success Factors" in the Appendix.

Once a scenario was identified, the Task Force began a deeper analysis to deliver a multi-phased solution and recommendation.

Table 6 on the following page depicts the scenario evaluation process using the top five Critical Success Factors. The tract selection factors included in the graph are proximity (distance and transportation), honoring communities and neighborhoods, and high density.

Table 6: Scenario Chart with Critical Success Factors listed

Green = Meets Critical Success Factor Yellow = Somewhat Meets Critical Success Factor Red = Does Not Meet Critical Success Factor	Critical Success Factors					Other Factors	
Scenario	**Capacity**	**Family Impact**	**Balance**	**Grand-fathering**	**Honoring Feeder Path**	**Tract selection factors**	**Cost**
Recommended Solution: 113 & 144 to Dixon; split 111; and potentially add capacity to elementary school(s) by 2020-21							
132 & 111 East to Dixon; feeder school shifts for 132							
132 to Dixon; add capacity to Brookfield Elementary in 2020-21							
113 & 144 to Dixon with swing alignment and keep feeder paths							
113 & 144 to Dixon with swing alignment; keep feeder paths; add capacity to Brookfield Elementary in 2020-21							
144 & 111 East to Dixon; 183 to Burleigh; keep feeder paths						144 & 111 -  183 - 	
163, 111 East & 144 to Dixon; 143 to Burleigh; and 184 to Swanson							
180 & 181 to Dixon; don't shift feeders; add capacity to Dixon & Brookfield Elementary in 2020-21							
132, 182, and 111 East to Dixon; 143 to Burleigh; Dixon stays swing							
183, 181, & 111 East to Dixon; 143 to Burleigh; Dixon stays swing							
183, 182, 111 East to Dixon; 143 to Burleigh							
182 & 183 to Dixon; add capacity at Brookfield Elementary							

Recommendation Support

The recommended scenario of moving students in Tracts 113 and 144 to Dixon, splitting Tract 111, and adding capacity to Brookfield Elementary by 2020-21 was chosen for the following reasons:

- Swanson Elementary and Brookfield Elementary were over capacity. Dixon Elementary was the closest school and was under capacity, allowing it to take on additional students from Swanson and Brookfield Elementary.
- Tracts 113 and 144 had proximity to Dixon and geographic continuity with other tracts assigned to Dixon. The enrollment numbers show a balance within five years, does not exceed capacity, and had a low number of families that would be disrupted.
- Tract 111 was split because of the need to relieve enrollment pressures at Brookfield Elementary. It was the only tract with geographic continuity that could be easily split due to the neighborhood and community distinctions between the Norhardt and Parc du Chateau neighborhoods that also met the Critical Success Factors.
- Concerns were raised about Tracts 113 and 144 being moved during the last realignment in 2012. The Task Force felt strongly that this was the correct alignment, but wanted to ensure that families were not impacted again, outlined in the Recommendation below.

SECTION 5: INITIAL TASK FORCE RECOMMENDATION

Section 5: Initial Task Force Recommendation

Recommendation

This is a multi-phase recommendation and is a realignment of tracts among existing elementary schools. It includes moving tracts from Swanson Elementary and Brookfield Elementary to create necessary capacity to relieve existing capacity pressures and anticipated increases in enrollment. In addition, it calls for an annual analysis of enrollment to best plan for any necessary capacity expansion. All components of this recommendation begin in 2017-2018. The details to this recommendation include:

Phase 1:

- Assign Tracts 113 and 144 from Swanson to Dixon and move students in those tracts beginning September 1, 2017. Middle and High School pathways for students in Tracts 113 and 144 remain unchanged, with students attending Wisconsin Hills Middle and Brookfield Central High School.
- The Task Force recommends splitting Tract 111 into two tracts. Students in the western section would remain at Brookfield Elementary. Students in the eastern section, now Tract 115 (North Avenue, Calhoun, Gebhardt, Norhardt), would attend Dixon Elementary.
- Move the 4-Year-Old Preschool program from Dixon to Burleigh.
- All tract changes would be accompanied by grandfathering for 2017-2018 4th graders and 2018-2019 5th graders with parent provided transportation to the grandfathered school. The district is also assessing the costs of other transportation options.
- Families living in Tracts 113 and 144 that were impacted by the redistricting in 2011 would have the option to remain at their current school with parent provided transportation. The district is also assessing the costs of other transportation options.

Phase 2:

- In addition to the recommendation, the Task Force offers the following consideration:
    - Annually report out enrollment trends using the new projection formula, so as to inform planning for capacity increases that range from additions at multiple schools (permanent and/or temporary) or a replacement school.

Capacity Balancing

As shown in Tables 7 and 8 below, in 2017-18, the first year of implementation of the Task Force's recommendations, enrollment is projected to be balanced on both capacity measures: all schools are within 10% of one another and all should operate at or under 90% of capacity.

Table 7: 2017-18 Elementary School Capacity

2017-18

	Square Foot Capacity		Class Size Capacity	
	Current	Proposed	Current	Proposed
Brook El	99%	91%	95%	86%
Burleigh	85%	85%	81%	81%
Dixon	67%	93%	64%	89%
Swanson	107%	93%	104%	90%
Tonawanda	88%	88%	80%	80%
District	91%	91%	86%	86%

Table 8: 2020-21 Elementary School Capacity

2020-21

	Square Foot Capacity		Class Size Capacity	
	Current	Proposed	Current	Proposed
Brook El	105%	101%	105%	96%
Burleigh	86%	91%	86%	86%
Dixon	71%	102%	71%	97%
Swanson	117%	106%	117%	103%
Tonawanda	101%	101%	92%	92%
District	101%	101%	96%	96%

Grandfathering Students and Families

In addition, the Task Force wanted to grandfather all 4th and 5th grade students and those families impacted by Hillside closing in 2012. A deeper analysis was completed to ensure that that the elementary schools would still be within capacity ranges, even with allowing these students to stay at their current school. Table 9 below shows the impact of the grandfathering.

In addition to grandfathering, the issue of transportation was strongly considered by the Task Force. The Task Force would like to evaluate the cost of alternate transportation options for the affected tracts to understand the financial and logistical implications to the district. The recommendation may be adjusted based on these results.

Table 9: Grandfathering Analysis

With Grandfathering*
2017-18

	Square Foot Capacity		Class Size Capacity	
	Current	Proposed	Current	Proposed
Brook El	99%	93%	95%	89%
Burleigh	85%	85%	81%	81%
Dixon	67%	83%	64%	79%
Swanson	107%	99%	104%	97%
Tonawanda	88%	88%	80%	80%
District	91%	91%	86%	86%

**4th and 5th grade students for all moved tracts and families twice impacted in Tracts 113 and 144.*

Tract Realignment

The charts below show the current and proposed tract alignment. Tracts 113 and 144 were selected because of their proximity to Dixon Elementary and location on the edge of the Swanson Elementary boundary lines. Similarly, Tract 111 East was selected because of its location on the border of Brookfield Elementary's boundary lines. This realignment created contiguous school boundaries and proximity to other students and families attending the same school. For more specific boundary maps, see "Tract Realignment Boundary Maps" in the Appendix.

Chart 22: Current School Alignment by Tract

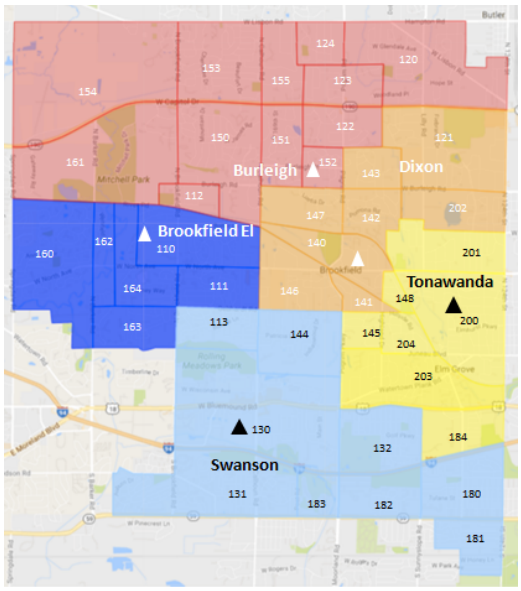
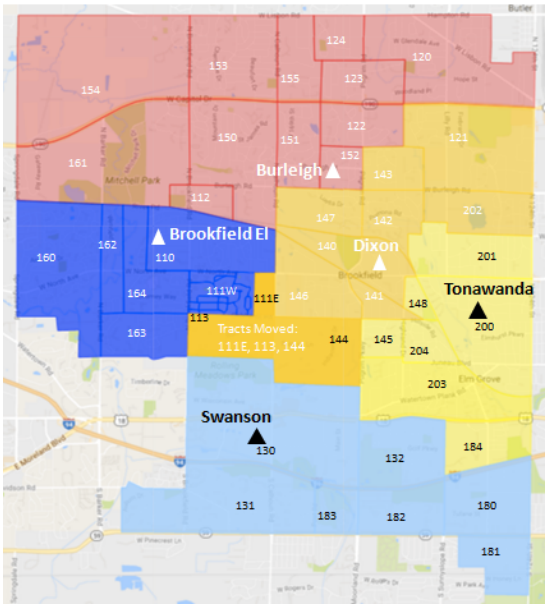


Chart 23: Recommended School Alignment by Tract



Adding Capacity

By 2020-21 enrollments are expected to increase again, putting pressure on the entire district requiring capacity adjustments to existing schools. The current data projects that the district will be at 102% of the lower capacity range in the elementary schools by 2020-21. The Task Force's recommendation includes adding capacity to existing schools after being informed with future data. Given the potential fluctuations due to unpredictable factors such as changes in housing turnover, market share, and residential housing development, the Task Force recommends that an annual monitoring process be put in place that captures the analytical rigor of the Task Force work in order to inform enrollment projections and capacity needs.

Section 6: Next Steps

Communication Plan

The following table outlines the next steps and communication plan before a formal Board approval of the Task Force's recommendations. These dates are still tentative, including when the Board will make a final decision. The Board of Education could make a decision as early as October 2016, but the dialogue could continue and a final decision could be made by December 2016.

Table 10: Communication Plan

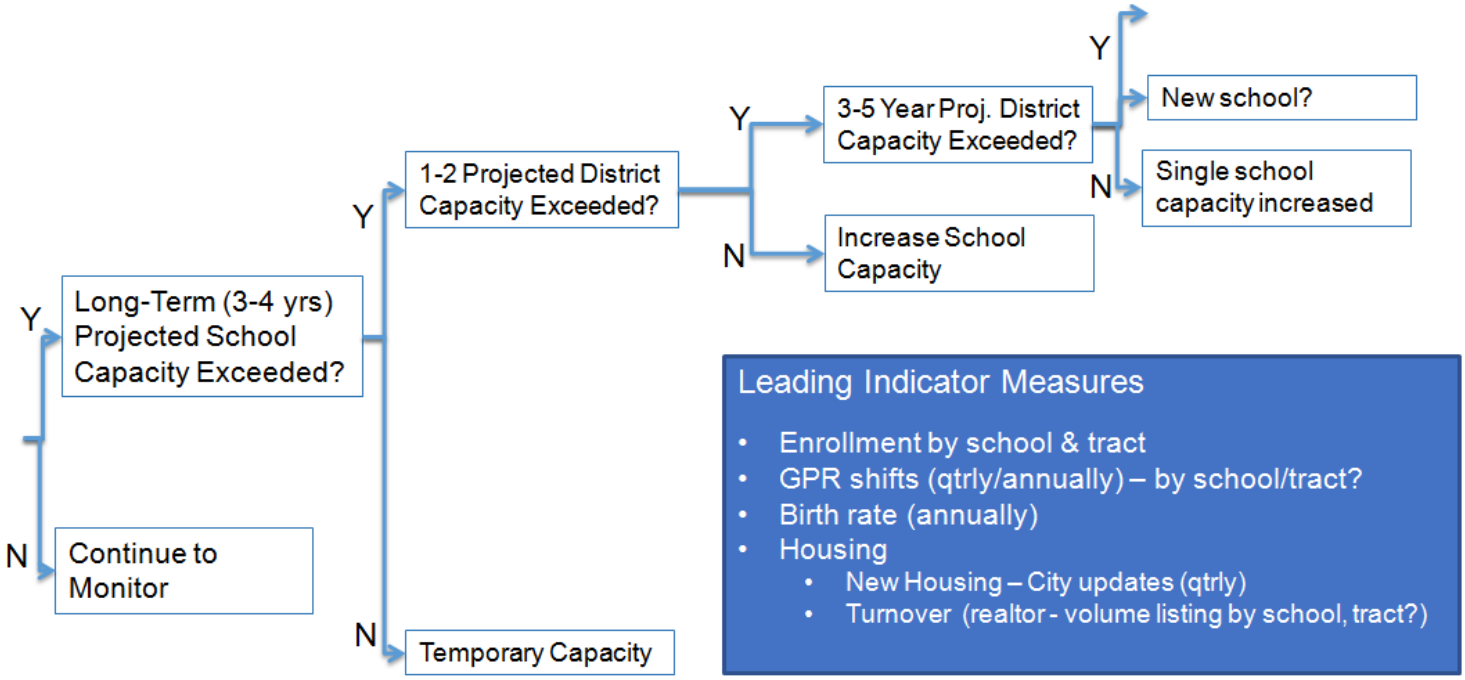
Date	Description
July 29	Finalize Draft Enrollment Balancing Task Force Report for August 2 meeting
August 1	Finalize Draft Enrollment Balancing Task Force Talking Points
August 11	Release Draft Enrollment Balancing Task Force Report via District's webpage with feedback option
August 12	• K-5 Email to impacted tracts with link to report, timeline, and feedback • K-12 Email to all other families with link to report, timeline, and feedback • K-12 Staff email with report, summary and talking points • Issue news item and press release on district website • Link to feedback collection (comments and questions)
August 16	Present Enrollment Balancing Task Force Recommendations and Report to the Board of Education.
August 17	Video of the Task Force recommendation to the Board of Education presentation available on the district website.
August 19	• FAQs will be start to be added and updated to the website.
August 22	• Information Night at Swanson Elementary at 5:30 PM • Information Night at Brookfield Elementary at 6:30 PM
August 19	K-5 family email with video of Board of Education meeting presentation, report, and feedback opportunity
August 24	Dixon Family Welcome Picnic - 4:30-6:30PM with New Family Presentation at 5:30PM
August 31	• Brookfield Elementary Meet and Greet from 2-5:30 PM • Dixon Meet and Greet from 2-5 PM • Swanson Meet and Greet from 2-5:30 PM
September 6	Forum invitation and registration email to K-5 families

September 6	Board of Education Discussion of the Enrollment Balancing Task Force Recommendations and Report
September 13	● Swanson PTO Presentation - 6:30 ● Present Enrollment Balancing Task Force Recommendations to Parent Network
September 14	● Swanson Parent Information Night ● Dixon Parent Information Night
September 15	● Dixon Principal Chat 6:00 PM and PTO Meeting 6:30 PM ● Brookfield Elementary Parent Information Night
September 16	Finalize Community Forum agenda and presentation
September 20	● Community Forum at 6:00 PM at TBD ● Burleigh PTO Presentation
September 26	Board of Education Discussion and/or Action on the Enrollment Balancing Task Force Recommendations and Report
TBD	Present Enrollment Balancing Task Force Recommendations to Parent Leadership Council
October 11	Board of Education Discussion and/or Action on the Enrollment Balancing Task Force Recommendations and Report
October 25	Board of Education Discussion and/or Action on the Enrollment Balancing Task Force Recommendations and Report
November 15	Board of Education Discussion and/or Action on the Enrollment Balancing Task Force Recommendations and Report
December 13	Board of Education Discussion and/or Action on the Enrollment Balancing Task Force Recommendations and Report

Preliminary Process Approach

Phase 2 of the Task Force's recommendation includes planning for capacity increases that range from additions at multiple schools (permanent and/or temporary) or a replacement school. The Task Force is proposing a monitoring system similar to the steps outlined below to track enrollment growth and capacity pressure. It recommends an annual review of data to act upon when concerns arise. Formally monitoring and analyzing enrollment trends using the enrollment formula will allow the district to plan ahead for any capacity concerns that arise.

Chart 24: Capacity Expansion Monitoring



Section 7: Acknowledgements

The Enrollment Balancing Task Force and School District of Elmbrook used a number of external resources to conduct the data analyses. Thanks and appreciation to the following individuals and organizations, whose insights proved invaluable:

- 5 Maps Analytics
- Applied Population Laboratory at the University of Wisconsin-Madison
- Brent Logan
- City of Brookfield
- Eppstein Uhen Architects
- Kim Devine
- Lake Washington School District, Seattle, WA
- Mark Roffers
- McKibben Demographic Research
- Oconomowoc Area School District, Oconomowoc, WI
- Shelly Budde
- Village of Elm Grove
- Wayzata Public Schools, Wayzata, MN

Section 8: Appendix

1. Analysis of Building Capacity - EUA
2. Swanson Building Additions
3. School Enrollment Projections Series for the School District of Elmbrook - APL
4. Benchmarking Other Districts
5. Class Size Report 2016
6. Middle and High School Historic and Projected Enrollment
7. Analysis of Building Capacity – Middle and High Schools - EUA
8. Elementary School Enrollment Projections and Capacity
9. Housing Turnover Data
10. New Single Family Housing Impact Data
11. Detailed New Residential Housing - Estimated Impact
12. New Residential Housing Effect on Elementary Enrollment Projections
13. Task Force Scenario Initial Analysis
14. Scenarios to Recommendations Infographic
15. Elementary Tract Projection and Analysis
16. Scenario Evaluation with Critical Success Factors
17. Tract Realignment Boundary Maps
18. Elmbrook Enrollment Balancing Task Force web site

ANALYSIS OF BUILDING CAPACITIES

There are several ways to evaluate a school's maximum capacity.

1. Design Capacity: Determine the maximum population for instructional spaces based on Best Practice square feet per student.
2. Follow Board of Education class size goal (if available).
3. Gross Building Square Footage: Take the existing building overall square footage and divide it by the recommended square footage per student based on Best Practice.

As enrollment fluctuations affect school districts nationwide, the physical capability of each building will determine whether or not enrollment should increase beyond its present level, or if it will be necessary to move students to other buildings more capable of accommodating such enrollment shifts. This analysis should provide a guide to measure each building's capability to handle a student population and provide a measuring stick to keep up with the changing needs.

HISTORICAL PERSPECTIVE ON SCHOOL CAPACITY

It is worthwhile to briefly cover why buildings are not able to contain the same number of students as when they were originally constructed. America's public schools can be traced back to 1640 when founders assumed families bore the responsibility of raising a child. Gradually, programs were added by Federal and State mandates that have dramatically affected the educational environment. The trend of increasing responsibilities for public schools has accelerated ever since.

1900-1910
- Health Instruction added

1910-1930
- Physical Education
- Vocational Education (Home Economics & Agriculture)

1940's
- Business Education
- Art & Music
- Speech & Drama
- Half-Day Kindergarten
- Lunch provided

1950's
- Expanded Science & Math
- Expanded Art & Music
- Foreign Language

1960's
- Advanced Placement
- Head Start
- Title I (Reading)
- Consumer & Career Education

1970's
- Special Education
- Title IX (equality for girl's athletics
- Behavior Adjustment
- Breakfast provided

1980's
- Computer Education
- English as a Second Language
- Early Childhood
- Full-Day Kindergarten
- At-Risk Programs
- After School Programs

1990's
- Expanded Computer / Internet
- Inclusion of Special Education Learners
- School-to-Work Programs

2000's
- Standardized Testing
- Project Lead the Way
- STE(A)M

2010's
- Makerspace
- BYOD (Bring Your Own Device)

In many districts, spaces that were once used as standard classrooms have been transformed into multiple educational environments that have to act as offices, teaching space for 4-6 students, and reference libraries for several different areas associated with Special Education. One of the most dramatic program requirements of the past 30 years may become obsolete in the near future. Computers first made their presence in schools in the early 1980s when a single Apple II was assigned to one building in may national schools. Now, many elementary schools assign a single lab to each grade, and the future may reverse these spaces back into classrooms as laptops and hand-held tablets become the norm

for student production and research. The bottom line is the demand on educational space is always changing, and it should be expected that buildings need to change along with those programs.

TYPES OF CAPACITY CALCULATIONS

1. FUNCTIONAL CAPACITY BY AREA

Historically, building capacity has been determined by counting the number of classrooms and multiplying by the average number of students. This method of capacity calculation is sometimes called the "Design Capacity."

A more accurate Design Capacity, however, can be derived from evaluating the best practice square footage allowances per student in each individual room. Based on the best data currently available, we recommend 55 SF (square feet) per student at the kindergarten level, 35 SF per student for grades 1-5, and 30 SF per student at the middle and high school levels. This allows a standard elementary classroom (1375 SF kindergarten, 875 SF grades 1-5) to support a class of 25 students. At the middle school and high school levels, a standard 900 SF classroom can support up to 30 students. To calculate the total capacity of a building, then:

Each academic space (core subjects) has a calculated square footage. This square footage is then divided by the recommended SF/student. Other academic spaces throughout the building have their own "Best Practice" square footage allowances per student. The total population is then calculated by adding the student population of each academic space.

At the elementary level, only standard classrooms are included in the capacity analysis because students remain in their assigned classroom most of the day. At the Middle and High School, all instructional spaces are used in the calculation because students are rarely in the same room for more than one period.

Several areas are not included in this calculation:

- Special Education rooms are not included because it is unlikely that other students would fill their classroom seats while they are getting additional instruction elsewhere in the building.

- Labs are also not factored into this calculation because the intent of these spaces is to serve as resource areas for classes that would otherwise be located somewhere else in the school. For example, a computer lab dedicated to an English Department is not included because the students are physically leaving one space to use the other as a resource.

However, the Design Capacity method alone becomes flawed because it is unlikely that every room will be used at 100% capacity all the time. At the middle and high school levels, the capacity calculation needs to account for teacher prep time, bell schedules, and tutoring which would drop the total utilization of any one space. Even at the elementary school level, because of fluctuations in student population, it is impractical to expect every classroom to be filled completely to design capacity in any given school year. Taking school schedules, programmatic issues, and fluctuations in student populations into consideration, the Design Capacity is modified to create the final "**Functional Design Capacity**."

It's important to note that as a rule:

90% utilization is considered to be the **Functional Design Capacity** targeted at the **elementary level**.
80% utilization is considered to be the **Functional Design Capacity** targeted at the **middle and high school levels.**

For example, the targeted utilization at a middle or high school level represents scheduled use of a core subject room 6 to 7 periods out of an 8 period day, or between 75% and 88% of the time available for use.

2. CAPACITY BASED ON GROSS BUILDING SQUARE FOOTAGE

Information for determining recommended school capacity based on gross area per student is typically used for initial analysis of building enrollment capacity. Building area standards are derived from historic data compilation, optimal planning models for space utilization, and are found through regional and national educational research and planning organizations. There is not a recognized national standard for use in such reviews, and available data most current and determined to be most relevant to the School District's locality is utilized. The following ranges shown in the standards consulted indicate regional and programmatic differences between the school districts reviewed. The lower end square foot per student numbers may indicate that few auxiliary type spaces are provided. The higher end square foot per student numbers may indicate that more auxiliary type spaces are provided, i.e. Auditorium, Field House, Natatorium, etc. For smaller schools, the numbers are typically higher than for larger schools.

Gross square footage for school planning based on school building projects built in Wisconsin over the last 15 years.

- *Elem. School*: 130 – 160 sq.ft. per student (average of 145 sq.ft.)
- *Middle School*: 150 – 180 sq.ft. per student (average of 165 sq.ft.)
- *High School*: 200 – 250 sq.ft. per student (average of 225 sq.ft.)

Gross square footage for school planning recommended by the *Minnesota Department of Children, Families & Learning - Guide for Planning Construction Projects*. This is one of the few State sponsored publications that actually lists size recommendations for educational environments. These area ranges were established to plan for the space needs of technology and new forms of instruction (Published 2002).

- *Elem. School*: 125 – 155 sq. ft. per student (average of 140 sq. ft.)
- *Middle School*: 170 – 200 sq. ft. per student (average of 185 sq. ft.)
- *High School*: 200 – 320 sq. ft. per student (average of 260 sq. ft.)

In order to keep the evaluation current and account for the present and future space needs of technology and new forms of instruction, the Wisconsin data and Minnesota DCFL information has been approximately averaged to create the unit of measure used in this report:

- 140 sq. ft. per student for the Elementary Schools
- 172 sq. ft. per student for the Middle School
- 242 sq. ft. per student for the High School

The gross square foot per student recommendations should be considered as a **baseline guide** for planning and analysis, and remain flexible in order to reflect the immediate needs and long term goals of the School District.

The maximum capacity is based on the existing building SF divided by the average recommended SF per student listed. The resulting data can then be used as an indicator to show how the schools compare with National and State recommendations.

Summary of Capacity analysis

The table below indicates the current enrollment and the various methods to determine maximum potential enrollments for the existing school facilities.

- The first column lists the school analyzed.
- The second column lists the current enrollment provided by the school district.
- The third column shows the capacity based on Administrative Use Policy.
- The fourth column shows the Functional Design Capacity calculation.
- The fifth column shows the capacity based on the gross square footage of the building.

School	Current Enrollment (Provided by District)	Capacity based on School Board Goal [b,c]	Functional Capacity by Area [a,b]	Capacity based on Gross Building Square Footage
Tonawanda ES	**365**	455	413	400
Swanson ES	**795**	864	775	767
Brookfield ES	**607**	648	617	710
Dixon ES	**369**	648	632	710
Burleigh ES	**690**	863	816	1087
TOTALS	**2826**	**3478**	**3253**	**3674**

a. *Based on 55 SF per student for 4K & K, 35 SF per student for grades 1-5, 30 SF per student for grades 6-12 for general classrooms. Science Rooms, Ag Labs, FACE Labs, Band and Art Rooms use 50 SF per student. Tech Ed Lab spaces use 100 SF per student. Auto uses 150 SF per student.*
b. *Functional Design Capacity is 90% of the maximum capacity in Elementary Schools and 80% of the maximum capacity in Middle Schools and High Schools.*
c. *Based on Board Goal Capacity of 26 students for grades K-3 and 28 students for grades 4-5.*

DETAIL – TONAWANDA ES

Functional Capacity by Area
This calculation included all regular classroom academic spaces. Spaces not included in this calculation include:

- Music
- Art
- Special education classrooms and rooms serving special needs students
- Gym/ Cafeteria
- Library
- Computer lab

This Maximum Design Capacity equates to **458 students** if each space was occupied to capacity every minute of the day. As stated earlier in this document, the Functional Design Capacity is 90% of that value. This means that the Functional Design Capacity for the school is **413 students**.

Functional School Board Capacity Goal
This calculation assumes learning space are filled to the maximum Board Capacity Goal and equates to **506 students**. If we apply 90% to the maximum Board Capacity Goal it equates to **455 students**.

Capacity Based on Building Area
When the total building square footage is divided by the recommended elementary area per student, the capacity calculation yields a significantly smaller number: 56,034 sq. ft. divided by 140 sq. ft. per student, equates to only **400 students**.

Utilizing the cafeteria capacity can also help determine capacity. The existing area of the cafeteria would indicate a capacity of 311 students (4673 sqft / 15sqft = 311). This capacity can then be multiplied by the desired number of lunch periods.

CONCLUSION
When the Capacity by Building Area is significantly smaller than Functional Design Capacity, it is an indication that the non-academic spaces in the facility are disproportionately smaller in size. The aggregate of corridors, common-space, and athletic spaces may be undersized for the amount of academic spaces provided. The gymnasium is also being used as a cafeteria which will make this capacity number smaller.

The board's goal for capacity per classroom is very similar to the functional design capacity which is an indication that the learning spaces size and quantity are in close alignment.

DETAIL – SWANSON ES

Functional Capacity by Area
This calculation included all regular classroom academic spaces. Spaces not included in this calculation include:

- Music
- Band
- Orchestra
- Art
- Special education classrooms and rooms serving special needs students
- Gym
- Cafeteria
- Library
- Computer lab
- Multi-purpose spaces

This Maximum Design Capacity equates to **861 students** if each space was occupied to capacity every minute of the day. As stated earlier in this document, the Functional Design Capacity is 90% of that value. This means that the Functional Design Capacity for the school is **775 students**.

Functional School Board Capacity Goal
This calculation assumes learning space are filled to the maximum Board Capacity Goal and equates to **960 students**. If we apply 90% to the maximum Board Capacity Goal it equates to **864 students**.

Capacity Based on Building Area
When the total building square footage is divided by the recommended elementary area per student, the capacity calculation yields: 107,375 sq. ft. divided by 140 sq. ft. per student, equates to only **767 students**. When including the cafeteria addition to the total building square footage and dividing by the recommended elementary area per student, the capacity calculation yields: 112,025 sq. ft. divided by 140 sq. ft. per student, equates to **800 students**.

Utilizing the cafeteria capacity can also help determine capacity. The existing area of the cafeteria would indicate a capacity of 228 students. (3430 sqft / 15sqft = 228). With the proposed cafeteria addition the capacity number changes to 470 students. (7052 sqft / 15sqft = 470). This capacity can then be multiplied by the desired number of lunch periods.

CONCLUSION

Functional Design Capacity being slightly lower that the Capacity Based on Building Area indicates that classroom space may be smaller than recommended. Functional School Board Capacity being aligned with Capacity Based on Building Area is an indication that the aggregate of corridors, common-space, are aligned for the amount of academic spaces provided. However as stated above the cafeteria size will limit capacity if the goal is to have two lunch periods.

DETAIL – BROOKFIELD ES

Functional Capacity by Area
This calculation included all regular classroom academic spaces. Spaces not included in this calculation include:

- Music/ Orchestra/ Band
- Art
- Special education classrooms and rooms serving special needs students
- Gym
- Cafeteria
- Library
- Computer lab
- Multi-purpose spaces

This Maximum Design Capacity equates to **686 students** if each space was occupied to capacity every minute of the day. As stated earlier in this document, the Functional Design Capacity is 90% of that value. This means that the Functional Design Capacity for the school is **617 students**.

Functional School Board Capacity Goal
This calculation assumes learning space are filled to the maximum Board Capacity Goal and equates to 720 **students**. If we apply 90% to the maximum Board Capacity Goal it equates to **648 students**.

Capacity Based on Building Area
When the total building square footage is divided by the recommended elementary area per student, the capacity calculation yields: 99,442 sq. ft. divided by 140 sq. ft. per student, equates to **710 students**.

Utilizing the cafeteria capacity can also help determine capacity. The existing area of the cafeteria would indicate a capacity of 197 students (2967 sqft / 15sqft = 197). This capacity can then be multiplied by the desired number of lunch periods.

CONCLUSION

When the Capacity by Building Area is larger than the Functional Design Capacity, it is an indication that the schools common spaces are larger in size or number. When looking closer at the plan of Brookfield ES, the higher Capacity Based on Building Area appears to be related to the amount of common/ core space which includes four special educational rooms, a large reading room separate from library, a large tutoring room, the LGI and a separate band and music room.

The board's goal for capacity per classroom is very similar to the functional design capacity which is an indication that the learning spaces size and quantity are in close alignment.

DETAIL – DIXON ES

Functional Capacity by Area
This calculation included all regular classroom academic spaces. Spaces not included in this calculation include:

- Music/ Orchestra/ Band
- Art
- Special education classrooms and rooms serving special needs students
- Gym
- Cafeteria
- Library
- Computer lab
- Multi-purpose spaces

This Maximum Design Capacity equates to **702 students** if each space was occupied to capacity every minute of the day. As stated earlier in this document, the Functional Design Capacity is 90% of that value. This means that the Functional Design Capacity for the school is **632 students**.

Functional School Board Capacity Goal
This calculation assumes learning space are filled to the maximum Board Capacity Goal and equates to **720 students**. If we apply 90% to the maximum Board Capacity Goal it equates to **648 students**.

Capacity Based on Building Area
When the total building square footage is divided by the recommended elementary area per student, the capacity calculation yields: 99,442 sq. ft. divided by 140 sq. ft. per student, equates to **710 students**.

Utilizing the cafeteria capacity can also help determine capacity. The existing area of the cafeteria would indicate a capacity of 197 students (2967 sqft / 15sqft = 197). This capacity can then be multiplied by the desired number of lunch periods.

CONCLUSION

When the Capacity by Building Area is larger than the Functional Design Capacity, it is an indication that the schools common spaces are larger in size or number. When looking closer at the plan of Dixon ES, the higher capacity based on building area appears to be related to the amount of common/ core space which includes 5 special educational rooms, a large reading room separate from library, 2 computer labs, the LGI and a separate vocal and orchestra room.

The board's goal for capacity per classroom is very similar to the functional design capacity which is an indication that the learning spaces size and quantity are in close alignment. However some variance in the functional design capacity and the functional school board capacity goal is an indication that some classrooms may be undersized. An example of this is kindergarten room 135 and the 4K classrooms which are smaller than recommended.

DETAIL – BURLEIGH ES

Functional Capacity by Area
This calculation included all regular classroom academic spaces. Spaces not included in this calculation include:

- Music/ Band
- Art
- Special education classrooms and rooms serving special needs students
- Gym
- Cafeteria
- Library
- Computer lab
- Auxiliary gym

This Maximum Design Capacity equates to **906 students** if each space was occupied to capacity every minute of the day. As stated earlier in this document, the Functional Design Capacity is 90% of that value. This means that the Functional Design Capacity for the school is **816 students**.

Functional School Board Capacity Goal
This calculation assumes learning space are filled to the maximum Board Capacity Goal and equates to **959 students**. If we apply 90% to the maximum Board Capacity Goal it equates to **863 students**.

Capacity Based on Building Area
When the total building square footage is divided by the recommended elementary area per student, the capacity calculation yields: 152,181 sq. ft. divided by 140 sq. ft. per student, equates to **1087 students**.

Utilizing the cafeteria capacity can also help determine capacity. The existing area of the cafeteria would indicate a capacity of 488 students per lunch period (7325 sqft / 15sqft = 488). This capacity can then be multiplied by the desired number of lunch periods.

CONCLUSION

When the Capacity by Building Area is larger than the Functional Design Capacity, it is an indication that the schools common spaces are larger in size or number. When looking closer at the plan of Burleigh ES, the higher capacity appears to be related to the amount of common/ core space which includes 12 special educational rooms, 3 computer labs, an auxiliary gym, 3 music rooms, and 2 art rooms.

The similarity in the functional design capacity and the functional school board capacity goal is an indication that the amount of classrooms and there size are appropriate.

3/2/2016

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Brookfield ES - Utilization Study

Room No.	Primary Use of Room (Subject)	S.F. Area	Based on Square Feet per Student of Space	Based on Administrative Guidelines	Based on Total Square Feet 99,442
115	LMC	3499	64		
116	Classroom	894	26	26	
121	Kindergarten	1138	21	26	
124	Kindergarten	1265	23	26	
130	Grade 1	897	26	26	
132	Grade 1	908	26	26	
133	Grade 1	909	26	26	
135	Grade 1	886	25	26	
137	Kindergarten	1699	31	26	
140	Kindergarten	1073	20	26	
142	Reading	893	18		
150	Kindergarten	1080	20	26	
155	Cafeteria	2967	198		
163	Gymnasium	7180	29		
168	Band	1499	30		
173	Therapy	456	9		
174	Speech	434	9		
179	Grade 2	885	25	26	
181	Grade 2	909	26	26	
182	Grade 2	909	26	26	
184	Grade 2	910	26	26	
207	Grade 3	985	28	26	
209	Grade 3	912	26	26	
210	Grade 3	913	26	26	
212	Grade 3	985	28	26	
220	Grade 5	897	26	28	
222	Grade 5	908	26	28	
223	Grade 5	909	26	28	
225	Grade 5	883	25	28	
226	Special Ed.	700	14		
229	LGI	1543	39		
232	Classroom	922	26	28	
235	Special Education	1204	24		
243	Music	1545	44		
245	Art	1485	30		
248	Grade 4	883	25	28	
250	Grade 4	909	26	28	
251	Grade 4	909	26	28	
253	Grade 4	896	26	28	
	Max Capacity		686	720	**710**
	Functional Capacity		**617**	**648**	
	2015-16 Enroll.	**607**			

Note: Shaded areas not calculated for capacity numbers.

3/2/2016

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Burleigh ES - Utilization Study

36 classroom school (6 sections per grade)

Room No.	Primary Use of Room (Subject)	S.F. Area	Based on Square Feet per Student of Space	Based on Administrative Guidelines	Based on Total Square Feet 152,181
101	TLS	605	12		
102	Library	3709	67		
103	Grade 2	1019	29	26	
105	Grade 2	860	25	26	
106	Grade 2	1087	31	26	
107	Grade 2	860	25	26	
108	Special Education	970	19		
109	Grade 2	860	25	26	
110	EC	1312	26		
111	Grade 2	860	25	26	
112	Computer	958	24		
114	Computer	602	15		
115	Cafeteria	7325	488		
116	Computer	1094	27		
118	Gymnasium	9423	38		
120	Auxiliary GYM	5298	21		
126	EC	871	17		
127	Music	1711	49		
129	Band	2511	50		
130	Special Education	866	17		
131	Music	857	24		
133	Grade 1	860	25	26	
135	Grade 1	860	25	26	
137	Grade 1	860	25	26	
139	Grade 1	860	25	26	
141	Grade 1	880	25	26	
143	Grade 1	839	24	26	
156	Kindergarten	1182	21	26	
157	Kindergarten	1140	21	25	
158	Kindergarten	1177	21	26	
159	Kindergarten	1140	21	26	
160	Kindergarten	1062	19	26	
162	Kindergarten	1060	19	26	
200	Discovery Room	1304	24		
202	Special Education/ ELL	976	18		
203	Grade 5	860	25	28	
204	Grade 4	1306	37	28	
205	Grade 5	860	25	28	
206	Grade 5	976	28	28	
207	Grade 5	860	25	28	
209	Grade 5	860	25	28	
210	Grade 4	976	28	28	
211	Grade 5	860	25	28	
212	Grade 4	834	24	28	
214	Speech	463	9		
217	Art	1192	24		
219	Art	1189	24		
220	Grade 3	1304	37	26	
221	Grade 4	877	25	28	
222	Grade 3	975	28	26	
225	Grade 4	860	25	28	
227	Grade 4	862	25	28	
229	Grade 3	862	25	26	
231	Grade 3	862	25	26	
233	Grade 3	883	25	26	
235	Grade 3	839	24	26	
	Max Capacity		906	959	**1087**
	Functional Capacity		**816**	**863**	
	2015-16 Enroll.	**690**			

Note: Shaded areas not calculated for capacity numbers.

3/2/2016

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Dixon ES - Utilization Study

4+ sections per grade with preschool

Room No.	Primary Use of Room (Subject)	S.F. Area	Based on Square Feet per Student of Space	Based on Administrative Guidelines	Based on Total Square Feet 99,442
115	Library	3353	61		
116	Classroom	894	26	26	
121	Kindergarten	1138	21	26	
124	Kindergarten	1265	23	26	
130	Grade 1	897	26	26	
132	Grade 1	908	26	26	
133	Grade 1	909	26	26	
135	Kindergarten	886	25	26	
137	Wrap Around	1699	31	20	
141	Preschool	1073	20	20	
142	Preschool	893	16	20	
151A	Preschool	1080	20	20	
155	Cafeteria	2967	198		
163	Gymnasium	7180	29		
168	Band	1499	43		
173	Therapy	456			
174	Speech	434			
179	Grade 2	885	25	26	
181	Grade 2	909	26	26	
182	Grade 2	909	26	26	
184	Grade 2	910	26	26	
207	Grade 3	985	28	26	
209	Grade 3	912	26	26	
210	Grade 3	913	26	26	
212	Grade 3	985	28	26	
220	Grade 5	897	26	28	
222	Grade 5	908	26	26	
223	Grade 5	909	26	28	
225	Grade 5	883	25	28	
226	Special Education	700	14		
229	LGI	1543	28		
232	Classroom	922	26	28	
235	Orchestra	1204	24		
246	Speech	857	17		
254	Art	1485	30		
243	Music	1545	44		
248	Grade 4	883	25	28	
250	Grade 4	909	26	28	
251	Grade 4	909	26	28	
253	Grade 4	896	26	28	
	Max Capacity		702	720	**710**
	Functional Capacity		**632**	**648**	
	2015-16 Enroll.	**369**			

Note: Shaded areas not calculated for capacity numbers.

3/2/2016

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Dixon ES - Utilization Study

4+ sections per grade without preschool

Room No.	Primary Use of Room (Subject)	S.F. Area	Based on Square Feet per Student of Space	Based on Administrative Guidelines	Based on Total Square Feet 99,442
115	Library	3353	61		
116	Classroom	894	26	26	
121	Kindergarten	1138	21	26	
124	Kindergarten	1265	23	26	
130	Grade 1	897	26	26	
132	Grade 1	908	26	26	
133	Grade 1	909	26	26	
135	Grade 1	886	25	26	
137	Kindergarten	1699	31	26	
141	Kindergarten	1073	20	26	
142	Reading	893	26		
151A	Kindergarten	1080	20	26	
155	Cafeteria	2967	198		
163	Gymnasium	7180	29		
168	Band	1499	43		
173	Therapy	456	13		
174	Speech	434	12		
179	Grade 2	885	25	26	
181	Grade 2	909	26	26	
182	Grade 2	909	26	26	
184	Grade 2	910	26	26	
207	Grade 3	985	28	26	
209	Grade 3	912	26	26	
210	Grade 3	913	26	26	
212	Grade 3	985	28	26	
220	Grade 5	897	26	28	
222	Grade 5	908	26	28	
223	Grade 5	909	26	28	
225	Grade 5	883	25	28	
226	Special Education	700	14		
229	LGI	1543	28		
232	Classroom	922	26	28	
235	Orchestra	1204	24		
246	Speech	857	17		
254	Art	1485	30		
243	Music	1545	44		
248	Grade 4	883	25	28	
250	Grade 4	909	26	28	
251	Grade 4	909	26	28	
253	Grade 4	896	26	28	
	Max Capacity		680	720	**710**
	Functional Capacity		**612**	**648**	
	2015-16 Enroll.	**369**			

Note: Shaded areas not calculated for capacity numbers.

3/2/2016

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Swanson ES - Utilization Study

Room No.	Primary Use of Room (Subject)	S.F. Area	Based on Square Feet per Student of Space	Based on Administrative Guidelines	Based on Total Square Feet 107,375
G02	Kindergarten	1096	20	26	
G03	Computer Lab	858	21		
G04	Kindergarten	1083	20	26	
G06	Kindergarten	1147	21	26	
G08	Kindergarten	1146	21	26	
G09	Special Education	658	13		
G10	Kindergarten	1126	20	26	
G14	Grade 1	862	25	26	
G16	Grade 1	862	25	26	
G18	Grade 1	855	24	26	
G20	Grade 1	798	23	26	
G22	Grade 1	855	24	26	
G24	Grade 2	862	25	26	
G26	Grade 2	862	25	26	
G28	Grade 2	872	25	26	
G30	Grade 2	855	24	26	
G32	Grade 2	862	25	26	
G33	Library	4657	85		
G34	Grade 2	862	25	26	
G36	Learning Support	425	9		
101	Gymnasium	6184	25		
108	Art	2722	54		
109	Vocal Music	1138	23		
110	Band	1646	33		
112	Orchestra	1219	24		
114	Cafeteria	3430	229		
202	Grade 4	846	24	28	
204	Grade 4	846	24	28	
205	English as a second lang.	563	11		
207	Special Education	482	10		
208	Learning Support	846			
209	Grade 4	846	24	28	
210	Grade 4	846	24	28	
211	Special Education	761	15		
212	Grade 4	846	24	28	
213	Special Education	658	13		
214	Grade 3	862	25	26	
215	Maker Space	954	19		
216	Grade 3	862	25	26	
218	Grade 3	855	24	26	
220	Grade 3	879	25	26	
221	Maker Space	1397	28		
222	Grade 3	855	24	26	
224	Grade 3	862	25	26	
226	Grade 5	862	25	28	
228	Grade 5	872	25	28	
230	Grade 5	855	24	28	
232	Grade 5	862	25	28	
233	Computer Lab	950	24		
234	Grade 5	862	25	28	
	Max Capacity		762	852	**767**
	Max Capacity with Addition		762	852	**800**
	Functional Capacity		**686**	**767**	
	2015-16 Enroll.	**795**			

Note: Shaded areas not calculated for capacity numbers.

Revised 3/2/2016

eppstein uhen : architects

Tonawanda ES - Utilization Study

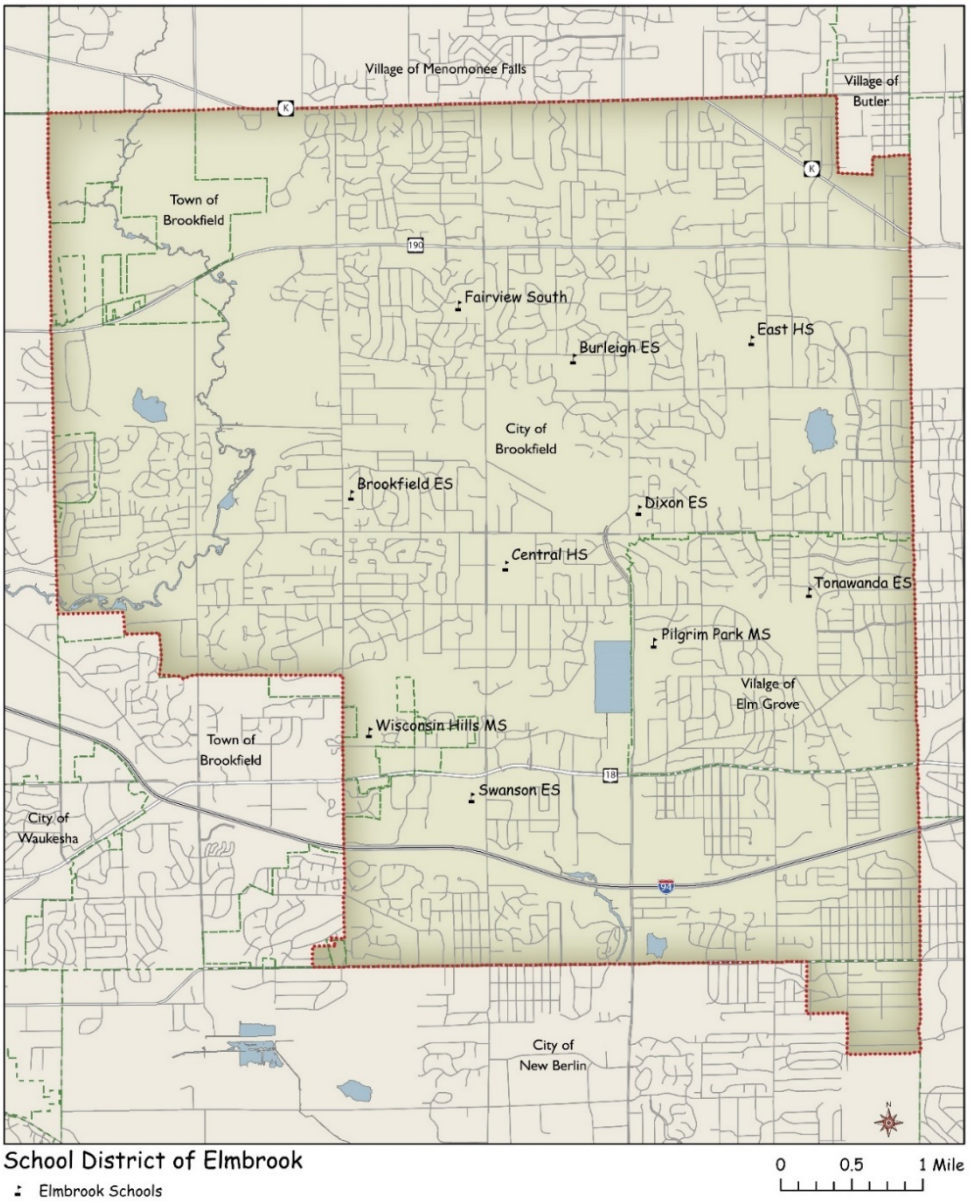
Room No.	Primary Use of Room (Subject)	S.F. Area	Based on Square Feet per Student of Space	Based on Administrative Guidelines	Based on Total Square Feet 56,034
100	Art	1176	24		
101	Music	1455	42		
102	Orchestra	828	17		
104	Cafeteria/Gymnasium	4673			
105A	Kindergarten	1918	35	26	
105B	Kindergarten	1723	31	26	
105C	Kindergarten	1056	19	26	
108	Special Educaiton Reading	459	9		
109	Gifted and Talented	460	9		
110	Band	931	19		
112	Multipurpose	818	23		
113	OT/PT	509	1		
140	Library	2793	51		
142	Reading	549	11		
A1	Intervention	813	16		
A2	Grade 1	816	23	26	
A3	Grade 1	832	24	26	
A4	Grade 1	813	23	26	
A5	Grade 2	816	23	26	
A6	Grade 2	816	23	26	
A7	Grade 2	812	23	26	
B1	Computer Lab	813	20		
B2	Grade 5	816	23	28	
B3	Grade 5	816	23	28	
B4	Grade 5	813	23	28	
B5	Special Education	816	16		
B6	Empty Class	816	23	26	
B7	Special Education	813	16		
C1	Grade 3	812	23	26	
C2	Grade 3	816	23	26	
C3	Grade 3	816	23	26	
C4	Grade 4	813	23	28	
C5	Grade 4	816	23	28	
C6	Grade 4	816	23	28	
C7	Computer Lab	813	20		
	Max Capacity		458	506	**400**
	Functional Capacity		**413**	**455**	
	2015-16 Enroll.	**365**			

Note: Shaded areas not calculated for capacity numbers.

Swanson Building Additions

Year of Building/Addition	Addition Details	Additional Square Feet Added	Total Square Footage
1960 (Building)	8 classrooms Kitchen Gymnasium Other necessary facilities	25,330	25,330
1963 (Expansion)	12 classrooms Music Room Cafeteria Art Room Library Shower Rooms/Dressing Rooms	27,785	53,115
1996 (Expansion)	22 classrooms Current office suite area Library	48,660	101,775
2002 (Expansion)	Current art room 2 classrooms	5,600	107,375

Planning for the Schools of Tomorrow



School Enrollment Projections Series
School District of Elmbrook

February 2016

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Table of Contents

Executive Summary

The district-wide resident enrollment for the School District of Elmbrook for the current 2015-2016 school year is 6,470 students. This executive summary provides important key points that can be found throughout this resident projections report. This report includes district-wide and individual school projections but the summary will focus on the district-wide projections.

- The district has experienced an enrollment decrease of 0.5% annually over the last ten years. While elementary grades have increased by 0.3%, middle school grades and high school grades decreased by 0.8% and 1.2%, respectively.

- Kindergarten enrollment has increased over the long-term (last 10 years) and even more significantly over the last 5 years. Recent birth trends also indicate that the district will likely see continued increases in future births. However, long-term birth trends indicate steady births.

- The district area has seen a slight increase in single family home construction the last two years. The City of Brookfield has several potential developments of both single family and multi-family construction. In general, districts tend to see more students from single than multi-family homes.

- Grade progression ratios used for the projection models are above one indicating an in-migration of resident students. The B:K ratios are well above one indicating that a significant number of kindergartners are born outside the district. Most of the grades have seen an in-migration of students.

- All models project overall K-12 enrollment increases in the foreseeable future. The 2 Year "Trend" model indicates the greatest projected increase of 13% in five years. When additional students are added from new home construction the district could see a 14% increase in the next five years. The Baseline model projects the least amount of increase in enrollment (3.9% in five years).

- All models project some level of K-5 resident enrollment increases. Grades 6-8 will see slight increases in resident enrollment over the next three years followed by more significant increases. Grades 9-12 will see steady resident enrollment over the next five to seven years.

- All elementary schools and middle schools will likely see increasing enrollment in the near term. Both high schools will likely see steady enrollment near term followed by increasing enrollment.

Part 1: District Enrollment Projections

Part 1 of this report offers a summary of the Enrollment Projection Analysis completed for the School District of Elmbrook by the Applied Population Laboratory, University of Wisconsin-Madison. Enrollment projections are provided for the district as a whole, and individually for each grade and grade grouping. The projection process uses a combination of historical enrollment data, birth trends and projections, housing starts data, and population trends and projections to create reasonable assumptions about future growth scenarios and the likely impact on the school district.

Past Projections

Table A compares the past four years of actual enrollment to the projections completed in 2011 by projection model. The percent difference in Table A allows the district to assess which projection model has been most reliable. Overall, the Housing Turnover model which used the highest grade progression ratio for each grade pair was most accurate for the total district and for all grade groupings. Although the Housing Turnover model was the most reliable, this is largely due to the other models under-projecting enrollment. The first three years (2011-12 to 2013-14) of the projections models were fairly accurate, but over time projections become less reliable.

TABLE A

Comparison of Enrollment Projections with Actual Enrollment
School District of Elmbrook

	K-12 Enrollment			
Projection Year	12-13	13-14	14-15	15-16
Actual	6,181	6,232	6,359	6,470
Baseline	6,088	6,026	5,976	5,896
5 Year Trend	6,084	6,027	5,997	5,957
2 Year "Trend"	6,051	5,975	5,928	5,872
Kindergarten Trend	6,109	6,026	5,968	5,902
Housing Turnover	6,150	6,119	6,116	6,102
	K-5 Enrollment			
Projection Year	12-13	13-14	14-15	15-16
Actual	2,437	2,499	2,607	2,700
Baseline	2,390	2,368	2,367	2,291
5 Year Trend	2,395	2,379	2,410	2,385
2 Year "Trend"	2,375	2,344	2,369	2,334
Kindergarten Trend	2,419	2,378	2,382	2,330
Housing Turnover	2,436	2,436	2,475	2,452
	6-8 Enrollment			
Projection Year	12-13	13-14	14-15	15-16
Actual	1,435	1,476	1,435	1,455
Baseline	1,410	1,449	1,403	1,431
5 Year Trend	1,413	1,452	1,395	1,411
2 Year "Trend"	1,409	1,452	1,391	1,405
Kindergarten Trend	1,413	1,452	1,395	1,411
Housing Turnover	1,417	1,462	1,420	1,456
	9-12 Enrollment			
Projection Year	12-13	13-14	14-15	15-16
Actual	2,309	2,257	2,317	2,315
Baseline	2,288	2,209	2,206	2,174
5 Year Trend	2,276	2,196	2,191	2,161
2 Year "Trend"	2,267	2,180	2,168	2,133
Kindergarten Trend	2,276	2,196	2,191	2,161
Housing Turnover	2,297	2,221	2,222	2,194

Percent Difference between Projected and Actual
School District of Elmbrook

	K-12 Enrollment			
Projection Year	12-13	13-14	14-15	15-16
Baseline	-1.51%	-3.30%	-6.03%	-8.88%
5 Year Trend	-1.56%	-3.29%	-5.70%	-7.92%
2 Year "Trend"	-2.11%	-4.12%	-6.78%	-9.24%
Kindergarten Trend	-1.17%	-3.31%	-6.15%	-8.78%
Housing Turnover	-0.51%	-1.82%	-3.82%	-5.69%
	K-5 Enrollment			
Projection Year	12-13	13-14	14-15	15-16
Baseline	-1.9%	-5.2%	-9.2%	-15.1%
5 Year Trend	-1.7%	-4.8%	-7.5%	-11.7%
2 Year "Trend"	-2.5%	-6.2%	-9.1%	-13.6%
Kindergarten Trend	-0.7%	-4.8%	-8.6%	-13.7%
Housing Turnover	0.0%	-2.5%	-5.1%	-9.2%
	6-8 Enrollment			
Projection Year	12-13	13-14	14-15	15-16
Baseline	-1.7%	-1.9%	-2.3%	-1.7%
5 Year Trend	-1.5%	-1.6%	-2.8%	-3.0%
2 Year "Trend"	-1.8%	-1.6%	-3.1%	-3.4%
Kindergarten Trend	-1.5%	-1.6%	-2.8%	-3.0%
Housing Turnover	-1.3%	-0.9%	-1.1%	0.0%
	9-12 Enrollment			
Projection Year	12-13	13-14	14-15	15-16
Baseline	-0.9%	-2.1%	-4.8%	-6.1%
5 Year Trend	-1.4%	-2.7%	-5.4%	-6.6%
2 Year "Trend"	-1.8%	-3.4%	-6.5%	-7.9%
Kindergarten Trend	-1.4%	-2.7%	-5.4%	-6.6%
Housing Turnover	-0.5%	-1.6%	-4.1%	-5.2%

Figure A compares the actual births with the projected births from the previous report completed by Applied Population Laboratory. Projected births forecasted an increase but actual births have increased more significantly in the last three years than projected. Across the State of Wisconsin births peaked in 2007 then declined during the recession in many communities. However, in the City of Brookfield and the Village of Elm Grove this was not the case. Figure B compares the actual kindergartners with the projected kindergartners from the previous report. Instead of seeing a decrease in kindergarten resident enrollment there was an increase, especially the last three years when enrollment has remained higher than in the recent past.

Figure A

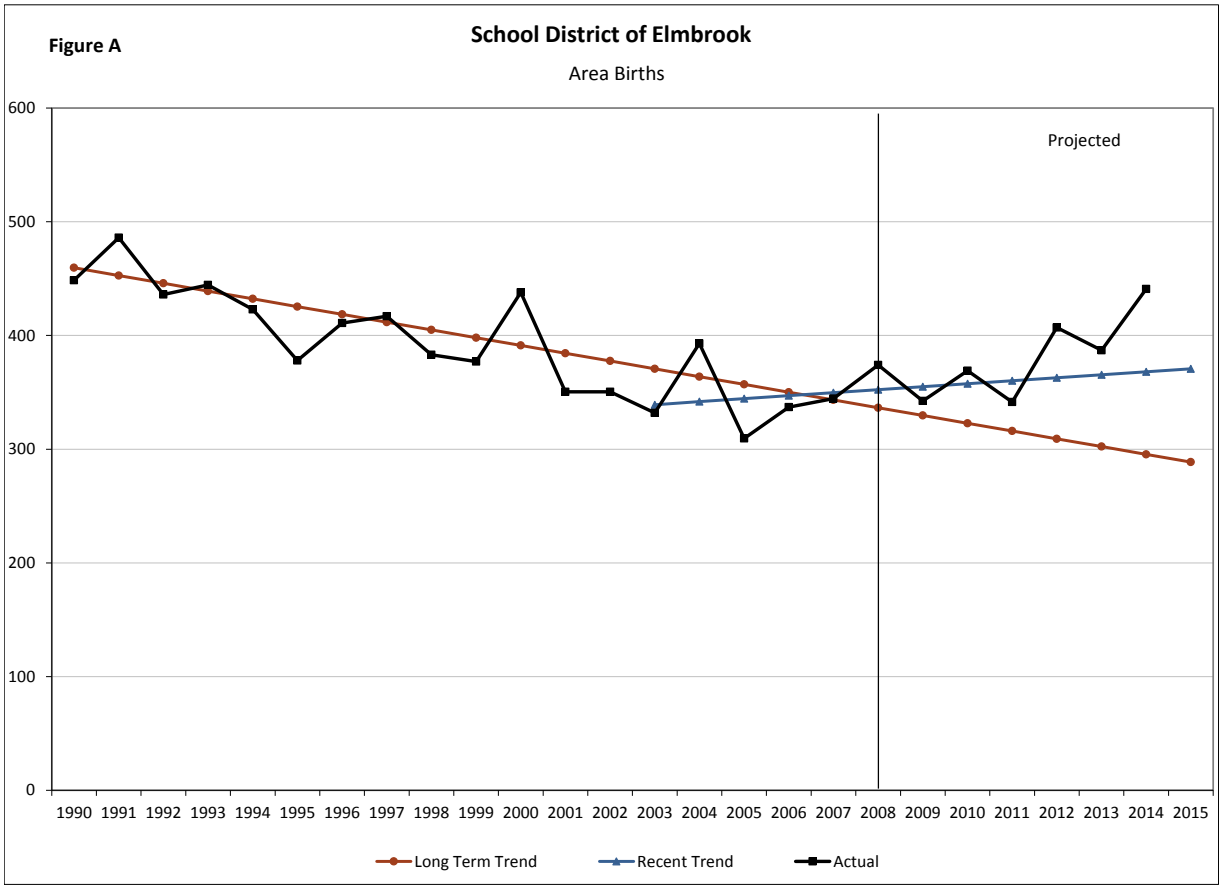
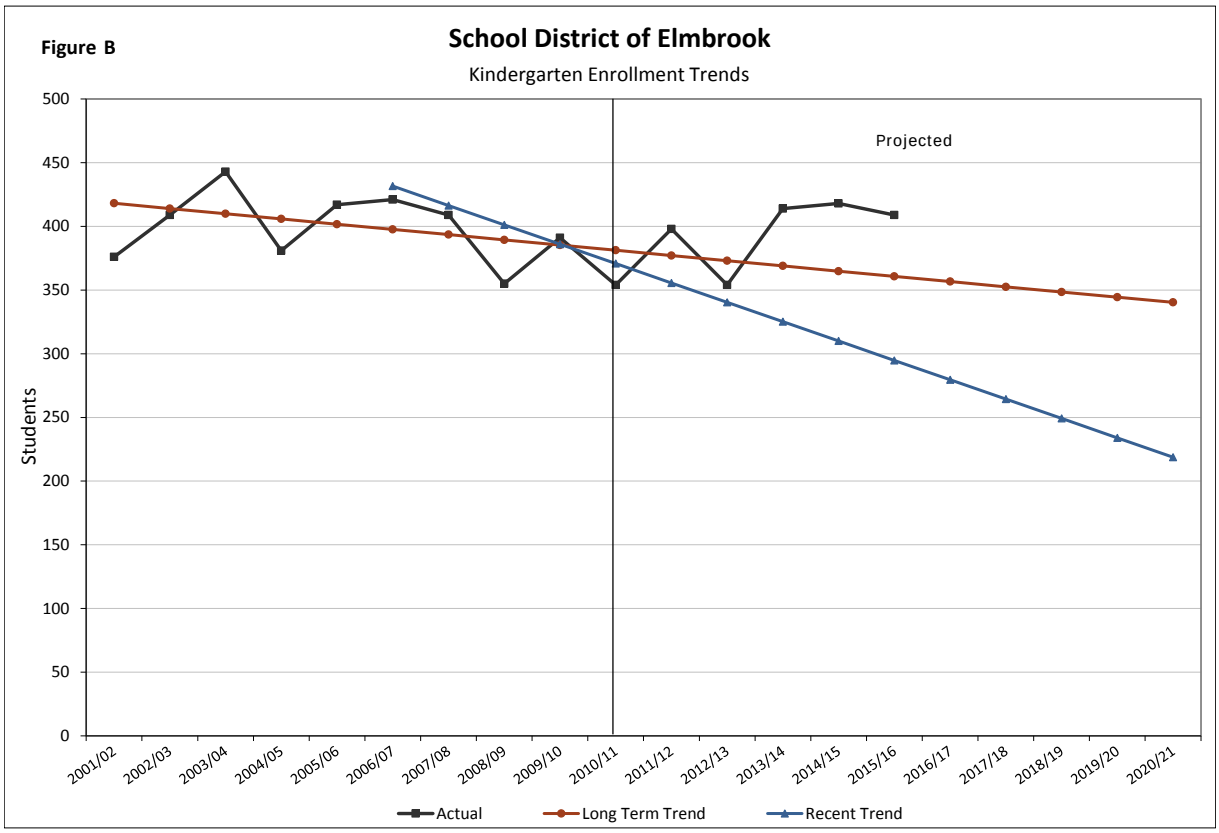


Figure B



District Enrollment History

Figure 1-A and Tables 1 and 2 display the last ten years of resident enrollment history in the School District of Elmbrook. K-12 resident enrollment has declined overall in the past ten years, from 6,776 students in the 2006/07 school year to 6,470 students in 2015/16. This is a decline of 306 students, or a 4.5% decrease in the number of students enrolled.

Figure 1-A

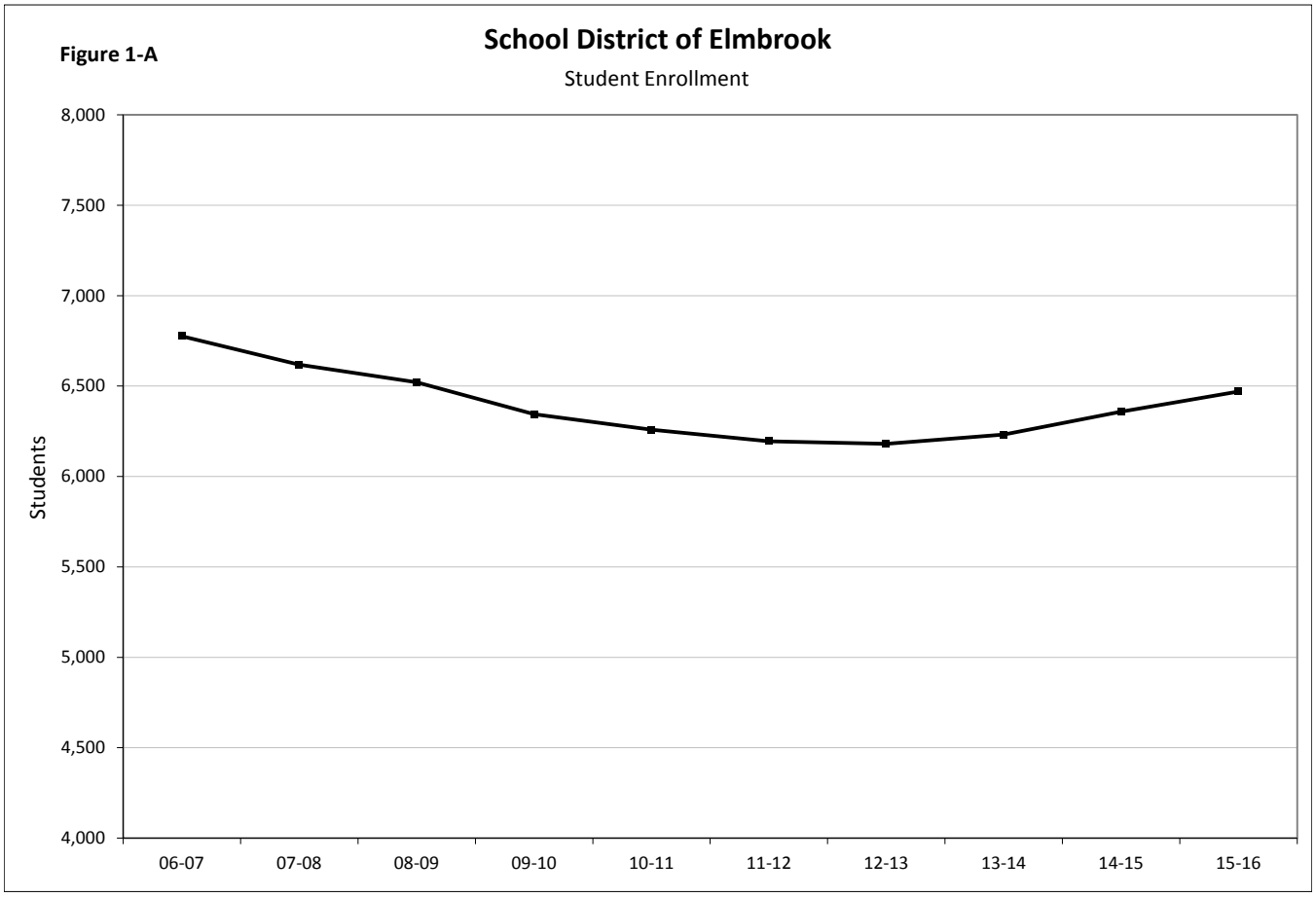


TABLE 1
Student Enrollment
School District of Elmbrook

	SCHOOL YEAR									
	06-07	**07-08**	**08-09**	**09-10**	**10-11**	**11-12**	**12-13**	**13-14**	**14-15**	**15-16**
K	404	379	346	387	351	361	354	414	418	409
1	422	420	422	354	421	374	384	373	453	456
2	377	425	424	420	379	433	397	401	400	481
3	495	388	440	408	433	402	437	413	429	434
4	452	506	400	451	433	437	414	466	428	459
5	472	459	511	411	458	448	451	432	479	461
6	498	491	489	524	441	482	472	466	459	500
7	523	507	517	501	533	458	492	488	482	478
8	549	531	521	519	507	543	471	522	494	477
9	614	592	581	581	552	558	603	510	611	558
10	658	617	586	579	581	547	578	612	514	608
11	634	681	624	610	571	574	543	574	611	514
12	678	622	660	599	599	577	585	561	581	635
TOTAL	**6,776**	**6,618**	**6,521**	**6,344**	**6,259**	**6,194**	**6,181**	**6,232**	**6,359**	**6,470**
K-12	6,776	6,618	6,521	6,344	6,259	6,194	6,181	6,232	6,359	6,470
K-5	2,622	2,577	2,543	2,431	2,475	2,455	2,437	2,499	2,607	2,700
6-8	1,570	1,529	1,527	1,544	1,481	1,483	1,435	1,476	1,435	1,455
9-12	2,584	2,512	2,451	2,369	2,303	2,256	2,309	2,257	2,317	2,315

TABLE 2
Student Enrollment Changes
School District of Elmbrook

	ABSOLUTE CHANGE			PERCENT CHANGE			AVERAGE ANNUAL PERCENT CHANGE		
GRADE	**'06 to '15**	**'06 to '10**	**'11 to '15**	**'06 to '15**	**'06 to '10**	**'11 to '15**	**'06 to '15**	**'06 to '10**	**'11 to '15**
K	5	-53	48	1.2	-13.1	13.3	0.1	-3.3	3.3
1	34	-1	82	8.1	-0.2	21.9	0.9	-0.1	5.5
2	104	2	48	27.6	0.5	11.1	3.1	0.1	2.8
3	-61	-62	32	-12.3	-12.5	8.0	-1.4	-3.1	2.0
4	7	-19	22	1.5	-4.2	5.0	0.2	-1.1	1.3
5	-11	-14	13	-2.3	-3.0	2.9	-0.3	-0.7	0.7
6	2	-57	18	0.4	-11.4	3.7	0.0	-2.9	0.9
7	-45	10	20	-8.6	1.9	4.4	-1.0	0.5	1.1
8	-72	-42	-66	-13.1	-7.7	-12.2	-1.5	-1.9	-3.0
9	-56	-62	0	-9.1	-10.1	0.0	-1.0	-2.5	0.0
10	-50	-77	61	-7.6	-11.7	11.2	-0.8	-2.9	2.8
11	-120	-63	-60	-18.9	-9.9	-10.5	-2.1	-2.5	-2.6
12	-43	-79	58	-6.3	-11.7	10.1	-0.7	-2.9	2.5
TOTAL	**-306**	**-517**	**276**	**-4.5**	**-7.6**	**4.5**	**-0.5**	**-1.9**	**1.1**
K-12	-306	-517	276	-4.5	-7.6	4.5	-0.5	-1.9	1.1
K-5	78	-147	245	3.0	-5.6	10.0	0.3	-1.4	2.5
6-8	-115	-89	-28	-7.3	-5.7	-1.9	-0.8	-1.4	-0.5
9-12	-269	-281	59	-10.4	-10.9	2.6	-1.2	-2.7	0.7

Figure 1-B shows resident enrollment history broken down by grade groupings (K-5, 6-8, and 9-12). Elementary resident enrollment has increased by 0.3% annually. Middle school resident enrollment has decreased over the past ten years by 0.8% annually. The high school resident enrollment decreased the most by 1.2% annually.

Figure 1-B

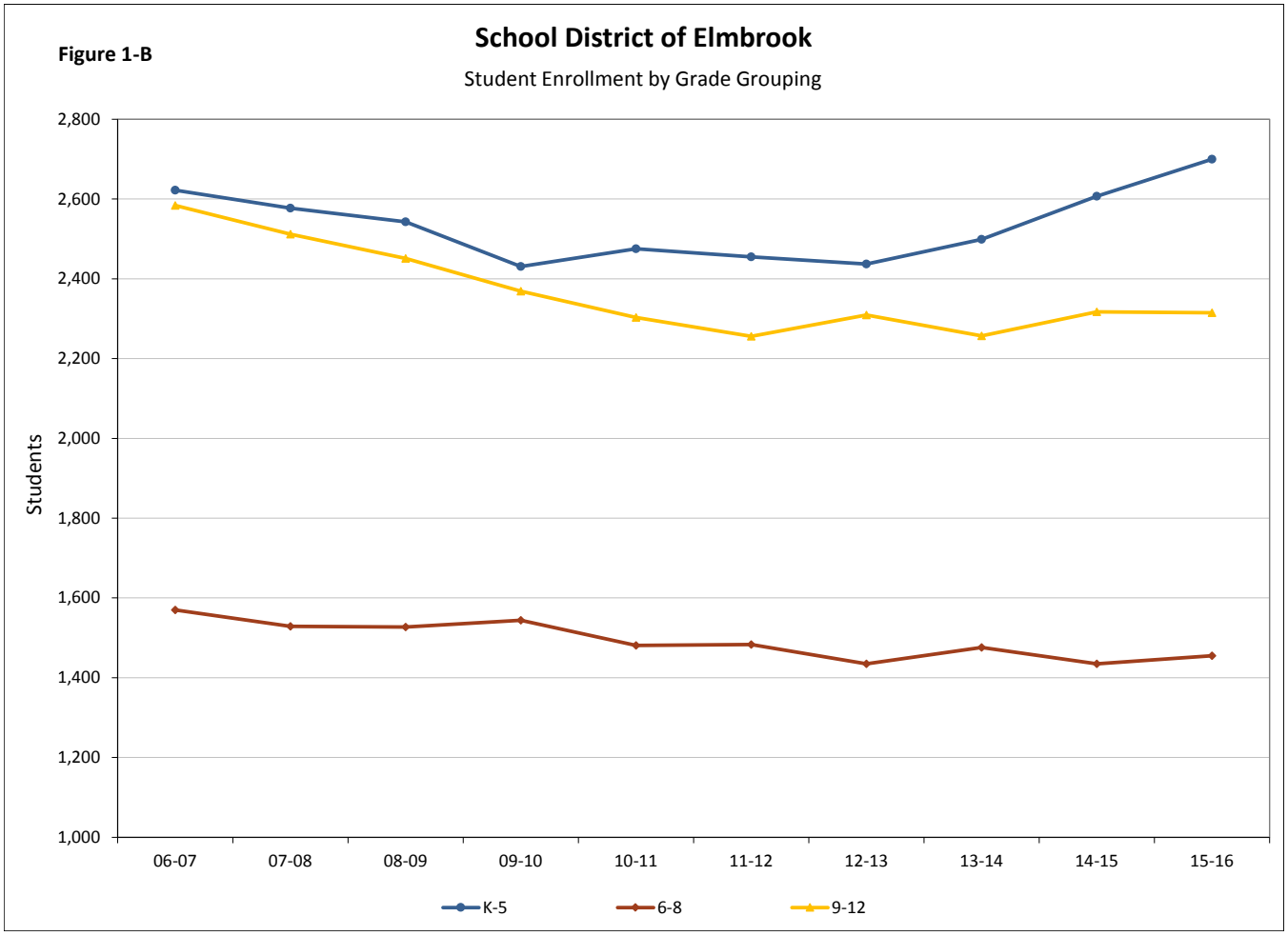
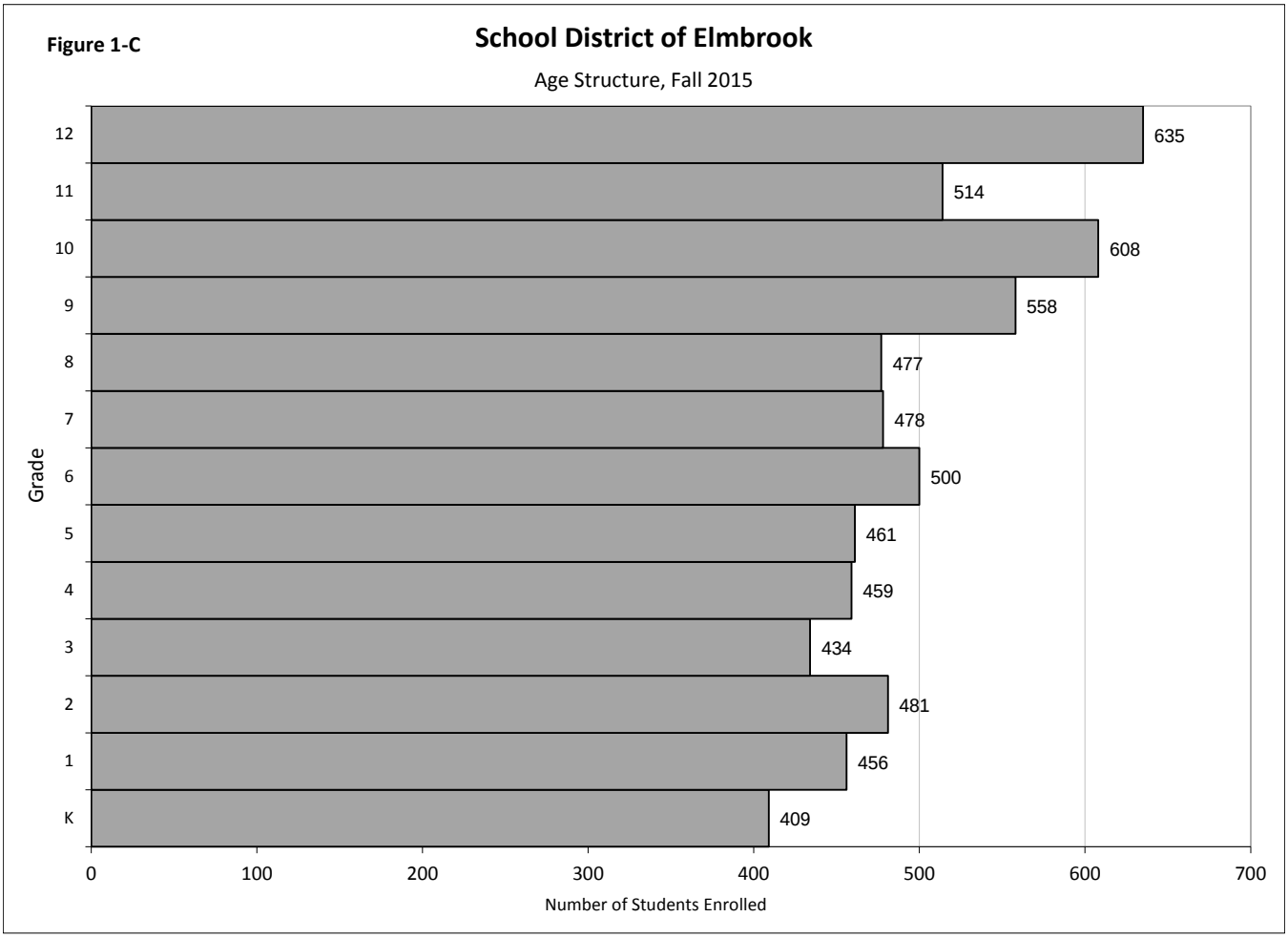


Figure 1-C shows the estimated age structure in Fall 2015 of the student population with the number of kindergarteners at the bottom and the number of 12th graders at top. 12th graders are the largest of the high school grades. 6th graders are the largest of the middle school grades and 2nd graders are the largest of the elementary grades.

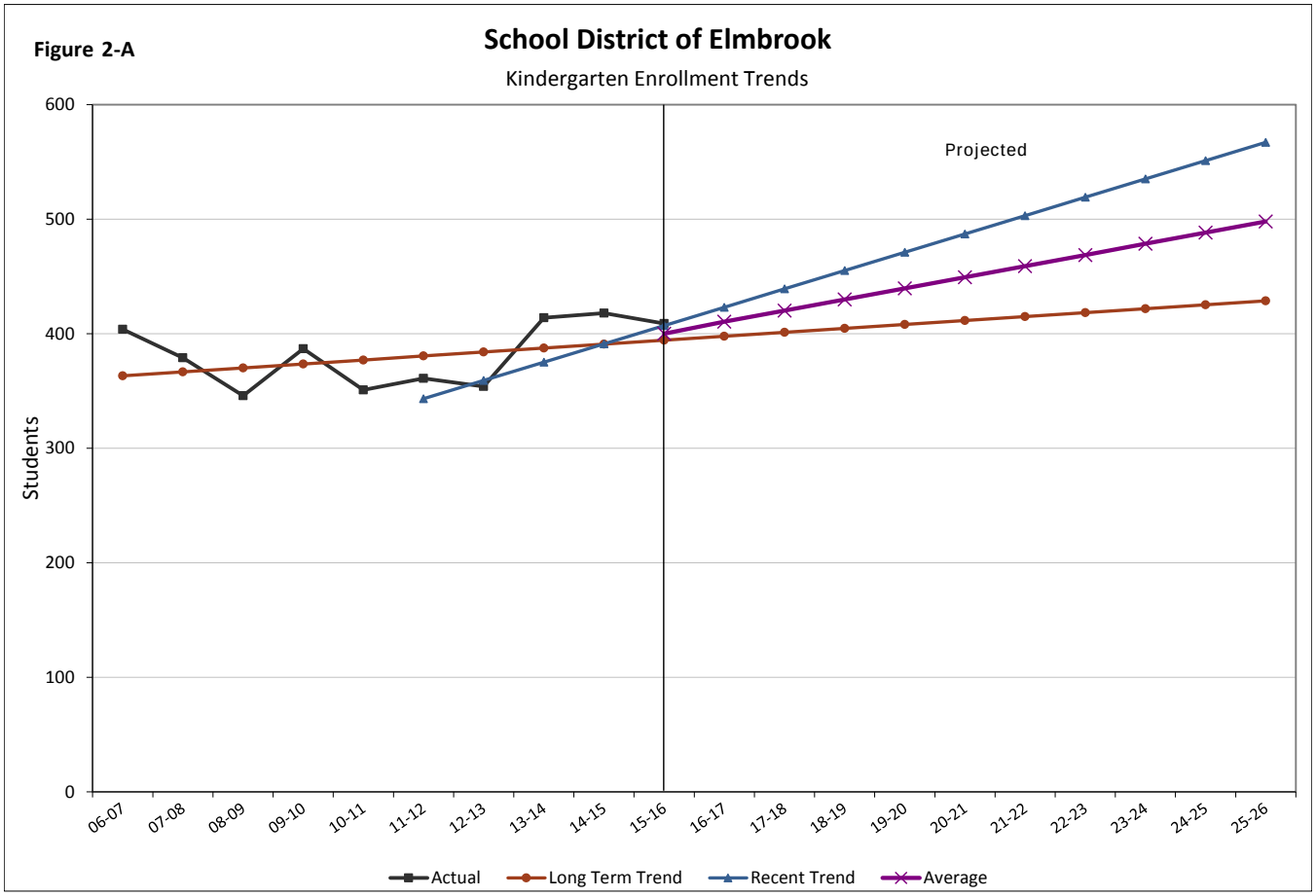
Figure 1-C



Kindergarten Enrollment Trends

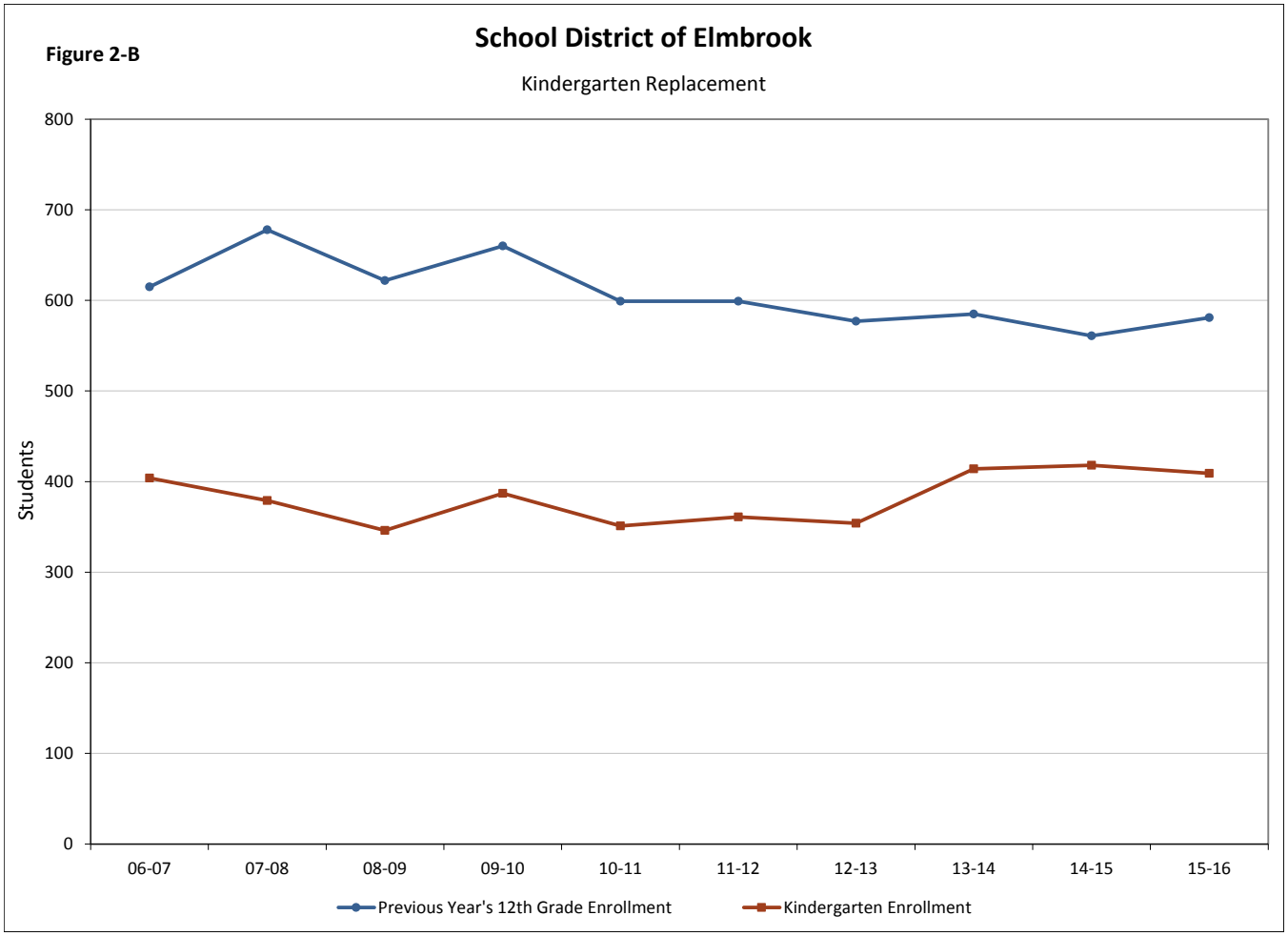
Examining trends in kindergarten resident enrollment is particularly informative for gaining perspective on future district resident enrollment, as today's kindergarteners will gradually make up tomorrow's students at the higher grade levels as they age and move through the school system. When kindergarten resident enrollment is increasing, elementary and middle school resident enrollment might be expected to increase in the near future, while high school resident enrollment may increase farther in the future. Figure 2-A shows kindergarten resident enrollment history in black, and trend lines depicting kindergarten resident enrollment in red and blue. The "Long Term Trend" line (shown in red) averages kindergarten resident enrollment changes between 2006/07 and 2015/16. The "Recent Trend" line emphasizes kindergarten resident enrollment changes over the last five years. In the School District of Elmbrook, long term kindergarten resident enrollment trends indicate increasing resident enrollment. The last 5 years of resident enrollment trends indicate even greater increasing kindergarten resident enrollment. The average of the two trends will be used to project kindergartners in the Kindergarten Trend model later in the report.

Figure 2-A



In addition to examining kindergarten resident enrollment on its own, comparing kindergarten resident enrollment to outgoing 12th graders offers a snapshot of how the age structure of district resident enrollment is shifting either from older to younger, or younger to older. Districts tend to experience overall growth when kindergarten resident enrollment outpaces outgoing students, and they tend to experience decline when kindergarteners do not fully replace the number of graduates. Over the past decade in the School District of Elmbrook, kindergartners have not replaced outgoing seniors. Private schools influences the number of kindergartners as some students will attend a private school through 8th grade but move to public school for high school.

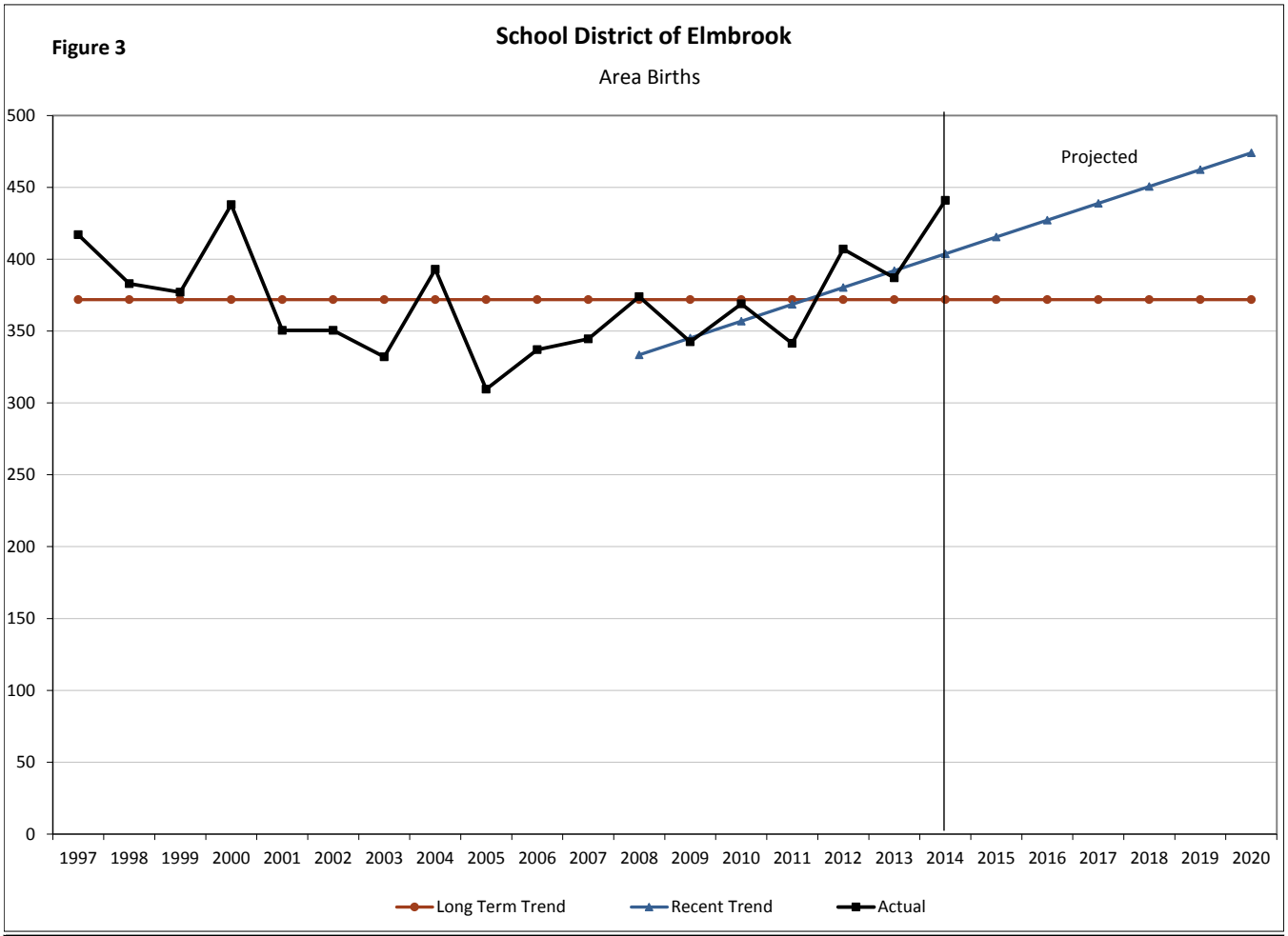
Figure 2-B



Birth Trends and Projections

We use historical and projected birth data to forecast the number of kindergarten students who will enroll in the School District of Elmbrook in future years. Figure 3 shows (in black) the number of births to mothers living in the City of Brookfield, the Town of Brookfield, and the Village of Elm Grove, by year, from 1997-2014, as collected from the Wisconsin Department of Health. We extrapolate these birth trends into the future to correspond with the projection models. The red line in Figure 3 represents birth trends over the longer term (between 1997 and 2014) which indicates steady births. The blue line examines birth patterns for the last seven years. While much of the state has seen a decline in births the last seven years the School District of Elmbrook has seen an increasing trend. The long term trend is used in the Baseline model and the recent trend is used to project kindergartners for the Five Year and Two Year "Trend" models.

Figure 3



Year	1997	1998	1999	2000	2001	2002	2003	2004	2005
# of Births	417	383	377	438	351	351	332	393	310
Year	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
# of Births	337	345	374	343	369	342	407	387	441

Source: WI Department of Health Services

Population Trends

This section examines population trends of the recent past for municipalities that fall within the School District of Elmbrook. Changes in the total population of the district area, particularly when examined by age, provide clues into how the school age population may be changing. Table 3 and Figures 4-A and 4-B provide 2010 U. S. Census population counts and Wisconsin Department of Administration (DOA) estimates for district area municipalities from 2011 to 2015. These municipal estimates can be compared with estimates for Waukesha County and the State of Wisconsin.

TABLE 3
Total Population by Municipality: 2010-2015
School District of Elmbrook

Municipality	POPULATION					
	Census 2010	est. 2011	est. 2012	est. 2013	est. 2014	est. 2015
C. Brookfield	37,920	37,890	37,870	37,835	37,847	37,859
T. Brookfield	6,116	6,109	6,102	6,095	6,064	6,049
V. Elm Grove	5,934	5,941	5,930	5,934	5,963	5,956
District Area	**49,970**	**49,940**	**49,902**	**49,864**	**49,874**	**49,864**
Waukesha County	389,891	390,267	390,914	391,478	392,761	393,927
State of Wisconsin	5,686,986	5,694,236	5,703,525	5,717,110	5,732,981	5,753,324

Municipality	PERCENT CHANGE					
	2010 to 2011	2011 to 2012	2012 to 2013	2013 to 2014	2014 to 2015	2010 to 2015
C. Brookfield	-0.1%	-0.1%	-0.1%	0.0%	0.0%	-0.2%
T. Brookfield	-0.1%	-0.1%	-0.1%	-0.5%	-0.2%	-1.1%
V. Elm Grove	0.1%	-0.2%	0.1%	0.5%	-0.1%	0.4%
District Area	-0.1%	-0.1%	-0.1%	0.0%	0.0%	-0.2%
Waukesha County	0.1%	0.2%	0.1%	0.3%	0.3%	1.0%
State of Wisconsin	0.1%	0.2%	0.2%	0.3%	0.4%	1.2%

Source: U. S. Census Bureau & Demographic Services Center, WIDOA

Figure 4-A

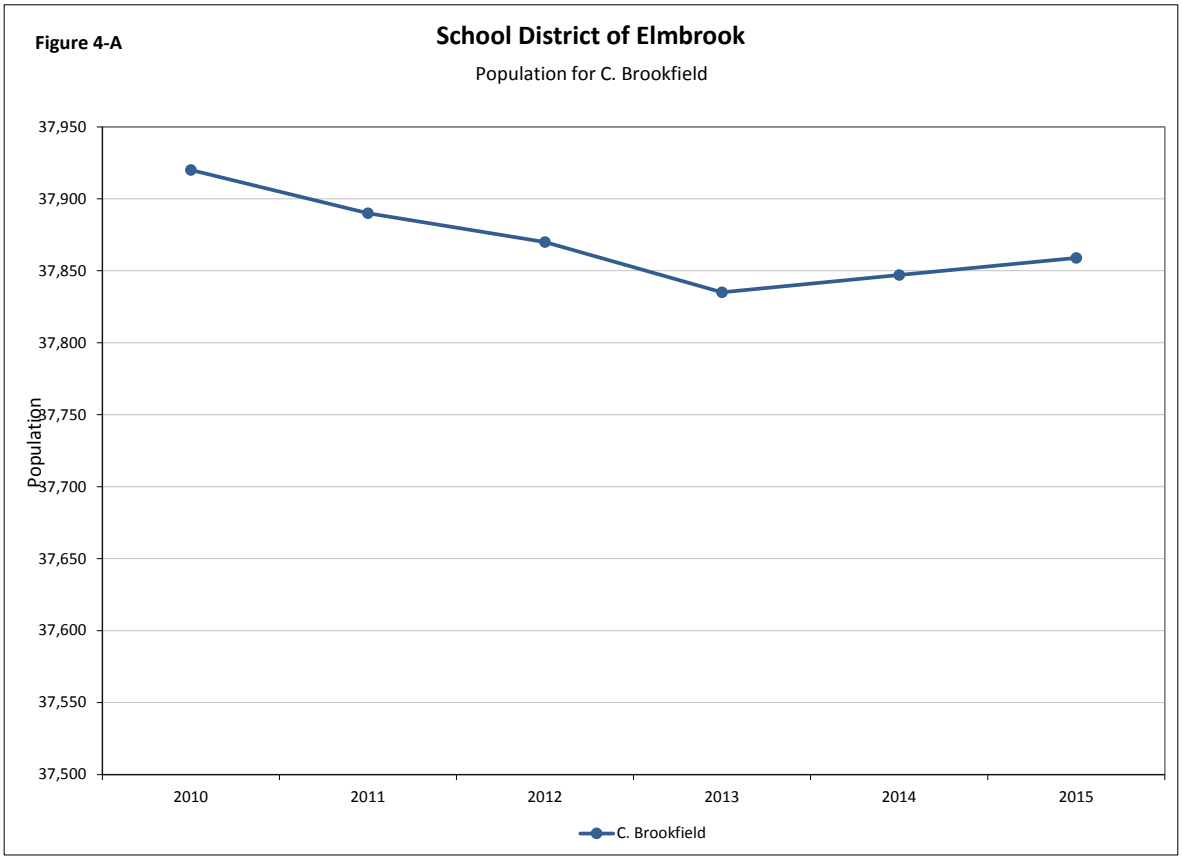


Figure 4-B

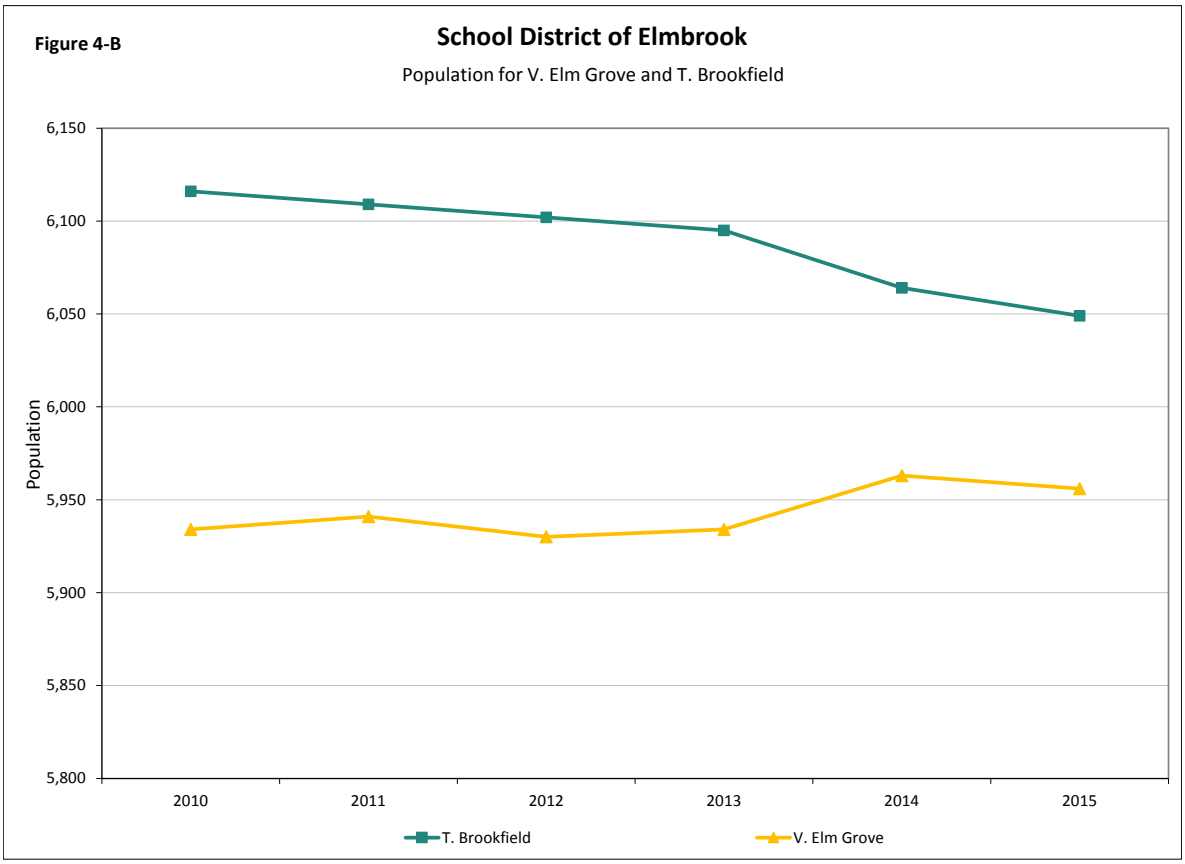
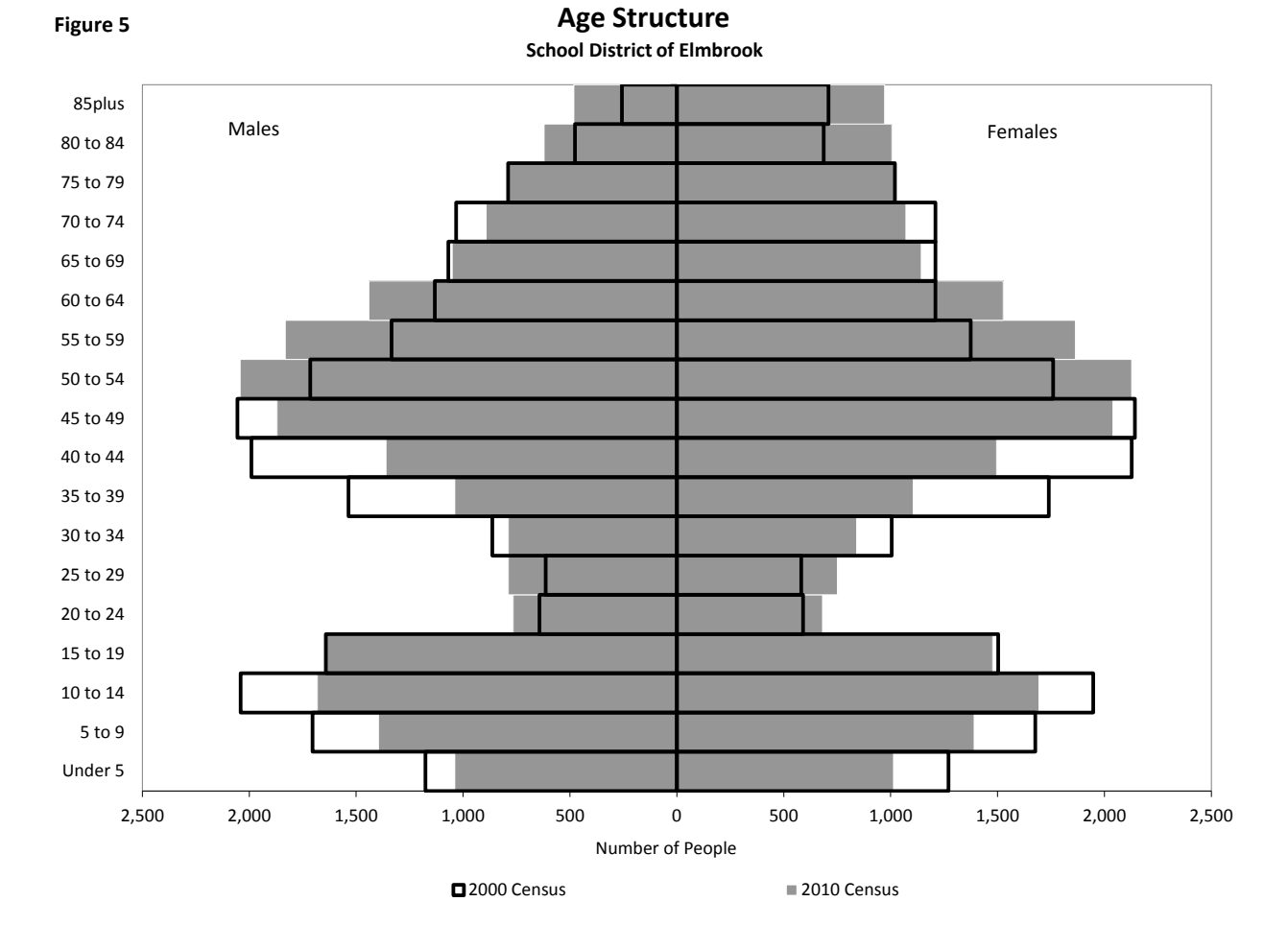
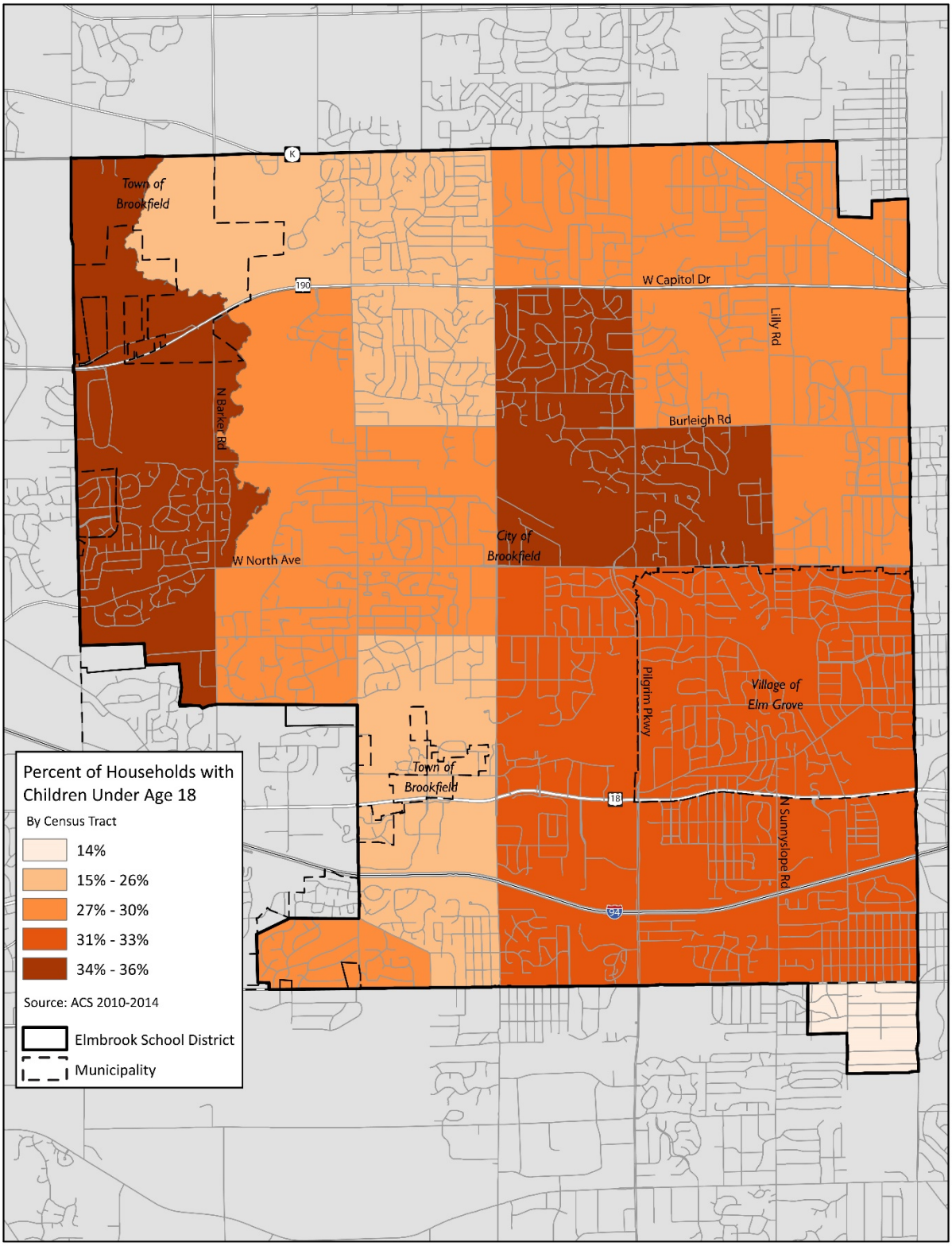


Figure 5 illustrates the population for the School District of Elmbrook showing the change in age structure between 2000 and 2010. This graph provides a population breakdown in five year increments and a visual representation showing the decrease in age 0-14 and increase in Baby Boom populations.

Figure 5



This map on the following page illustrates the percent of all households with children under 18 years of age by census tract from the American Community Survey (2010-2014). Households with children under the age of 18 are dispersed throughout the district. According to the American Community Survey (2010-2014), the City of Brookfield's population age 0-19 was 25% of the total population, while in the Village of Elm Grove the 0-19 population was 26% of the total population.


Town of Brookfield
K
190
W Capitol Dr
Lilly Rd
N Barker Rd
Burleigh Rd
City of Brookfield
W North Ave
Pilgrim Pkwy
Village of Elm Grove
Town of Brookfield
18
N Sunnyslope Rd
94
Percent of Households with Children Under Age 18
By Census Tract
14%
15% - 26%
27% - 30%
31% - 33%
34% - 36%
Source: ACS 2010-2014
Elmbrook School District
Municipality

Housing Trends

Historical Housing Trends

Figure 6-A shows housing starts in the area by type of housing unit—single family, two family, and multi-family housing unit. Households in single family homes, on average, contain more school-aged children than in two-family and multi-family complexes. The district area experienced an overall decline in single family housing development through 2008 when construction averaged 19 units until 2013. New single family home construction has increased over the last two years.

Figure 6-A

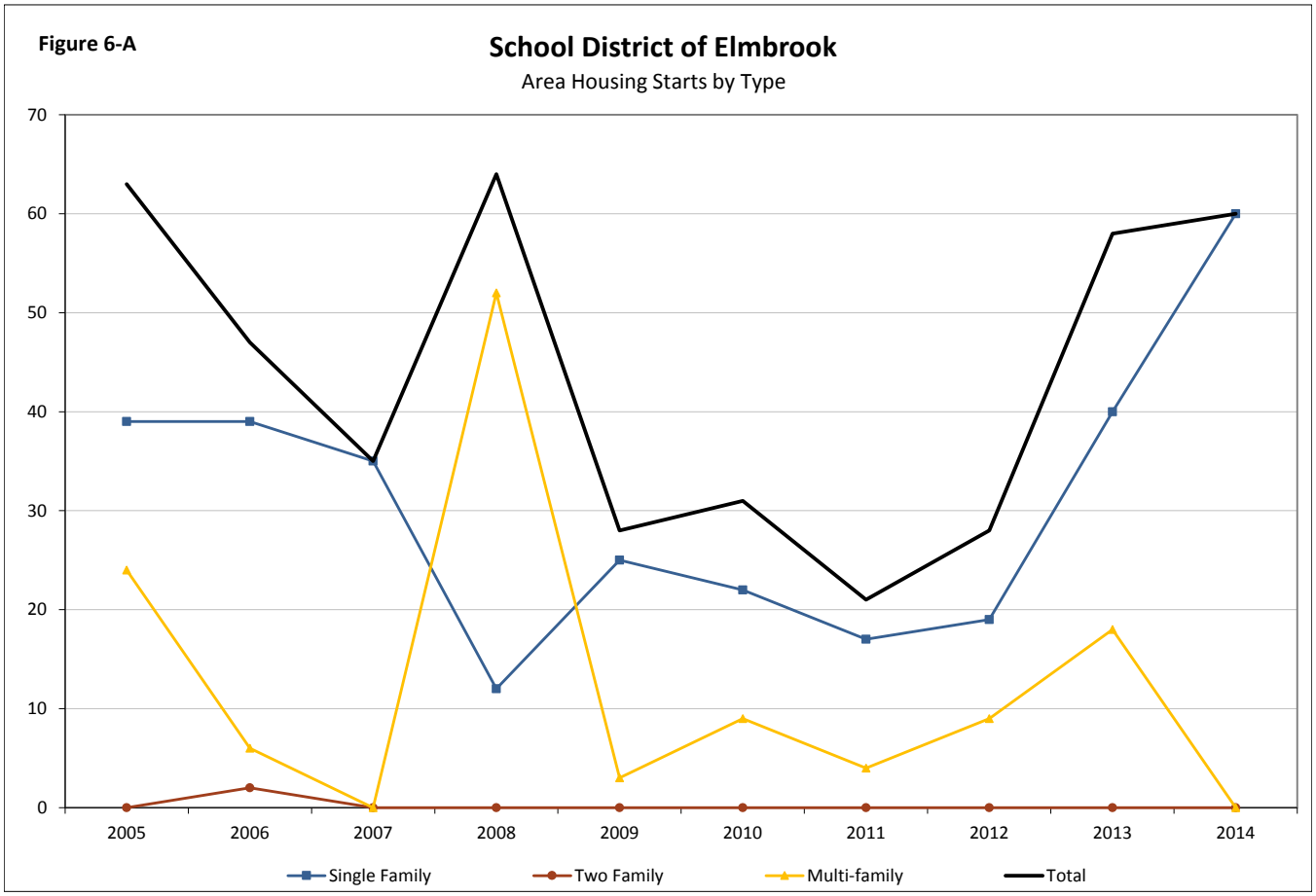


Table 4 shows the number of housing starts in the School District of Elmbrook from 2005 to 2014.

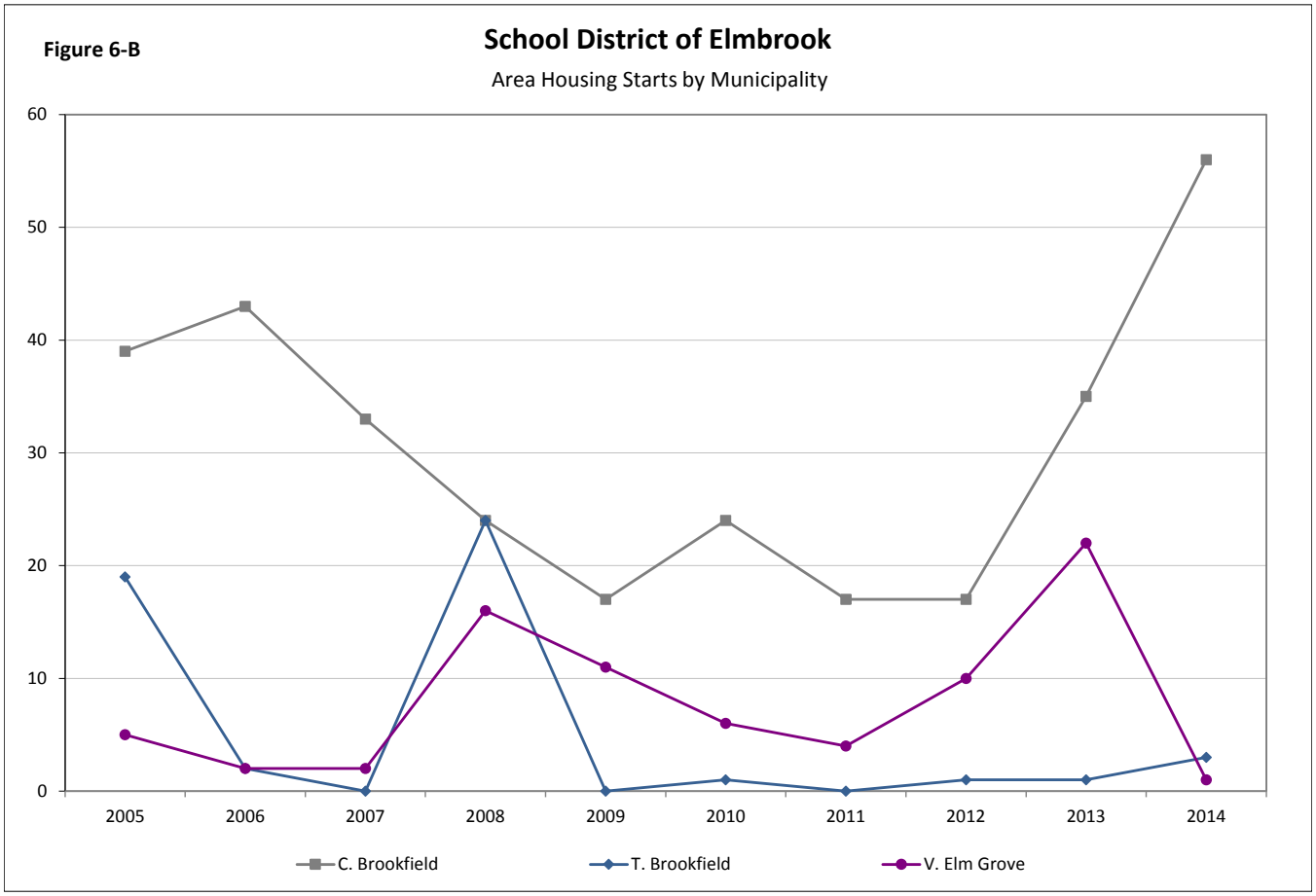
TABLE 4
School District Area Housing Starts
School District of Elmbrook

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
District Area										
TOTAL	**63**	**47**	**35**	**64**	**28**	**31**	**21**	**28**	**58**	**60**
Single Family	**39**	**39**	**35**	**12**	**25**	**22**	**17**	**19**	**40**	**60**
Two Family	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Multi-family	**24**	**6**	**0**	**52**	**3**	**9**	**4**	**9**	**18**	**0**
C. Brookfield										
TOTAL	**39**	**43**	**33**	**24**	**17**	**24**	**17**	**17**	**35**	**56**
Single Family	33	37	33	11	17	17	17	17	35	56
Two Family	0	0	0	0	0	0	0	0	0	0
Multi-family	6	6	0	13	0	7	0	0	0	0
T. Brookfield										
TOTAL	**19**	**2**	**0**	**24**	**0**	**1**	**0**	**1**	**1**	**3**
Single Family	1	0	0	0	0	1	0	1	1	3
Two Family	0	2	0	0	0	0	0	0	0	0
Multi-family	18	0	0	24	0	0	0	0	0	0
V. Elm Grove										
TOTAL	**5**	**2**	**2**	**16**	**11**	**6**	**4**	**10**	**22**	**1**
Single Family	5	2	2	1	8	4	0	1	4	1
Two Family	0	0	0	0	0	0	0	0	0	0
Multi-family	0	0	0	15	3	2	4	9	18	0

Source: Demographic Services Center, WIDOA

The majority of housing development over the last ten years has occurred in the City of Brookfield. The School District of Elmbrook has averaged 31 new single family homes annually over the last ten years. Development in the area has consisted of mostly single-family homes. Significant multi-family construction occurred in 2005, 2008, and 2013. Households in single family homes, on average, contain more school-aged children than in two-family and multi-family complexes. Figure 6-B shows the total number of residential building permits issued by municipality.

Figure 6-B


School District of Elmbrook
Area Housing Starts by Municipality
60
50
40
30
20
10
0
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
C. Brookfield
T. Brookfield
V. Elm Grove

Housing Turnover

It is also important to consider that turnover in ownership of existing housing stock also contributes to changes in resident enrollment. A district may increase or decrease in resident enrollment depending upon the cycle of resident homeowners, regardless of housing starts. For instance, a younger community will have a higher child-per-household ratio, whereas an older community will have a lower child-per-household ratio. At some point in time turnover in ownership in an older community may result in an increase in the child-per-household number. As younger families move into the area, the school district will tend to see new students enrolling into the district's schools. Absent new housing development or housing turnover, householders age in place and the number of school-aged children eventually declines. Turnover in home ownership is a gradual process and may alter over time at various rates.

Table 5 shows the in-migration of the City of Brookfield, Village of Elm Grove, School District of Elmbrook, and Waukesha County. 91.7% of city residents live in the home they lived in one year ago, while the village residents are lower at 90.4%.

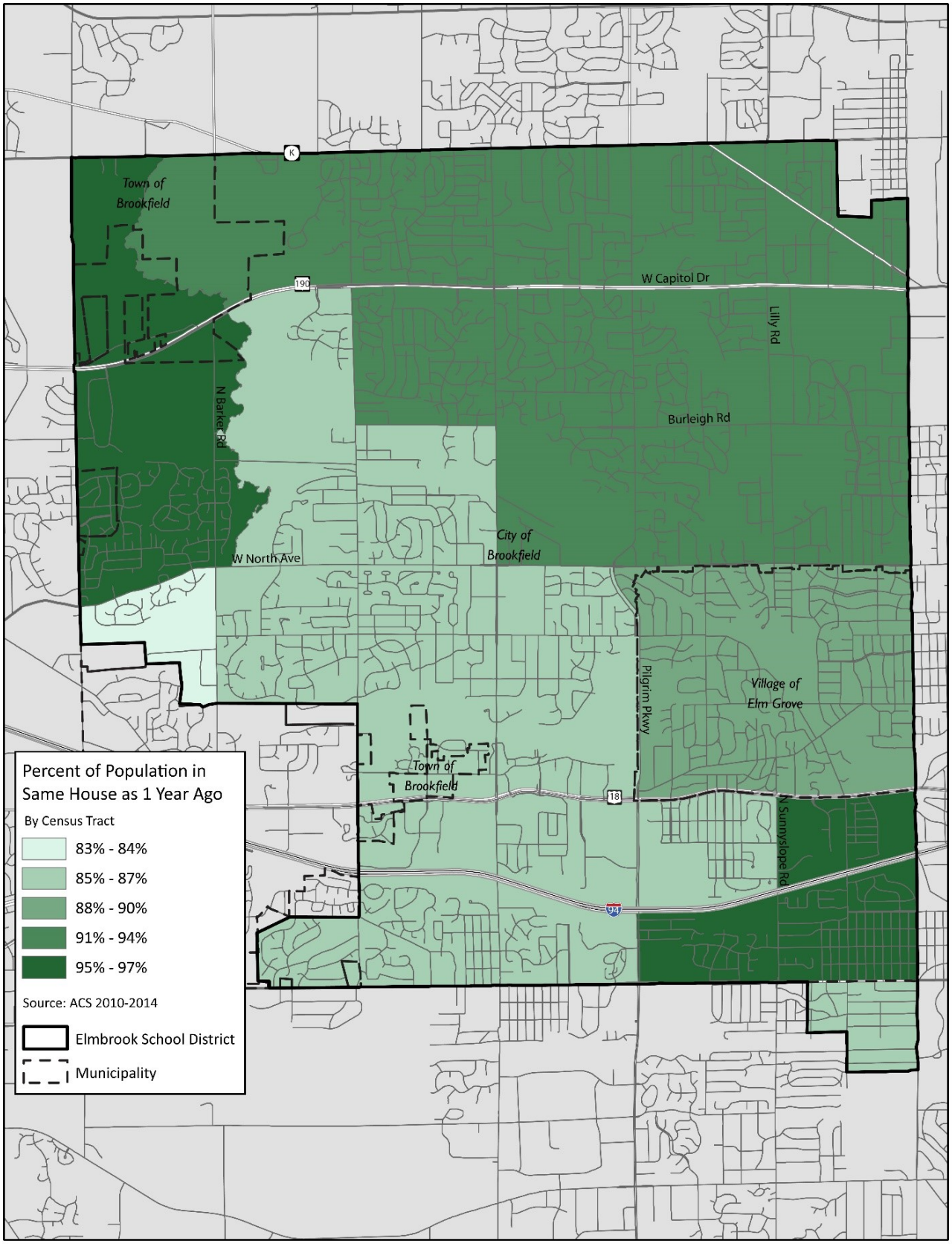
TABLE 5
In-migration, one year ago

Area	Population age 1 and over, 2010	% Living in the Same House	% Moved within Same County	% Moved in from Different County	% Moved in from Different State	% Moved from Abroad
City of Brookfield	37,667	91.7%	3.3%	3.2%	0.9%	0.9%
Village of Elm Grove	5,957	90.4%	1.7%	2.3%	5.6%	0.0%
School District of Elmbrook	44,753	91.5%	3.0%	3.2%	1.5%	0.8%
Waukesha County	388,512	89.2%	5.3%	3.7%	1.6%	0.3%

Source: ACS 2010-2014

The map on the following page illustrates the percent of households living in the same house as of one year ago by Census tract from the American Community Survey (ACS, 2010-2014).

Predicting future school district resident enrollment and the future age structure of the population in the School District of Elmbrook due to housing turnover is not easy to determine. Several factors are difficult to predict that affect housing turnover. These include demand and supply variables like attractiveness to young families (demand), as well as suitable and available rental and owner occupied housing (supply). In addition, housing turnover depends on even more elusive variables, determined by housing market conditions and the individual preferences of homeowners. Housing is driven by supply and demand. The following pages provide a snap-shot in time of several variables including housing value, housing tenure, and future housing trends. These trends can provide insight into the housing market.


Town of Brookfield
K
190
W Capitol Dr
Lilly Rd
N Barker Rd
Burleigh Rd
City of Brookfield
W North Ave
Pilgrim Pkwy
Village of Elm Grove
Town of Brookfield
18
N Sunnyslope Rd
94
Percent of Population in Same House as 1 Year Ago
By Census Tract
83% - 84%
85% - 87%
88% - 90%
91% - 94%
95% - 97%
Source: ACS 2010-2014
Elmbrook School District
Municipality

Housing Value

Young families need housing that is both affordable and can accommodate children. In general, young families have lower incomes and occupy less expensive housing than families with older, more established householders. Table 6 shows median value of owner occupied homes and average household size. In the School District of Elmbrook, the median housing value is $282,600 and the average household size is 2.62.

TABLE 6
Owner Occupied Housing Units

	Count	Median Value	Average Household Size
City of Brookfield	12,866	$282,300	2.63
Village of Elm Grove	2,097	$362,900	2.60
School District of Elmbrook	15,280	$282,600	2.62
Waukesha County	118,176	$249,900	2.68

Source: ACS 2010-2014

Housing Tenure

Table 7 shows owner-occupied and renter-occupied by age in the School District of Elmbrook and Waukesha County. In the district, about 88% of householders own their homes. In households likely to have school age children, 13% of householders age 35 to 44 are homeowners and 26% of householders age 45 to 54 are homeowners. In general, home ownership is spread throughout the age groups except for the very young and very elderly populations.

TABLE 7
Homeownership by Age

Householder	School District of Elmbrook				Waukesha County			
	Owners	Percent	Renters	Percent	Owners	Percent	Renters	Percent
15 to 24 years	44	0%	121	6%	517	0%	3,013	8%
25 to 34 years	693	5%	436	22%	9,635	8%	8,865	25%
35 to 44 years	2,051	13%	346	17%	20,323	17%	5,654	16%
45 to 54 years	3,928	26%	372	18%	30,276	26%	5,413	15%
55 to 64 years	3,612	24%	158	8%	27,828	24%	4,203	12%
65 to 74 years	2,518	16%	197	10%	16,685	14%	2,668	7%
75 to 84 years	1,701	11%	147	7%	9,735	8%	3,113	9%
85 years & over	733	5%	245	12%	3,177	3%	2,777	8%

Source: ACS 2010-2014

Rental units are significantly more likely to turnover than owner occupied homes, but rental turnover is less likely to bring increasing numbers of families. While most young families prefer to own a home, some people are willing to rent to live in a desirable area. Table 8 shows rental unit characteristics in the City of Brookfield, Village of Elm Grove, School District of Elmbrook, and Waukesha County. While rental units might serve young professionals, families with children often need three or more bedrooms. Gross rent is highest in the City of Brookfield at $1,291.

TABLE 8
Renter Occupied Housing Units

	No bedrooms	1 bedroom	2 bedrooms	3 or more	Median gross rent
City of Brookfield	20	420	805	446	$1,291
Village of Elm Grove	0	15	110	41	$1,167
School District of Elmbrook	56	495	1,020	451	$1,263
Waukesha County	1,136	10,170	17,443	6,957	$925

Source: ACS 2010-2014

The School District of Elmbrook has a total of 17,302 households with a total of 12,859 family households and non-family householders total 4,443. Table 9 shows the number of non-family households and the population living alone in the school district. 88% of the non-family householders live alone with 63% of them over 65 years of age.

TABLE 9
Population in Non-Family Households
School District of Elmbrook

Non-Family Households	Population	Living Alone	Percent of Total	Living Alone Over age 65	% Total Living Alone	Living w/Others*	Percent of Total
Female householder	3,035	2,787	63%	1,916	49%	248	6%
Male householder	1,408	1,104	25%	529	14%	304	7%
Total population	**4,443**	**3,891**	**88%**	**2,445**	**63%**	**552**	**12%**

* Other includes Housemates, Roomates, Boarders, or Unmarried partners
Source: ACS 2010-2014

Future Housing Trends

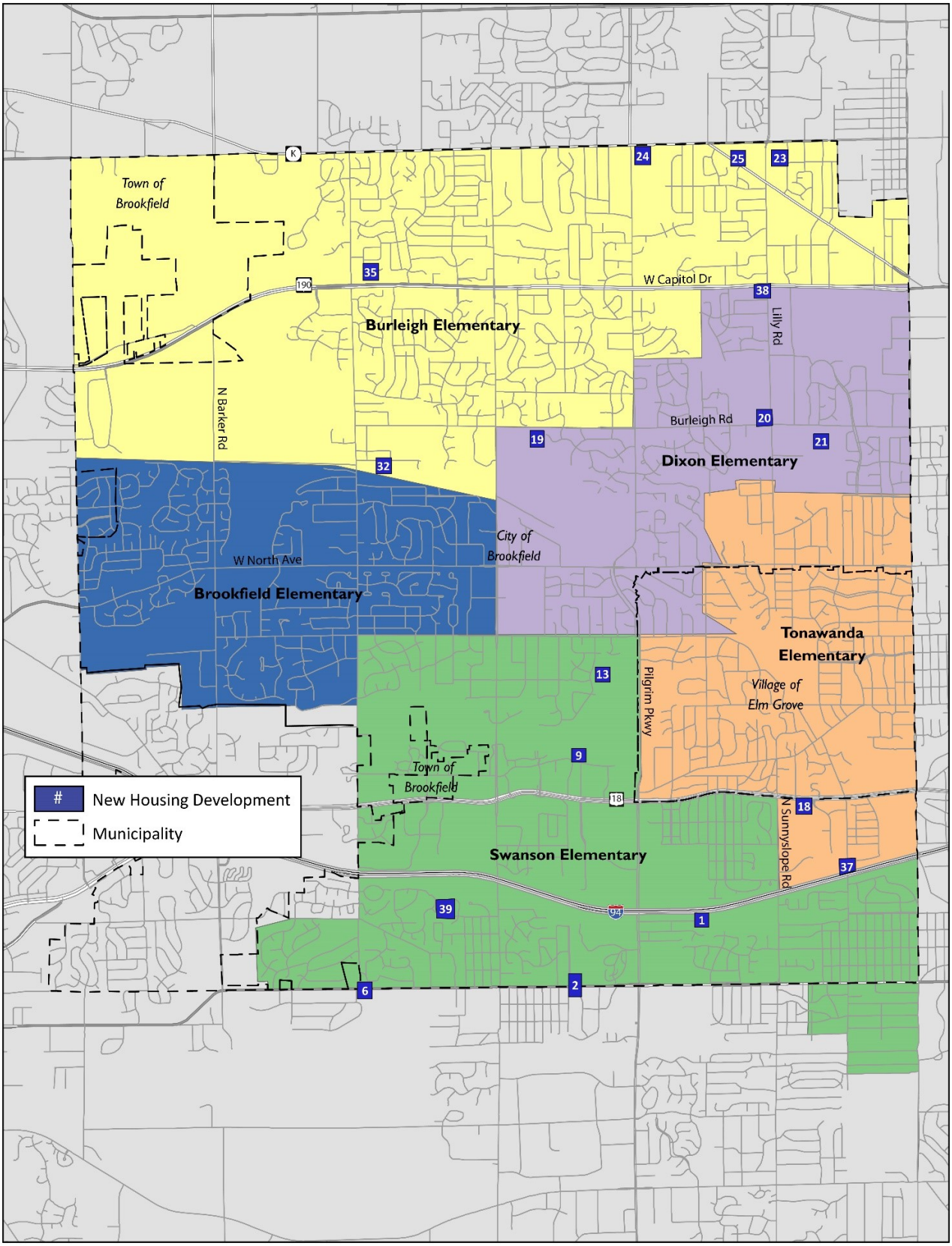
To better assess the potential for future housing development interviews were conducted with municipal personal. This report identifies residential development planned in the district's growth areas which are dispersed throughout the City of Brookfield. New housing construction slowed during the recession, but the district area has seen a gradual increase in home construction. This new housing information will be used to assess the influence of the residential development on future student growth.

Table 10 shows an estimated number of new single family homes in the city, village, and town for the next ten years and the estimated number of students resulting from home construction by grade grouping. A student per housing unit ratio is used to determine the potential number of students by grade grouping that may move into the district due to new housing.

TABLE 10
Additional Students from Residential Development
School District of Elmbrook

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
New Homes	63	63	63	68	68	68	73	73	73	73
	16-17	**17-18**	**18-19**	**19-20**	**20-21**	**21-22**	**22-23**	**23-24**	**24-25**	**25-26**
K-12	45	45	45	45	49	49	49	52	52	52
K-5	14	14	14	14	15	15	15	16	16	16
6-8	16	16	16	16	18	18	18	19	19	19
9-12	15	15	15	15	16	16	16	17	17	17

The map and table on the following pages show the approved and currently active housing developments in the district. The numbers shown on the map correspond with the developments listed in the table. This study does not try to consider future development that has not been approved by the City of Brookfield. This table shows all projected housing provided from the City of Brookfield planning department. Housing projections represent the best information known at this time and the numbers on the map correspond with the numbers in the Map column. The full list and their locations can be found on the District Boundary and Tract map (separate district compiled map). The highlighted areas are potentially new homes over the next four years. The Village of Elm Grove is built out and does not have any potential new homes unless existing homes are torn down.


Town of Brookfield
K
24
25
23
35
190
W Capitol Dr
38
Lilly Rd
Burleigh Elementary
N Barker Rd
Burleigh Rd
20
19
21
Dixon Elementary
32
City of Brookfield
W North Ave
Brookfield Elementary
Tonawanda Elementary
13
Pilgrim Pkwy
Village of Elm Grove
9
Town of Brookfield
18
18
N Sunnyslope Rd
Swanson Elementary
37
39
94
1
6
2
New Housing Development
Municipality

Map[1]	Tract	Description	1-2 years	3 - 4 years	5 or more years	Additional Information
1	182	12 single family home sites	x			End of Carpenter Rd.
2	183	70-80 units		x		Mainly 1 & 2 bedrooms, W of Brookfield Hills per city plan
4		6-8 lots single family			x	Could be Annexed from Town of Brookfield
5	132	12-14 single family lots			x	
6	131	5 new lots	x			lots already pre-sold, expect quick building
7 & 8	130	100 - 150 units		x(75)	x(75)	Mainly 1 & 2 bedrooms (maybe avail in 4 yrs)
9		100 - 120 units	x			Mainly 1 & 2 bedrooms (likely occupancy 2018-19)
10		30-40 units (40-50 units)			x	If Wisconsin Ave extends
11		24 units			x	
12	144	6 single family lots			x	
13		2 single family lots	x			
14	160	17-24 single family lots			x	No activity
15		10 single family lots (6-8 SF lots)			x	Low probability
16	163	6 max single family lots			x	Church property
17	110	40 units			x	Low probability
18	184	194 units	x			1, 2, and loft options
19	147	16 units		x		Concept right now behind hockey rink
20	121	76 units	x			Lilly Preserve (1,2 and 3 bedrooms, but not many w 2 & 3)
21	202	113 units	x	x		Hidden Lake (112 apts: 1 & 2 bedrm; 1 SF; 1/2 in 2017, 1/2 in 2019-20)
23		30-40 multi-family units		x		CAO Location
24		46 multi-family units		x		
25		Old Knights of Columbus (3 lots)		x	x	potential for 4-5 SF lots in 3-5 years
26	122	20 single family lots			x	Nothing active yet
27		8-10 units (4-5 duplexes)			x	Nothing active yet
28	123	6-8 single family			x	Nothing active yet
29		6-8 single family			x	Nothing active yet
30	124	20 units			x	Would require re-zoning
31	155	3-6 potential SF lots			x	Nothing active yet
32	112	33 units	x			Occupancy planned Fall 2016
33	150	6 single family lots			x	
34		84 potential units			x	currently zoned multi-family
35	161	56 units	x(28)	x(28)		1-2 bedroom; 1 building done & occupied
36	154	46 single family lots			x	
37	180	2 single family lots	x			Elm Grove Rd. and I-94
38	202	2 single family lots	x			Mobil station at Capitol & Lilly
39	131	2 single family lots	x			Robinwood & Toldt Circle Court
	182	6 -7 deep single family lots			x	No activity right now / speculative
	201	8-10 single family lots			x	
		Additional 60 units	x(20)	x(40)		

Method

In order to generate school resident enrollment projections, we rely on a commonly used demographic technique called the “cohort survival” method or the “grade progression ratio” method. This method advances current students through the school system over time and applies rates of transfer (or “survival”) as the students who are now in school age from year to year and grade to grade. It is through these rates of transfer that we make assumptions about how migration into and out of the district and transfers to and from different schools or home schooling will impact future resident enrollment.

Grade Progression Ratios

Grade progression ratios are used to measure district resident enrollment changes, year to year, and grade to grade, that have occurred within the school district in the recent past. By examining these, we can better understand recent changes in resident enrollment. We use these ratios as the rates of transfer to inform future student projections.

Table 11 shows the grade progression ratios for the School District of Elmbrook. The ratios measure the effects of in- and out-migration and the transfer of students between private and public schools. The ratios are calculated for several pairs of years and then averages of these based on different time frames are calculated for each grade.

TABLE 11
Grade Progression Ratios
School District of Elmbrook

YEAR CHANGES	B:K	K:1	1:2	2:3	3:4	4:5	5:6	6:7	7:8	8:9	9:10	10:11	11:12
06-07/07-08	0.998	1.040	1.007	1.029	1.022	1.015	1.040	1.018	1.015	1.078	1.005	1.035	0.981
07-08/08-09	0.987	1.113	1.010	1.035	1.031	1.010	1.065	1.053	1.028	1.094	0.990	1.011	0.969
08-09/09-10	1.144	1.023	0.995	0.962	1.025	1.028	1.025	1.025	1.004	1.115	0.997	1.041	0.960
09-10/10-11	0.942	1.088	1.071	1.031	1.061	1.016	1.073	1.017	1.012	1.064	1.000	0.986	0.982
10-11/11-12	1.070	1.066	1.029	1.061	1.009	1.035	1.052	1.039	1.019	1.101	0.991	0.988	1.011
11-12/12-13	1.080	1.064	1.061	1.009	1.030	1.032	1.054	1.021	1.028	1.110	1.036	0.993	1.019
12-13/13-14	1.211	1.054	1.044	1.040	1.066	1.043	1.033	1.034	1.061	1.083	1.015	0.993	1.033
13-14/14-15	1.148	1.094	1.072	1.070	1.036	1.028	1.063	1.034	1.012	1.170	1.008	0.998	1.012
14-15/15-16	1.159	1.091	1.062	1.085	1.070	1.077	1.044	1.041	0.990	1.130	0.995	1.000	1.039
Baseline	**1.100**	**1.071**	**1.044**	**1.039**	**1.031**	**1.026**	**1.050**	**1.029**	**1.017**	**1.097**	**1.000**	**0.996**	**0.996**
5 Year Trend	**1.133**	**1.074**	**1.054**	**1.053**	**1.042**	**1.043**	**1.049**	**1.034**	**1.022**	**1.119**	**1.009**	**0.994**	**1.023**
2 Year "Trend"	**1.153**	**1.093**	**1.067**	**1.077**	**1.053**	**1.052**	**1.053**	**1.038**	**1.001**	**1.150**	**1.001**	**0.999**	**1.026**

*Shaded progression ratios are excluded from the Baseline Average

The grade progression ratios can be interpreted in the following manner. The Baseline ratio for 2:3 is 1.039. This means that in the School District of Elmbrook, the third grade class is 3.9% larger than the second grade class from the previous year. Baseline B:K ratio of 1.100 indicates that, on average, an additional 10% of births outside the district will attend kindergarten.

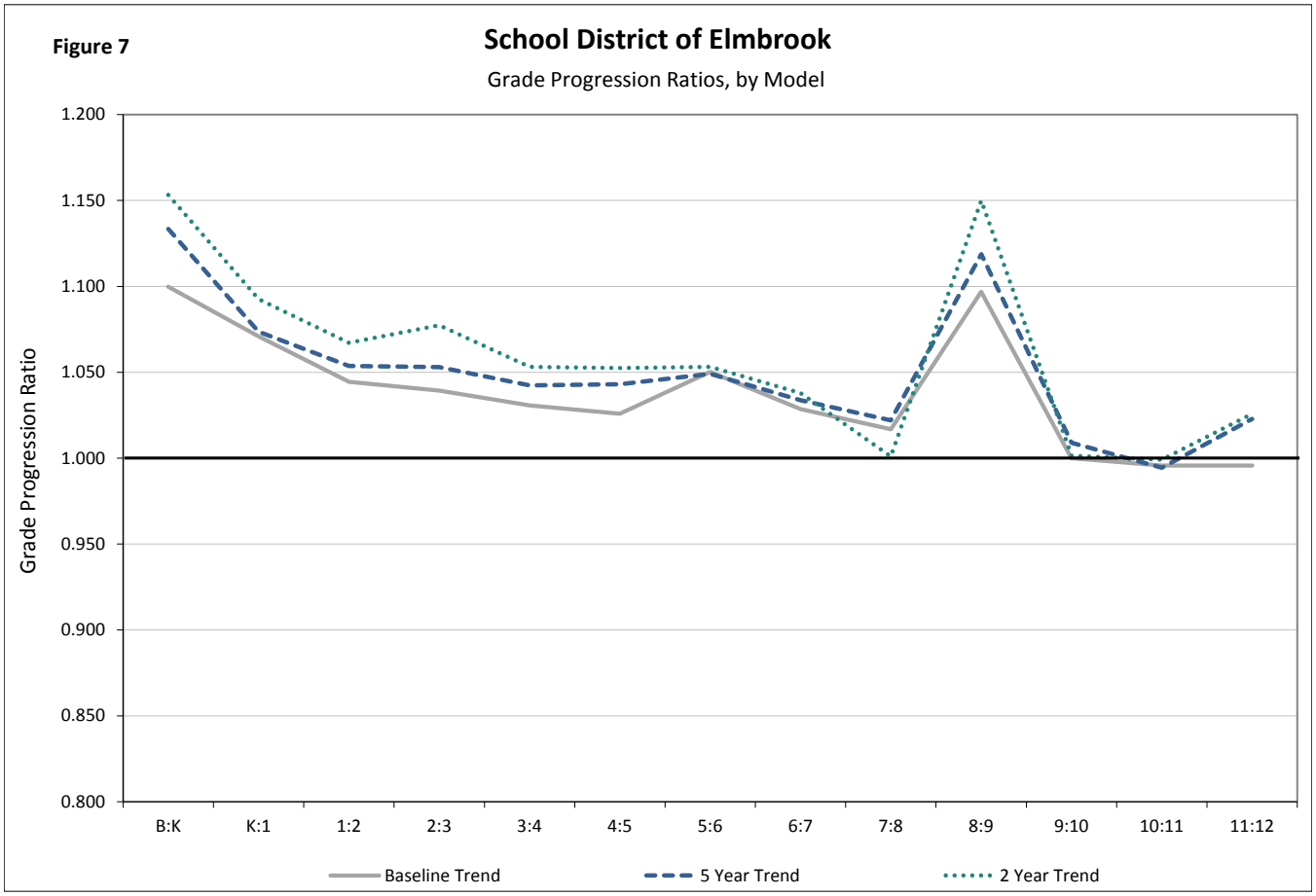
In order to predict future resident enrollment under different growth assumptions, three sets of grade progression ratios are calculated:

- Baseline averages the past ten years of progression ratios, with outlying ratios (those outside of one standard deviation of the mean) excluded;
- Five Year Trend averages the past five years of progression ratios with no exclusions;
- Two Year Trend averages the past two years of progression ratios with no exclusions.

These short-, medium- and long-range bases produce varying projections that indicate a range of likely resident enrollment outcomes in the future.

Figure 7 shows the differences between these three sets of grade progression ratios. Most all of the ratios are above one indicating a general trend of in-migration into the district.

Figure 7



The Baseline projection model uses the long term birth trends to project kindergartners and the baseline grade progression ratio to project future students. The Five and Two year trend models use the recent birth trend to project kindergartners and the five and two year grade progression ratios to project future students. The Kindergarten trend model uses kindergarten trends to project future kindergartens and the five year grade progression ratios for grades 1-12. The Residential Development model use the Five and Two Year trend models and includes additional students from approved single family housing. Historically it has been the experience of the researchers at the Applied Population Laboratory that very few students come from multi-family housing.

School Enrollment Projections

When considering all of the projections provided in this report for decision-making, it is important to recognize that population projections of all types, including school enrollment projections, are more accurate in the immediate future than they are farther into the future. Overall, our projections are more reliable over the next five years (up to the 2020/21 school year) than they are in the latter half of the next decade. Custom models for the district consider different assumptions based on more recent trends in births and migration into the district as well as the traditional models that have been provided in the past by Applied Population Laboratory. All projections are provided for resident students only.

Baseline Projections

The Baseline model (Table 12) projects resident enrollments using the assumption that average trends year to year, grade to grade, will continue into the future. This model assumes that long term trends in enrollment and births will be representative of future trends. This model projects that K-12 resident enrollment will increase from 6,470 students in 2015/16 to 6,721 students in 2020/21, an increase of 251 students.

TABLE 12
Baseline Projection Model
School District of Elmbrook

	SCHOOL YEAR									
	16-17	**17-18**	**18-19**	**19-20**	**20-21**	**21-22**	**22-23**	**23-24**	**24-25**	**25-26**
K	386	423	433	465	434	409	409	409	409	409
1	438	413	453	464	498	465	438	438	438	438
2	476	457	431	474	484	520	486	457	457	457
3	500	495	475	448	492	503	541	505	475	475
4	447	515	510	490	462	507	519	557	520	490
5	471	459	529	523	503	474	520	532	572	534
6	484	494	482	555	550	528	498	547	559	600
7	514	498	509	496	571	565	543	512	562	575
8	486	523	506	517	504	581	575	552	521	572
9	523	533	574	555	567	553	637	631	606	571
10	558	523	533	574	555	567	553	637	631	606
11	605	556	521	531	571	553	565	550	634	628
12	512	603	553	519	529	569	551	562	548	631
TOTAL	**6,401**	**6,493**	**6,510**	**6,611**	**6,721**	**6,795**	**6,833**	**6,890**	**6,932**	**6,986**
K-12	6,401	6,493	6,510	6,611	6,721	6,795	6,833	6,890	6,932	6,986
K-5	2,718	2,763	2,832	2,864	2,874	2,879	2,913	2,899	2,872	2,804
6-8	1,484	1,515	1,497	1,568	1,625	1,674	1,616	1,611	1,642	1,747
9-12	2,198	2,215	2,181	2,179	2,222	2,242	2,305	2,380	2,418	2,436

The 5 Year Trend model (Table 13) uses the grade progression ratios from the last five years and recent trends in the number of births in the school district area to project what future resident enrollments would look like if more recent patterns were representative of future trends.

With recent migration rates and birth trends weighted more heavily, K-12 resident enrollment in the School District of Elmbrook is projected to increase from 6,470 students in 2015/16 to 7,065 students in 2020/21, or an increase of 595 students.

TABLE 13
5 Year Trend Projection Model
School District of Elmbrook

	SCHOOL YEAR									
GRADE	**16-17**	**17-18**	**18-19**	**19-20**	**20-21**	**21-22**	**22-23**	**23-24**	**24-25**	**25-26**
K	397	436	446	479	481	480	493	506	519	533
1	439	427	469	479	515	516	515	529	543	558
2	480	463	450	494	505	542	544	543	558	573
3	506	506	487	473	520	532	571	572	571	587
4	452	528	527	508	494	542	554	595	597	596
5	479	472	551	550	530	515	565	578	621	622
6	484	502	495	578	577	556	540	593	606	651
7	517	500	519	512	597	597	574	558	613	627
8	489	528	511	531	523	610	610	587	571	626
9	534	547	591	572	594	585	683	682	657	638
10	563	538	551	596	577	599	590	689	688	663
11	605	560	535	548	593	574	596	587	685	684
12	526	618	573	548	561	607	587	609	600	701
TOTAL	**6,471**	**6,625**	**6,705**	**6,868**	**7,065**	**7,253**	**7,421**	**7,629**	**7,830**	**8,059**
K-12	6,471	6,625	6,705	6,868	7,065	7,253	7,421	7,629	7,830	8,059
K-5	2,755	2,832	2,930	2,983	3,043	3,126	3,242	3,323	3,409	3,468
6-8	1,489	1,531	1,525	1,620	1,697	1,763	1,724	1,738	1,790	1,904
9-12	2,227	2,263	2,251	2,264	2,324	2,364	2,456	2,567	2,631	2,686

The Two Year "Trend" model (Table 14) uses the grade progression ratios from the last two years to project what future resident enrollments would look like if even more recent patterns were representative of future trends. This model should be interpreted with some caution- if future migration into the school district continues as it has in the past two years, only then should this model be appropriate. For the Two Year "Trend", K-12 resident enrollment is projected increase from 6,470 students in 2015/16 to 7,331 students in 2020/21, an increase of 861 students.

TABLE 14
2 Year "Trend" Projection Model
School District of Elmbrook

	SCHOOL YEAR									
GRADE	**16-17**	**17-18**	**18-19**	**19-20**	**20-21**	**21-22**	**22-23**	**23-24**	**24-25**	**25-26**
K	404	444	454	488	489	488	502	515	529	542
1	447	442	485	496	533	534	533	548	563	578
2	487	477	472	518	529	569	570	569	585	601
3	518	524	514	508	558	570	613	614	613	630
4	457	546	552	541	535	587	601	645	647	646
5	483	481	574	581	569	563	618	632	679	681
6	486	509	507	605	612	600	593	651	666	715
7	519	504	528	526	628	635	622	616	676	691
8	478	519	504	529	526	628	636	623	616	676
9	549	550	597	580	608	605	723	731	717	709
10	559	549	551	598	581	609	606	724	732	718
11	608	558	549	551	598	580	608	606	723	732
12	527	623	573	563	565	613	595	624	621	742
TOTAL	**6,521**	**6,727**	**6,860**	**7,083**	**7,331**	**7,583**	**7,820**	**8,098**	**8,366**	**8,659**
K-12	6,521	6,727	6,860	7,083	7,331	7,583	7,820	8,098	8,366	8,659
K-5	2,796	2,914	3,051	3,132	3,213	3,312	3,436	3,524	3,615	3,677
6-8	1,483	1,532	1,539	1,659	1,766	1,863	1,851	1,890	1,958	2,083
9-12	2,242	2,281	2,270	2,292	2,351	2,408	2,533	2,685	2,793	2,900

For this method we perform a trend analysis to project the number of future kindergarten students, rather than relying upon the traditional birth to kindergarten (B:K) progression ratio. Then, the 5 Year Trend grade progression ratios are used for projecting the other grades (1-12) in the district. In other words, this model assumes that the number of new kindergarteners each year over the next decade will continue to follow a trend similar to the trend in kindergarten resident enrollment change over the last ten years, regardless of the number of observed births in the school district area.

A good way to think about the projections provided by this model is that if the number of kindergarteners continues to increase and if the five year pattern of transfers in and out of the district continue as they have, then the Kindergarten Trend model should provide a good prediction of future enrollment.

According to this hybrid projection method (Table 15), the Kindergarten Trend model projects resident enrollment will increase from 6,470 students in 2015/16 to 6,969 students in 2020/21, or an increase of 499 students.

TABLE 15
Kindergarten Trend Projection Model
School District of Elmbrook

GRADE	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	24-25	25-26
K	411	420	430	440	449	459	469	479	488	498
1	439	441	451	462	472	482	493	503	514	524
2	480	463	464	475	486	497	508	519	530	541
3	506	506	487	489	501	512	524	535	547	559
4	452	528	527	508	510	522	534	546	558	570
5	479	472	551	550	530	532	544	557	569	582
6	484	502	495	578	577	556	558	571	584	597
7	517	500	519	512	597	597	574	577	590	604
8	489	528	511	531	523	610	610	587	589	603
9	534	547	591	572	594	585	683	682	657	659
10	563	538	551	596	577	599	590	689	688	663
11	605	560	535	548	593	574	596	587	685	684
12	526	618	573	548	561	607	587	609	600	701
TOTAL	**6,484**	**6,623**	**6,687**	**6,808**	**6,969**	**7,131**	**7,270**	**7,442**	**7,601**	**7,786**
K-12	6,484	6,623	6,687	6,808	6,969	7,131	7,270	7,442	7,601	7,786
K-5	2,768	2,829	2,911	2,924	2,948	3,005	3,072	3,139	3,207	3,274
6-8	1,489	1,531	1,525	1,620	1,697	1,763	1,742	1,735	1,764	1,805
9-12	2,227	2,263	2,251	2,264	2,324	2,364	2,456	2,567	2,631	2,707

The Residential Development model (Table 16) uses future residential development trends, recent migration patterns, and past two year and five year grade progression ratios to predict future resident enrollments. Enrollment from new housing are based on an average ratio of students to housing units. This method does not provide individual grade projections, only grade grouping projections because it is too difficult to establish the specific grade the new resident students may enter.

TABLE 16
Residential Devlopment Projection Model
School District of Elmbrook

	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	24-25	25-26
Housing Units	8,451	8,514	8,577	8,640	8,708	8,776	8,844	8,917	8,990	9,063
2 Year										
K-12	6,566	6,772	6,905	7,128	7,379	7,631	7,869	8,150	8,418	8,711
K-5	2,810	2,927	3,065	3,145	3,228	3,326	3,451	3,539	3,631	3,692
6-8	1,499	1,548	1,555	1,676	1,784	1,881	1,869	1,909	1,977	2,102
9-12	2,257	2,296	2,285	2,307	2,368	2,424	2,549	2,702	2,811	2,917
5 Year										
K-12	6,516	6,670	6,750	6,913	7,113	7,301	7,470	7,681	7,882	8,111
K-5	2,768	2,845	2,943	2,997	3,058	3,141	3,256	3,339	3,425	3,484
6-8	1,505	1,547	1,542	1,636	1,715	1,780	1,742	1,757	1,809	1,923
9-12	2,242	2,278	2,266	2,279	2,341	2,381	2,472	2,585	2,648	2,704

Comparison of Projection Models

Figures 8-11 and Tables 17-20 compare the five resident enrollment projections models broken down by K-12 resident enrollment and by grade groupings (K-5, 6-8, and 9-12).

Figure 8

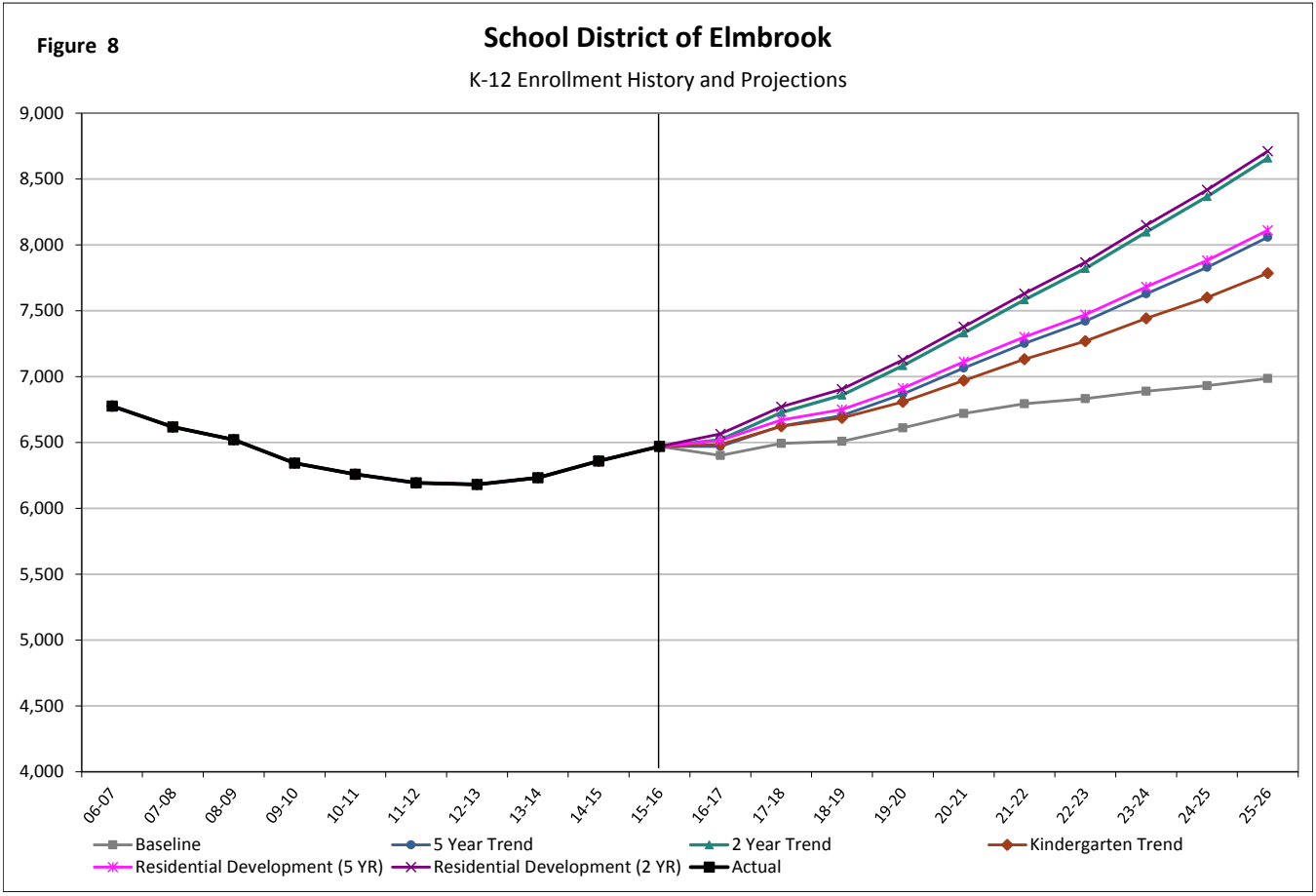


TABLE 17
Summary of K-12 Enrollment Projections
School District of Elmbrook

	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	24-25	25-26
Baseline	6,401	6,493	6,510	6,611	6,721	6,795	6,833	6,890	6,932	6,986
5 Year Trend	6,471	6,625	6,705	6,868	7,065	7,253	7,421	7,629	7,830	8,059
2 Year "Trend"	6,521	6,727	6,860	7,083	7,331	7,583	7,820	8,098	8,366	8,659
Kindergarten Trend	6,484	6,623	6,687	6,808	6,969	7,131	7,270	7,442	7,601	7,786
Residential Development (5 YR)	6,516	6,670	6,750	6,913	7,113	7,301	7,470	7,681	7,882	8,111
Residential Development (2 YR)	6,566	6,772	6,905	7,128	7,379	7,631	7,869	8,150	8,418	8,711

The 2 Year trend models project K-12 resident enrollment will increase significantly over time, while the Baseline projects the least amount of increase in enrollment. K-12 resident enrollment projections five years from now (2020/21) predict a range of enrollment from 6,721 to 7,379 students.

Figure 9

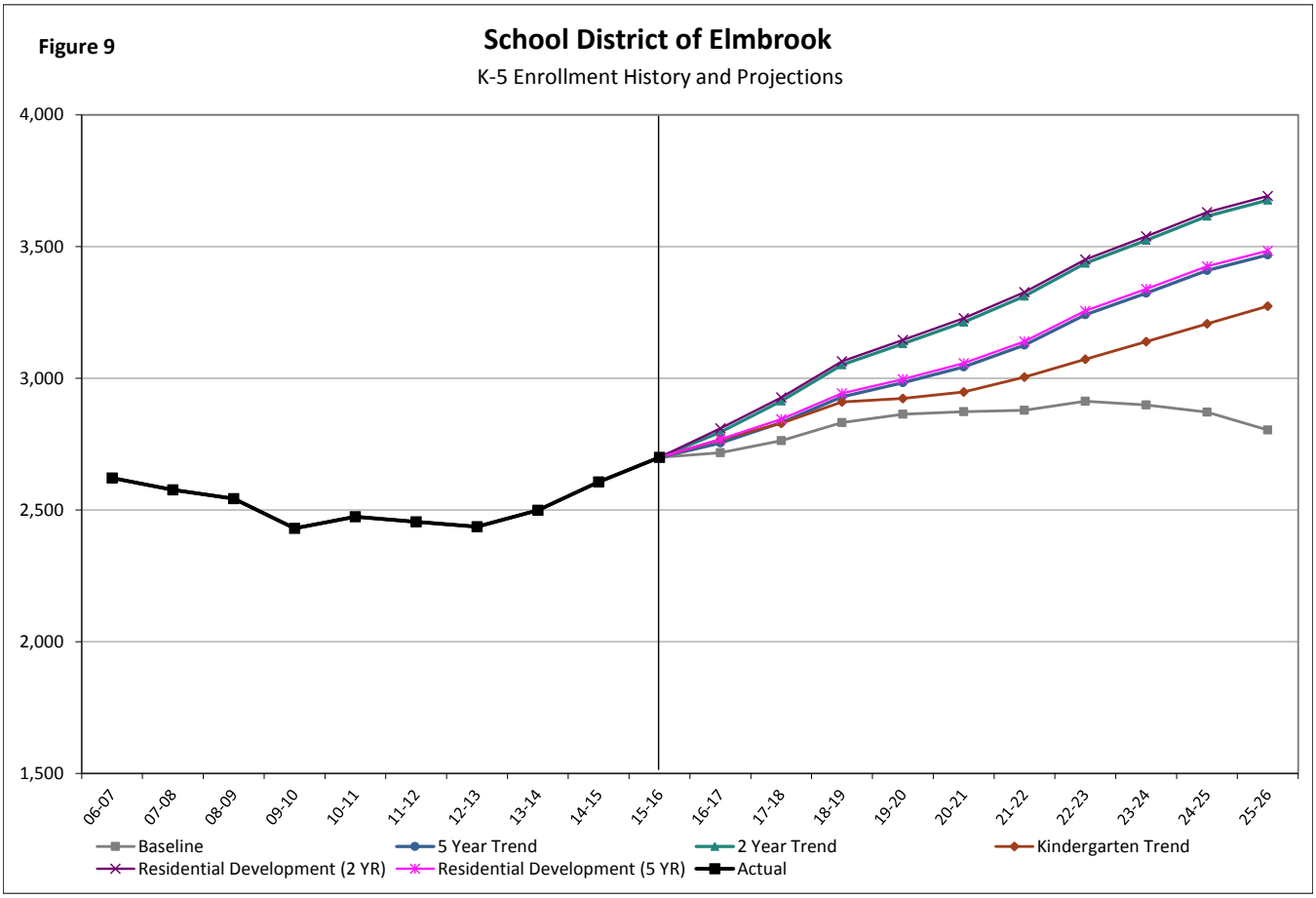


TABLE 18
Summary of K-5 Enrollment Projections
School District of Elmbrook

	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	24-25	25-26
Baseline	2,718	2,763	2,832	2,864	2,874	2,879	2,913	2,899	2,872	2,804
5 Year Trend	2,755	2,832	2,930	2,983	3,043	3,126	3,242	3,323	3,409	3,468
2 Year "Trend"	2,796	2,914	3,051	3,132	3,213	3,312	3,436	3,524	3,615	3,677
Kindergarten Trend	2,768	2,829	2,911	2,924	2,948	3,005	3,072	3,139	3,207	3,274
Residential Development (5 YR)	2,768	2,845	2,943	2,997	3,058	3,141	3,256	3,339	3,425	3,484
Residential Development (2 YR)	2,810	2,927	3,065	3,145	3,228	3,326	3,451	3,539	3,631	3,692

All models project resident enrollment increases for the next five years. The Baseline model projects K-5 resident enrollment will increase the least, while the Two Year "Trend" model projects most significant increases in enrollment. The Five Year and Kindergarten trend models fall in between these two models. In the 2020/21 school year, K-5 resident enrollment is predicted to range from 2,874 to 3,228 students.

Figure 10

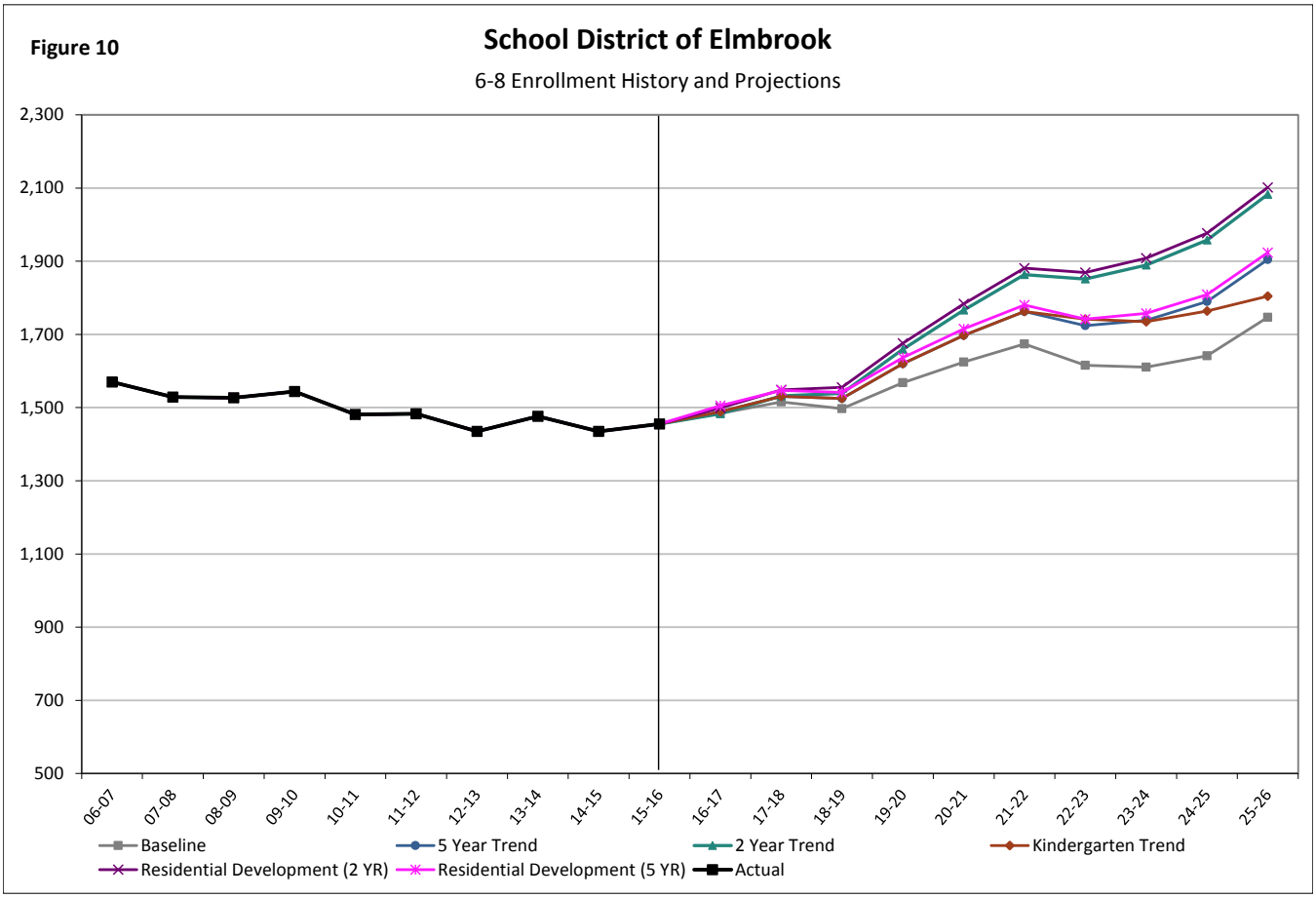


TABLE 19
Summary of 6-8 Enrollment Projections
School District of Elmbrook

	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	24-25	25-26
Baseline	1,484	1,515	1,497	1,568	1,625	1,674	1,616	1,611	1,642	1,747
5 Year Trend	1,489	1,531	1,525	1,620	1,697	1,763	1,724	1,738	1,790	1,904
2 Year "Trend"	1,483	1,532	1,539	1,659	1,766	1,863	1,851	1,890	1,958	2,083
Kindergarten Trend	1,489	1,531	1,525	1,620	1,697	1,763	1,742	1,735	1,764	1,805
Residential Development (5 YR)	1,505	1,547	1,542	1,636	1,715	1,780	1,742	1,757	1,809	1,923
Residential Development (2 YR)	1,499	1,548	1,555	1,676	1,784	1,881	1,869	1,909	1,977	2,102

For grades 6-8, all models project slightly increasing resident enrollment over the next three years followed by enrollment increasing more significantly as larger cohorts of elementary grades progress to middle school. During the 2020/21 school year, 6-8 resident enrollment is projected to range from 1,625 to 1,784 students.

Figure 11

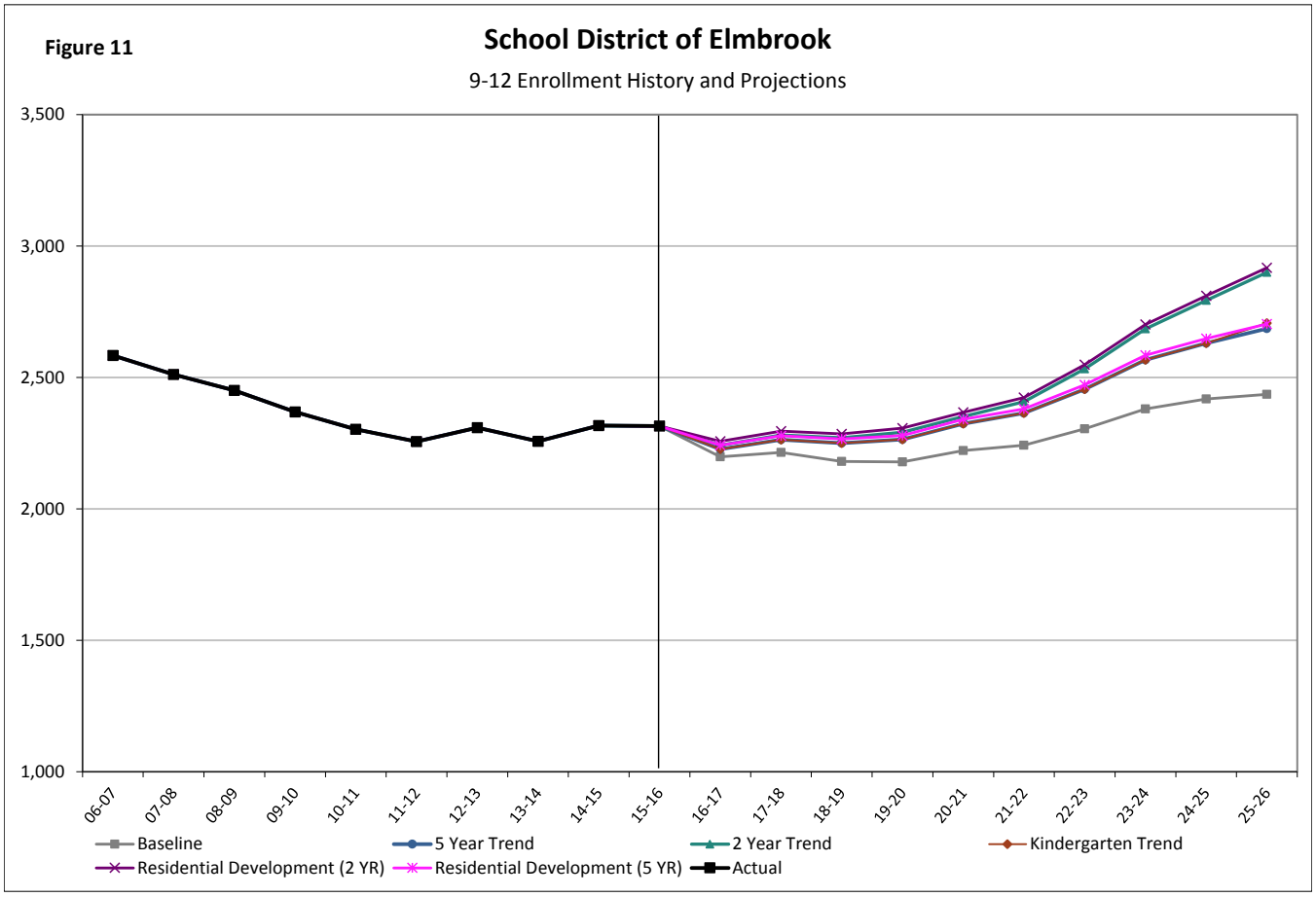


TABLE 20
Summary of 9-12 Enrollment Projections
School District of Elmbrook

	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	24-25	25-26
Baseline	2,198	2,215	2,181	2,179	2,222	2,242	2,305	2,380	2,418	2,436
5 Year Trend	2,227	2,263	2,251	2,264	2,324	2,364	2,456	2,567	2,631	2,686
2 Year "Trend"	2,242	2,281	2,270	2,292	2,351	2,408	2,533	2,685	2,793	2,900
Kindergarten Trend	2,227	2,263	2,251	2,264	2,324	2,364	2,456	2,567	2,631	2,707
Residential Development (5 YR)	2,242	2,278	2,266	2,279	2,341	2,381	2,472	2,585	2,648	2,704
Residential Development (2 YR)	2,257	2,296	2,285	2,307	2,368	2,424	2,549	2,702	2,811	2,917

All of the models project steady resident enrollment in high school resident enrollment over the next 5-7 years followed by increasing enrollment. Projecting to the 2020/21 school year, resident enrollment five years from now will range from 2,222 to 2,368 students.

District Conclusions

These district-level resident enrollment projections are based on models that incorporate recent past and current demographic information as well as the district's own resident enrollment data and assumptions about future housing development in the school district area. Because most of the students in the district's schools over the next few years have already been born or are already in school, and because their grade progression from one year to another is highly predictable, the total district-level projections should be viewed as having high accuracy over the next few years. After a few years, and increasingly for the lower elementary grades, actual resident enrollment figures will likely deviate from these projections by ever increasing amounts. The reason for this is that birth trends, in-migration of pre-school age children, and transfers into the district are more difficult to predict and therefore this makes meaningful incorporation into resident enrollment projections a challenge. As with nearly all types of forecasts, accuracy in these resident enrollment projections decreases over time.

In sum, the information provided in this school resident enrollment projections report show increasing K-12 resident enrollment in the School District of Elmbrook at various levels depending on the model observed. The Two Year "Trend" model indicates significant resident enrollment increases, while the Baseline model shows less of an increase. All models project K-5 resident enrollment increases and they follow a similar trend to the overall K-12 models. Grades 6-8 will see slight increases in resident enrollment over the next three years followed by more significant increases. Grades 9-12 will see steady resident enrollment over the next five to seven years.

Because the projections found in this report incorporate the consequences of migration to and from the district, any significant and sustained interruption of current or recent past migration patterns will erode these models' accuracy from the initiation point of the new pattern. The various projection models provide a realistic range of migration and transfer effects on the school district. Enrollment growth should be closely monitored for the next few years, and compared with these projections, to determine the trajectory of future growth. This type of monitoring program might help the district to determine which of the models seems to be the most realistic to use for planning purposes.

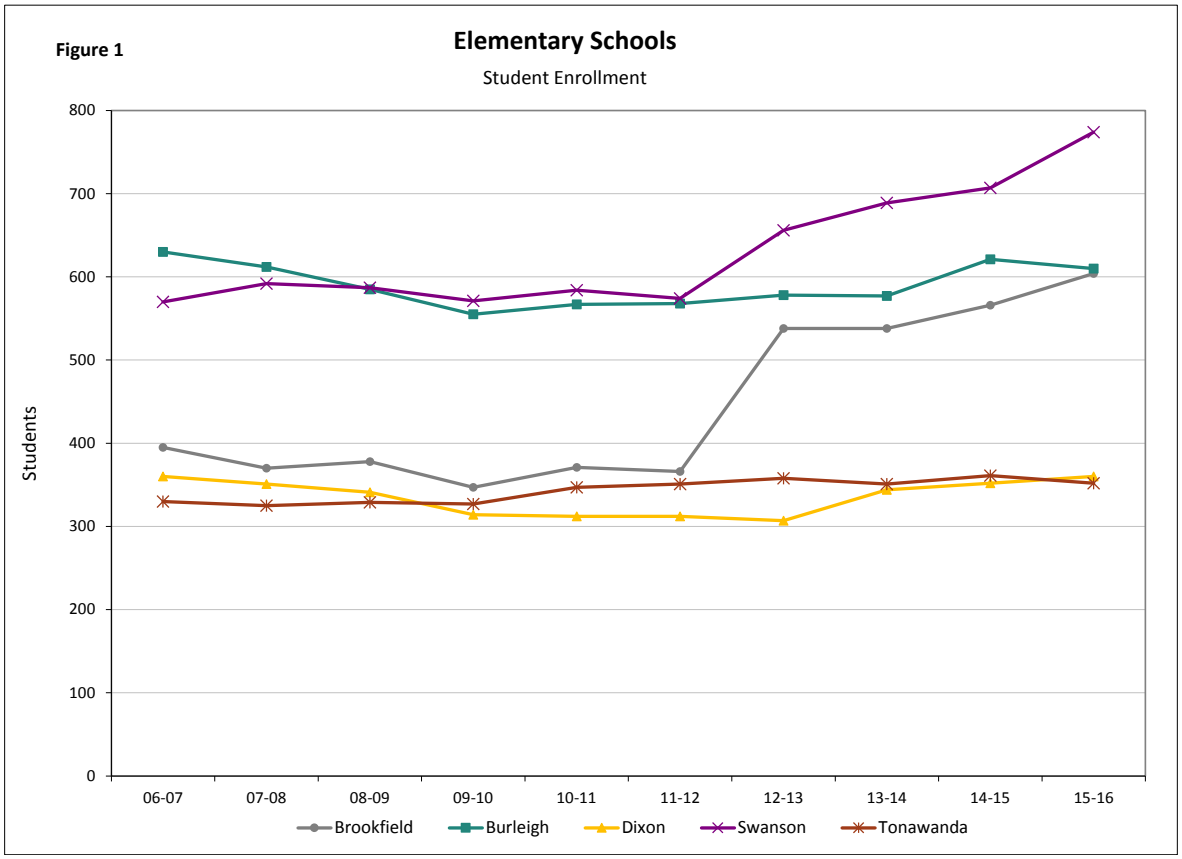
Part 2: Individual School Projections

The Applied Population Laboratory completed projections for Brookfield, Burleigh, Dixon, Swanson, and Tonawanda elementary schools as well as the two middle schools. Burleigh, Dixon, and Tonawanda are "feeder" schools for Pilgrim Park Middle School. Brookfield and Swanson are "feeder" schools for Wisconsin Hills Middle School. 8th graders from Pilgrim Park Middle School feed into Brookfield East High School and 8th graders from Wisconsin Hills Middle School feed into Brookfield Central High School.

When considering these projections, it is important to remember that projections made for smaller units of geography, such as elementary attendance areas, are less reliable than those projections made for the district as a whole. Although the individual school projections are less reliable than the district projections, these projections do serve as a reasonable guide for projecting the future trend and magnitude of resident enrollment in the individual schools for the School District of Elmbrook.

Elementary School Enrollment Histories

Figure 1 shows K-5 resident enrollment history for the elementary schools in School District of Elmbrook for the last ten years.



Brookfield Elementary School

Enrollment History

The resident enrollment history for Brookfield Elementary School has increased by 209 students, or a 6% annual increase, over the last ten years. The enrollment history and change in enrollment are shown in Tables 1 and 2.

TABLE 1
Student Enrollment
Brookfield Elementary School

	SCHOOL YEAR									
	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16
K	54	49	50	58	61	51	69	90	90	99
1	72	53	57	48	67	72	83	76	96	101
2	57	68	50	56	51	72	86	86	77	102
3	85	58	75	47	61	52	99	87	99	86
4	48	86	59	79	51	65	94	108	95	105
5	79	56	87	59	80	54	107	91	109	111
TOTAL	**395**	**370**	**378**	**347**	**371**	**366**	**538**	**538**	**566**	**604**

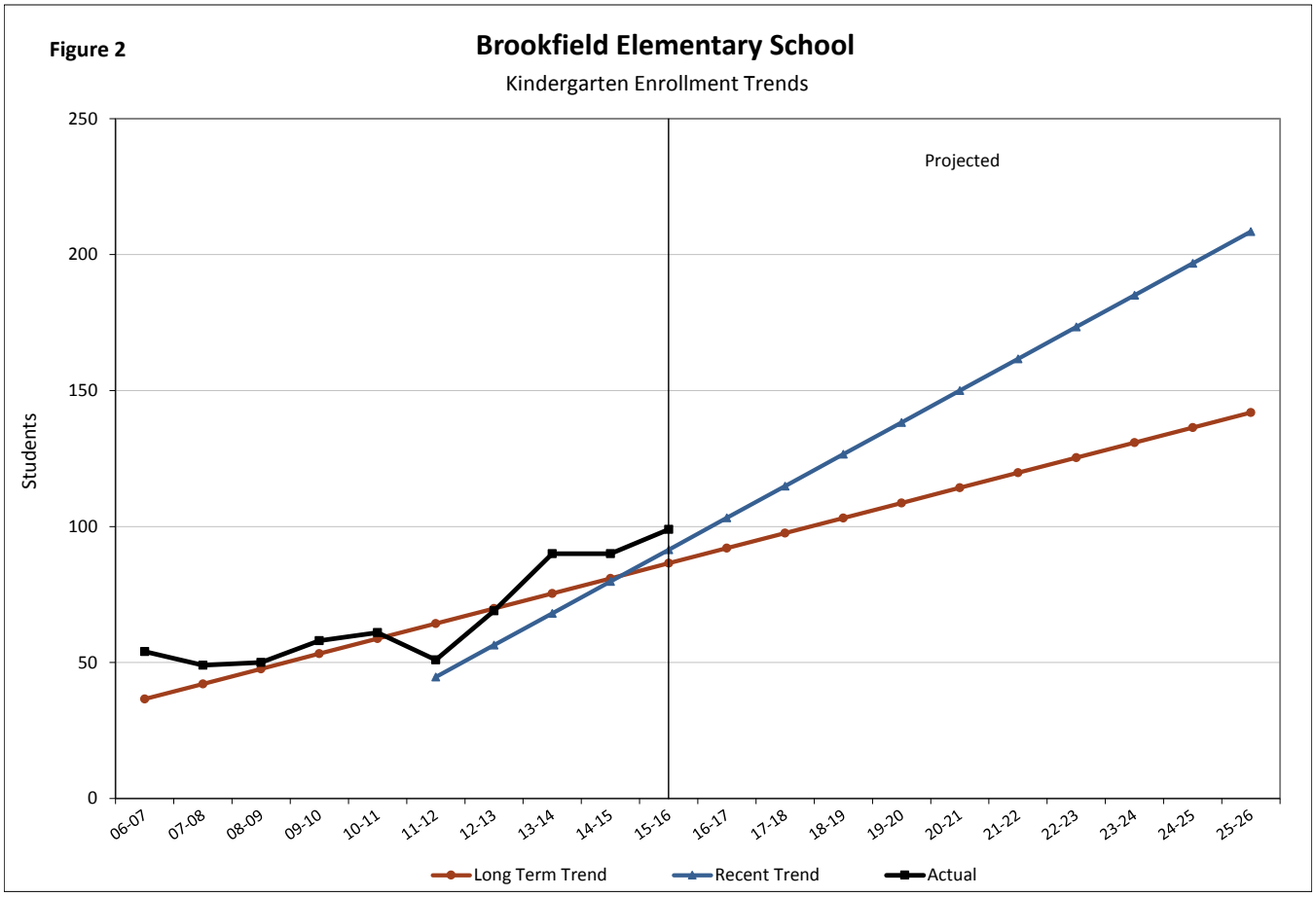
TABLE 2
Student Enrollment Changes
Brookfield Elementary School

	ABSOLUTE CHANGE			PERCENT CHANGE			AVERAGE ANNUAL PERCENT CHANGE		
GRADE	'06 to '15	'06 to '10	'11 to '15	'06 to '15	'06 to '10	'11 to '15	'06 to '15	'06 to '10	'11 to '15
K	45	7	48	83.3	13.0	94.1	9.3	3.2	23.5
1	29	-5	29	40.3	-6.9	40.3	4.5	-1.7	10.1
2	45	-6	30	78.9	-10.5	41.7	8.8	-2.6	10.4
3	1	-24	34	1.2	-28.2	65.4	0.1	-7.1	16.3
4	57	3	40	118.8	6.3	61.5	13.2	1.6	15.4
5	32	1	57	40.5	1.3	105.6	4.5	0.3	26.4
TOTAL	**209**	**-24**	**238**	**52.9**	**-6.1**	**65.0**	**5.9**	**-1.5**	**16.3**

Kindergarten Enrollment

Figure 2 shows kindergarten resident enrollment trends for Brookfield Elementary School. The long term and recent trends show increasing kindergarten enrollment. The long term trend will be used in the Kindergarten Trend model to project future kindergartners.

Figure 2



To review, grade progression ratios depict enrollment changes, year to year and grade to grade, measuring the effects of in- and out-migration and the transfer of students between private and public schools. Table 3 shows the grade progression ratios for Brookfield Elementary School.

TABLE 3
Grade Progression Ratios
Brookfield Elementary School

YEAR CHANGES	B:K	K:1	1:2	2:3	3:4	4:5
06-07/07-08	0.140	0.981	0.944	1.018	1.012	1.167
07-08/08-09	0.148	1.163	0.943	1.103	1.017	1.012
08-09/09-10	0.156	0.960	0.982	0.940	1.053	1.000
09-10/10-11	0.181	1.155	1.063	1.089	1.085	1.013
10-11/11-12	0.156	1.180	1.075	1.020	1.066	1.059
11-12/12-13	0.202	1.627	1.194	1.375	1.808	1.646
12-13/13-14	0.247	1.101	1.036	1.012	1.091	0.968
13-14/14-15	0.255	1.067	1.013	1.151	1.092	1.009
14-15/15-16	0.275	1.122	1.063	1.117	1.061	1.168
Baseline	**0.176**	**1.091**	**1.039**	**1.073**	**1.060**	**1.049**
5 Year Trend	**0.227**	**1.118**	**1.047**	**1.075**	**1.077**	**1.051**
2 Year "Trend"	**0.265**	**1.094**	**1.038**	**1.134**	**1.076**	**1.089**

*Shaded progression ratios are excluded from the Baseline

Baseline Projection

The Baseline model (Table 4) for Brookfield Elementary School projects in five years that resident enrollment will decrease from 604 students in 2015/16 to 524 students in 2020/21.

TABLE 4
Baseline Projection Model
Brookfield Elementary School

	SCHOOL YEAR									
	16-17	**17-18**	**18-19**	**19-20**	**20-21**	**21-22**	**22-23**	**23-24**	**24-25**	**25-26**
K	62	68	69	74	69	65	65	65	65	65
1	108	67	74	75	81	76	71	71	71	71
2	105	112	70	77	78	84	79	74	74	74
3	109	113	120	75	82	84	90	84	79	79
4	91	116	119	128	79	87	89	96	89	84
5	110	96	122	125	134	83	91	93	100	94
TOTAL	**585**	**571**	**574**	**554**	**524**	**479**	**486**	**484**	**480**	**468**

Five Year Trend Projection

The 5 Year Trend model (Table 5) uses the grade progression ratios from the last five years to project what future enrollments would look like if more recent patterns were representative of future trends. This model projects that resident enrollment will increase from 604 students in 2015/16 to 666 students in 2020/21.

TABLE 5
5 Year Trend Projection Model
Brookfield Elementary School

	SCHOOL YEAR									
GRADE	**16-17**	**17-18**	**18-19**	**19-20**	**20-21**	**21-22**	**22-23**	**23-24**	**24-25**	**25-26**
K	80	87	89	96	96	96	99	101	104	107
1	111	89	98	100	107	108	107	110	113	116
2	106	116	93	102	104	112	113	112	115	119
3	110	114	124	100	110	112	121	121	121	124
4	93	118	122	134	108	118	121	130	130	130
5	110	97	124	129	141	113	124	127	137	137
TOTAL	**609**	**621**	**651**	**661**	**666**	**660**	**684**	**702**	**720**	**732**

Two Year "Trend" Projection

The Two Year "Trend" model (Table 6) uses the grade progression ratios from the last two years to project future enrollment. Brookfield Elementary School resident enrollment is projected to increase from 604 students in 2015/16 to 763 students in 2020/21.

TABLE 6
2 Year "Trend" Projection Model
Brookfield Elementary School

	SCHOOL YEAR									
GRADE	**16-17**	**17-18**	**18-19**	**19-20**	**20-21**	**21-22**	**22-23**	**23-24**	**24-25**	**25-26**
K	93	102	104	112	112	112	115	118	121	125
1	108	102	112	114	123	123	123	126	129	133
2	105	112	106	116	118	127	128	127	131	134
3	116	119	128	120	131	134	144	145	144	148
4	93	124	128	137	129	141	145	155	156	155
5	114	101	136	139	149	140	154	157	169	170
TOTAL	**629**	**660**	**712**	**738**	**763**	**778**	**808**	**829**	**851**	**865**

Kindergarten Trend Projection

The Kindergarten Trend model (Table 7) analyzes trends in kindergarten enrollment and assumes that the kindergarten trends will be similar in the future as they have over the recent past. It then uses ratios from the last five years to project students at grades 1 through 5. This model projects that resident enrollment will increase from 604 students in 2015/16 to 745 students in 2020/21.

TABLE 7
Kindergarten Trend Projection Model
Brookfield Elementary School

GRADE	**16-17**	**17-18**	**18-19**	**19-20**	**20-21**	**21-22**	**22-23**	**23-24**	**24-25**	**25-26**
K	92	98	103	109	114	120	125	131	136	142
1	111	103	109	115	121	128	134	140	146	152
2	106	116	108	114	121	127	134	140	147	153
3	110	114	124	116	123	130	137	144	151	158
4	93	118	122	134	125	132	140	147	155	162
5	110	97	124	129	141	131	139	147	155	163
TOTAL	**621**	**645**	**691**	**717**	**745**	**768**	**808**	**849**	**889**	**930**

Figure 3 and Table 8 compare the different resident enrollment projection models for Brookfield Elementary School. Resident enrollment projections for five years into the future range from a low of 524 students to a high of 763 students.

Figure 3

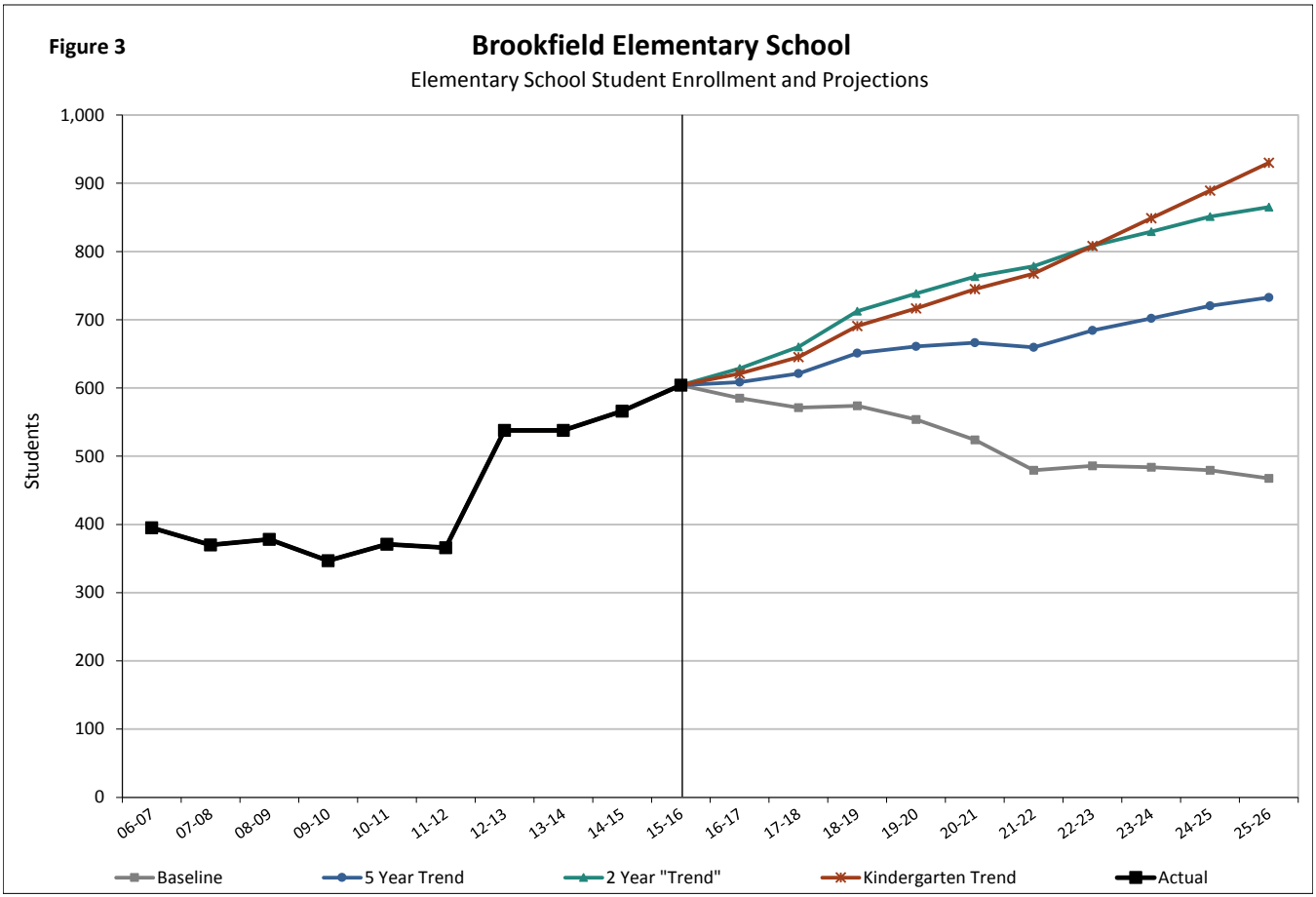


TABLE 8
Summary of Elementary School Enrollment Projections
Brookfield Elementary School

	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	24-25	25-26
Baseline	585	571	574	554	524	479	486	484	480	468
5 Year Trend	609	621	651	661	666	660	684	702	720	732
2 Year "Trend"	629	660	712	738	763	778	808	829	851	865
Kindergarten Trend	621	645	691	717	745	768	808	849	889	930

Burleigh Elementary School

Resident enrollment History

The resident enrollment history for Burleigh Elementary School has decreased by 20 students over the last ten years. The enrollment history and change in enrollment are shown in Tables 9 and 10.

TABLE 9
Student Enrollment
Burleigh Elementary School

	SCHOOL YEAR									
	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16
K	87	102	76	84	88	85	76	95	106	85
1	98	86	115	80	89	88	91	72	105	113
2	86	98	82	110	87	97	95	95	83	109
3	122	89	100	82	114	95	95	105	102	86
4	111	124	90	103	83	117	100	107	112	108
5	126	113	122	96	106	86	121	103	113	109
TOTAL	**630**	**612**	**585**	**555**	**567**	**568**	**578**	**577**	**621**	**610**

TABLE 10
Student Enrollment Changes
Burleigh Elementary School

	ABSOLUTE CHANGE			PERCENT CHANGE			AVERAGE ANNUAL PERCENT CHANGE		
GRADE	'06 to '15	'06 to '10	'11 to '15	'06 to '15	'06 to '10	'11 to '15	'06 to '15	'06 to '10	'11 to '15
K	-2	1	0	-2.3	1.1	0.0	-0.3	0.3	0.0
1	15	-9	25	15.3	-9.2	28.4	1.7	-2.3	7.1
2	23	1	12	26.7	1.2	12.4	3.0	0.3	3.1
3	-36	-8	-9	-29.5	-6.6	-9.5	-3.3	-1.6	-2.4
4	-3	-28	-9	-2.7	-25.2	-7.7	-0.3	-6.3	-1.9
5	-17	-20	23	-13.5	-15.9	26.7	-1.5	-4.0	6.7
TOTAL	**-20**	**-63**	**42**	**-3.2**	**-10.0**	**7.4**	**-0.4**	**-2.5**	**1.8**

Kindergarten Enrollment

Figure 4 shows kindergarten resident enrollment trends for Burleigh Elementary School. The long term trend show steady kindergarten enrollment while the recent trend shows increasing enrollment. The recent trend will be used in the Kindergarten Trend model to project future kindergartners.

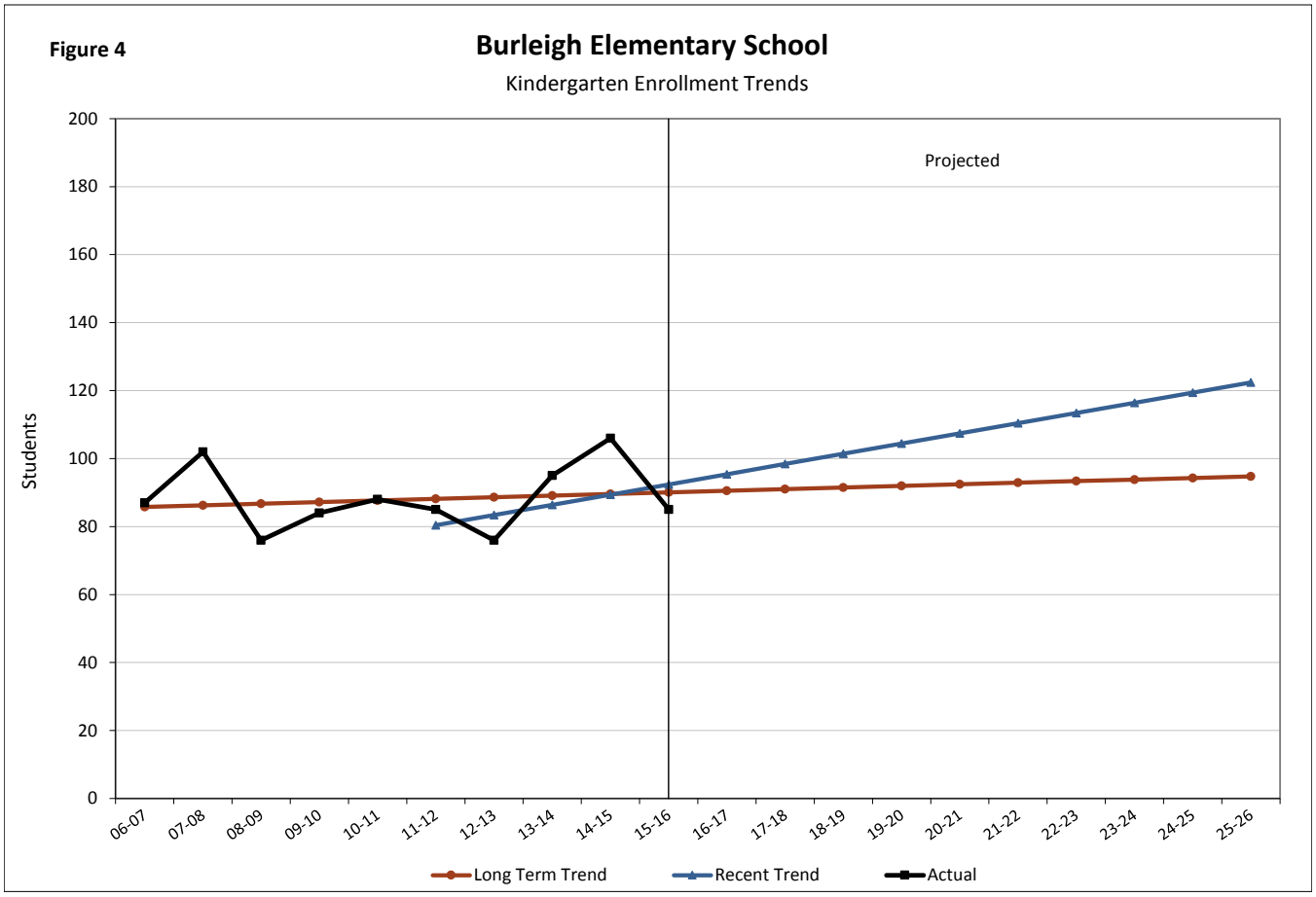


Table 11 shows the grade progression ratios for Burleigh Elementary School. Grade progression ratios depict enrollment changes, year to year and grade to grade, measuring the effects of in- and out-migration.

TABLE 11
Grade Progression Ratios
Burleigh Elementary School

YEAR CHANGES	B:K	K:1	1:2	2:3	3:4	4:5
06-07/07-08	0.291	0.989	1.000	1.035	1.016	1.018
07-08/08-09	0.225	1.127	0.953	1.020	1.011	0.984
08-09/09-10	0.225	1.053	0.957	1.000	1.030	1.067
09-10/10-11	0.261	1.060	1.088	1.036	1.012	1.029
10-11/11-12	0.259	1.000	1.090	1.092	1.026	1.036
11-12/12-13	0.222	1.071	1.080	0.979	1.053	1.034
12-13/13-14	0.261	0.947	1.044	1.105	1.126	1.030
13-14/14-15	0.300	1.105	1.153	1.074	1.067	1.056
14-15/15-16	0.236	1.066	1.038	1.036	1.059	0.973
Baseline	**0.241**	**1.049**	**1.056**	**1.034**	**1.034**	**1.034**
5 Year Trend	**0.256**	**1.038**	**1.081**	**1.057**	**1.066**	**1.026**
2 Year "Trend"	**0.268**	**1.086**	**1.095**	**1.055**	**1.063**	**1.015**

*Shaded progression ratios are excluded from the Baseline

Baseline Projection

The Baseline model (Table 12) uses the grade progression ratios from the last ten years to project what future enrollments. This model projects that Burleigh Elementary School resident enrollment will increase from 610 students in 2015/16 to 619 students in 2020/21.

TABLE 12
Baseline Projection Model
Burleigh Elementary School

	SCHOOL YEAR									
	16-17	**17-18**	**18-19**	**19-20**	**20-21**	**21-22**	**22-23**	**23-24**	**24-25**	**25-26**
K	85	93	95	102	95	90	90	90	90	90
1	89	89	97	100	107	100	94	94	94	94
2	119	94	94	103	105	113	106	99	99	99
3	113	123	97	97	106	109	117	109	103	103
4	89	117	128	101	100	110	113	121	113	106
5	112	92	120	132	104	104	114	116	125	117
TOTAL	**606**	**608**	**632**	**634**	**619**	**625**	**633**	**630**	**624**	**609**

Five Year Trend Projection

The 5 Year Trend model (Table 13) uses the grade progression ratios from the last five years to project what future enrollments would look like if more recent patterns were representative of future trends. This model projects that Burleigh Elementary School resident enrollment will increase from 610 students in 2015/16 to 674 students in 2020/21.

TABLE 13
5 Year Trend Projection Model
Burleigh Elementary School

	SCHOOL YEAR									
GRADE	**16-17**	**17-18**	**18-19**	**19-20**	**20-21**	**21-22**	**22-23**	**23-24**	**24-25**	**25-26**
K	90	98	101	108	108	108	111	114	117	120
1	88	93	102	104	112	113	112	115	119	122
2	122	95	101	110	113	121	122	121	125	128
3	115	129	101	106	117	119	128	129	128	132
4	92	123	138	107	113	125	127	137	137	137
5	111	94	126	141	110	116	128	131	140	141
TOTAL	**618**	**633**	**668**	**678**	**674**	**702**	**729**	**747**	**766**	**779**

Two Year "Trend" Projection

The Two Year "Trend" model (Table 14) uses the grade progression ratios from the last two years to project future enrollment. Burleigh Elementary School resident enrollment is projected to increase from 610 students in 2015/16 to 732 students in 2020/21.

TABLE 14
2 Year "Trend" Projection Model
Burleigh Elementary School

	SCHOOL YEAR									
GRADE	**16-17**	**17-18**	**18-19**	**19-20**	**20-21**	**21-22**	**22-23**	**23-24**	**24-25**	**25-26**
K	94	103	106	113	114	113	117	120	123	126
1	92	102	112	115	123	123	123	127	130	133
2	124	101	112	123	126	135	135	135	139	142
3	115	131	107	118	130	132	142	143	142	146
4	91	122	139	113	125	138	141	151	152	151
5	110	93	124	141	115	127	140	143	153	154
TOTAL	**626**	**652**	**699**	**723**	**732**	**769**	**798**	**818**	**839**	**853**

Kindergarten Trend Projection

The Kindergarten Trend model (Table 15) analyzes trends in kindergarten resident enrollment and assumes that the kindergarten trends will be similar in the future as they have in the recent past. This model projects an increase from 610 students in 2015/16 to 677 students in 2020/21.

TABLE 15
Kindergarten Trend Projection Model
Burleigh Elementary School

GRADE	**16-17**	**17-18**	**18-19**	**19-20**	**20-21**	**21-22**	**22-23**	**23-24**	**24-25**	**25-26**
K	95	98	101	104	107	110	113	116	119	122
1	88	99	102	105	108	111	115	118	121	124
2	122	95	107	110	114	117	120	124	127	131
3	115	129	101	113	117	120	124	127	131	134
4	92	123	138	107	121	124	128	132	136	140
5	111	94	126	141	110	124	128	132	135	139
TOTAL	**623**	**639**	**675**	**682**	**677**	**707**	**728**	**749**	**770**	**790**

Figure 5 and Table 16 compare the different resident enrollment projection models for Burleigh Elementary School. Resident enrollment projections for five years into the future range from a low of 619 students to a high of 732 students.

Figure 5

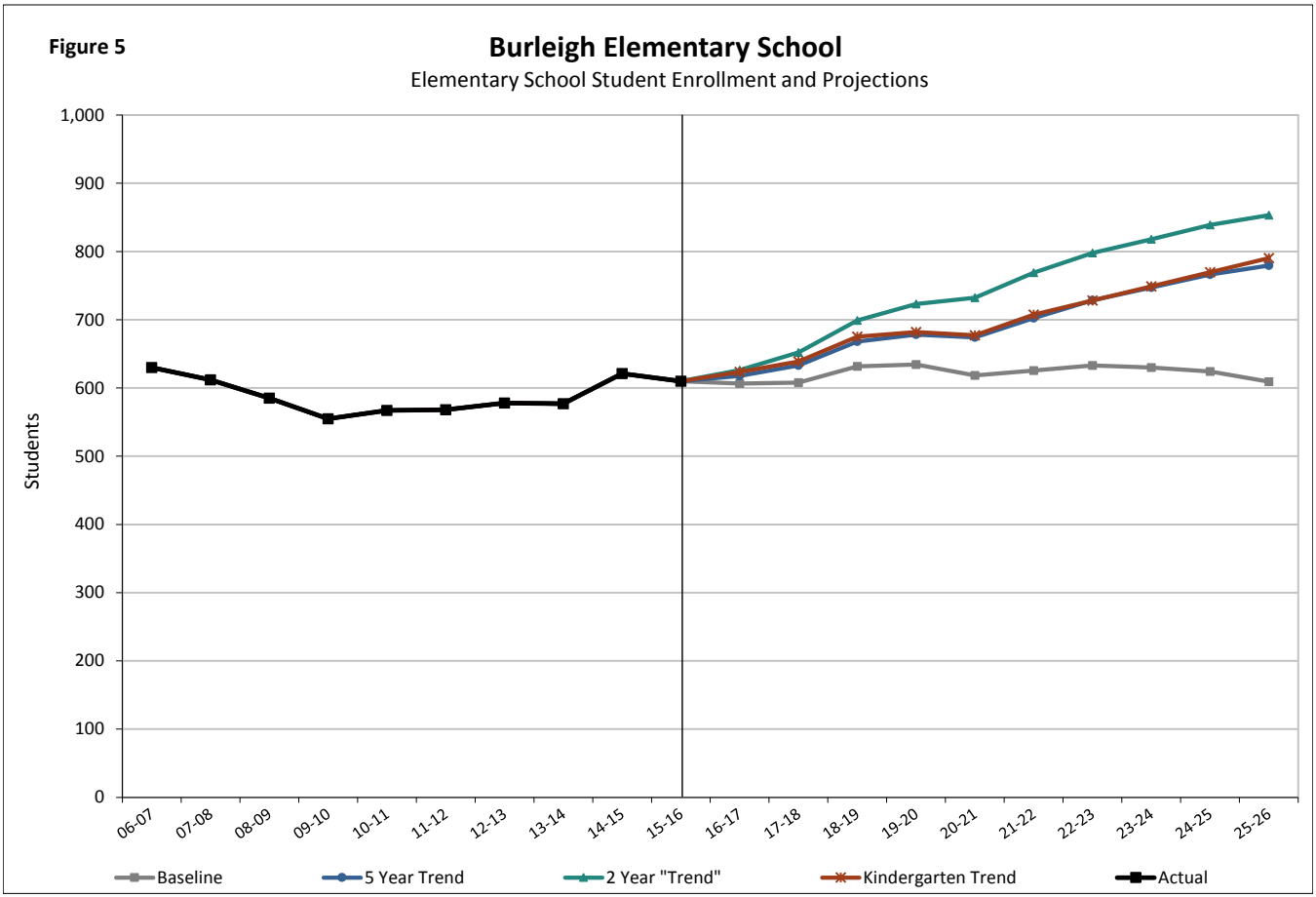


TABLE 16
Summary of Elementary School Enrollment Projections
Burleigh Elementary School

	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	24-25	25-26
Baseline	606	608	632	634	619	625	633	630	624	609
5 Year Trend	618	633	668	678	674	702	729	747	766	779
2 Year "Trend"	626	652	699	723	732	769	798	818	839	853
Kindergarten Trend	623	639	675	682	677	707	728	749	770	790

Dixon Elementary School

Enrollment History

The resident enrollment history for Dixon Elementary School experienced no change in enrollment over the last ten years. The enrollment history and change in enrollment are shown in Tables 17 and 18.

TABLE 17
Student Enrollment
Dixon Elementary School

	SCHOOL YEAR									
	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16
K	58	48	48	42	43	45	45	71	54	51
1	58	63	53	50	44	47	50	51	72	56
2	45	57	66	52	50	44	50	53	56	77
3	60	45	59	61	52	53	52	53	56	56
4	76	64	50	59	63	56	54	54	57	58
5	63	74	65	50	60	67	56	62	57	62
TOTAL	**360**	**351**	**341**	**314**	**312**	**312**	**307**	**344**	**352**	**360**

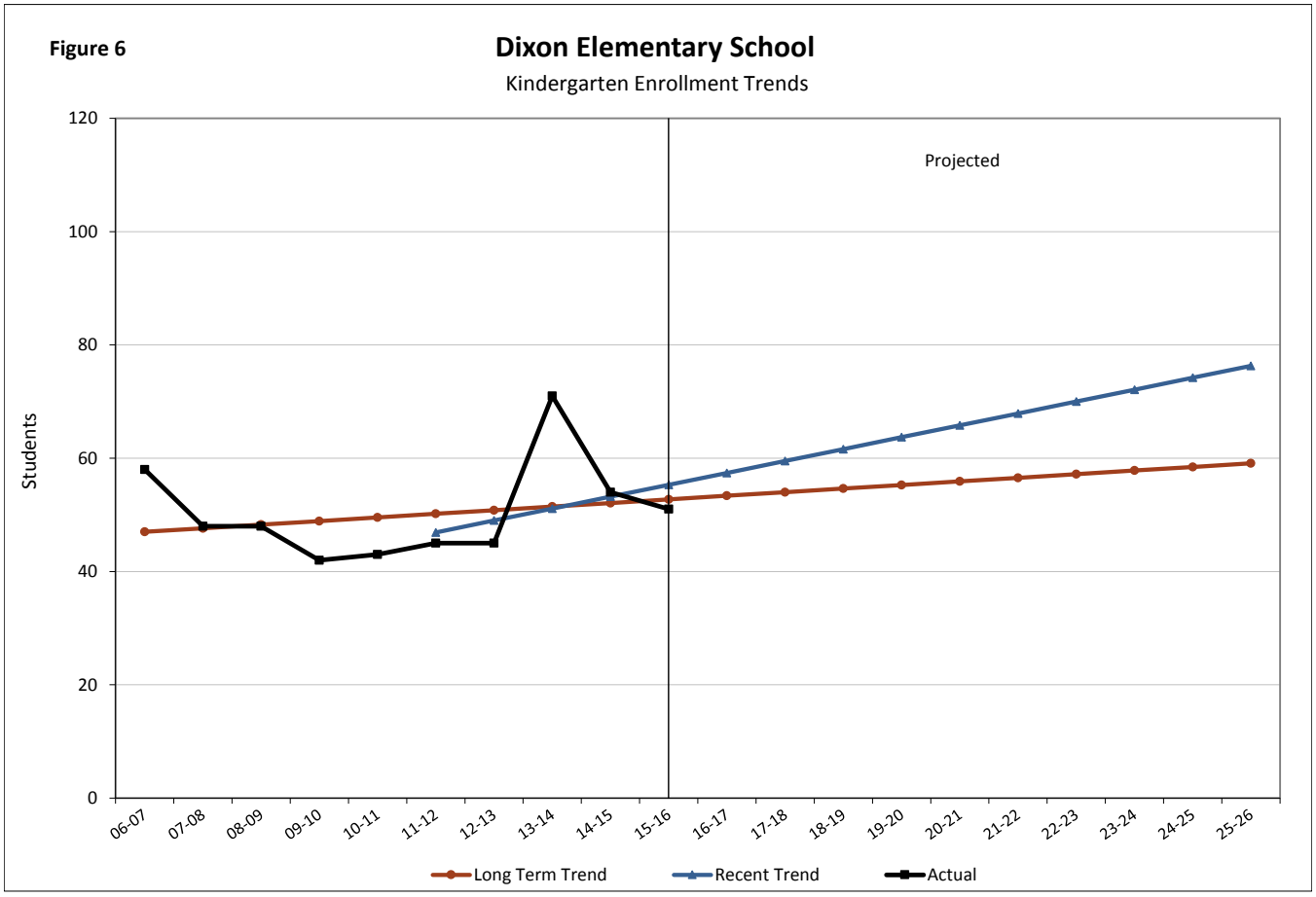
TABLE 18
Student Enrollment Changes
Dixon Elementary School

	ABSOLUTE CHANGE			PERCENT CHANGE			AVERAGE ANNUAL PERCENT CHANGE		
GRADE	'06 to '15	'06 to '10	'11 to '15	'06 to '15	'06 to '10	'11 to '15	'06 to '15	'06 to '10	'11 to '15
K	-7	-15	6	-12.1	-25.9	13.3	-1.3	-6.5	3.3
1	-2	-14	9	-3.4	-24.1	19.1	-0.4	-6.0	4.8
2	32	5	33	71.1	11.1	75.0	7.9	2.8	18.8
3	-4	-8	3	-6.7	-13.3	5.7	-0.7	-3.3	1.4
4	-18	-13	2	-23.7	-17.1	3.6	-2.6	-4.3	0.9
5	-1	-3	-5	-1.6	-4.8	-7.5	-0.2	-1.2	-1.9
TOTAL	**0**	**-48**	**48**	**0.0**	**-13.3**	**15.4**	**0.0**	**-3.3**	**3.8**

Kindergarten Enrollment

Figure 6 shows kindergarten resident enrollment trends for Dixon Elementary School. The long term trend and recent trend show an increase in kindergarten enrollment. The recent trend will be used in the Kindergarten Trend model to project future kindergartners.

Figure 6



Grade progression ratios depict enrollment changes, year to year and grade to grade, measuring the effects of in- and out-migration and the transfer of students between private and public schools. Table 19 shows the grade progression ratios for Dixon Elementary School.

TABLE 19
Grade Progression Ratios
Dixon Elementary School

YEAR CHANGES	B:K	K:1	1:2	2:3	3:4	4:5
06-07/07-08	0.137	1.086	0.983	1.000	1.067	0.974
07-08/08-09	0.142	1.104	1.048	1.035	1.111	1.016
08-09/09-10	0.113	1.042	0.981	0.924	1.000	1.000
09-10/10-11	0.127	1.048	1.000	1.000	1.033	1.017
10-11/11-12	0.137	1.093	1.000	1.060	1.077	1.063
11-12/12-13	0.132	1.111	1.064	1.182	1.019	1.000
12-13/13-14	0.195	1.133	1.060	1.060	1.038	1.148
13-14/14-15	0.153	1.014	1.098	1.057	1.075	1.056
14-15/15-16	0.142	1.037	1.069	1.000	1.036	1.088
Baseline	**0.139**	**1.074**	**1.040**	**1.030**	**1.043**	**1.034**
5 Year Trend	**0.152**	**1.078**	**1.058**	**1.072**	**1.049**	**1.071**
2 Year "Trend"	**0.147**	**1.026**	**1.084**	**1.028**	**1.056**	**1.072**

*Shaded progression ratios are excluded from the Baseline

Baseline Projection

The Baseline model (Table 20) for Dixon Elementary School projects resident enrollment will remain steady with 360 students in 2015/16 to 362 students in 2020/21.

TABLE 20
Baseline Projection Model
Dixon Elementary School

	SCHOOL YEAR									
	16-17	**17-18**	**18-19**	**19-20**	**20-21**	**21-22**	**22-23**	**23-24**	**24-25**	**25-26**
K	49	53	55	59	55	52	52	52	52	52
1	55	52	57	59	63	59	55	55	55	55
2	58	57	54	60	61	65	61	58	58	58
3	79	60	59	56	61	63	67	63	59	59
4	58	83	63	61	58	64	66	70	66	62
5	60	60	86	65	63	60	66	68	73	68
TOTAL	**359**	**366**	**373**	**359**	**362**	**363**	**367**	**366**	**362**	**354**

Five Year Trend Projection

The 5 Year Trend model (Table 21) projects resident enrollment will increase from 360 students in 2015/16 to 411 students in 2020/21 at Dixon Elementary School.

TABLE 21
5 Year Trend Projection Model
Dixon Elementary School

	SCHOOL YEAR									
GRADE	**16-17**	**17-18**	**18-19**	**19-20**	**20-21**	**21-22**	**22-23**	**23-24**	**24-25**	**25-26**
K	53	58	60	64	64	64	66	68	70	71
1	55	57	63	64	69	69	69	71	73	75
2	59	58	61	67	68	73	73	73	75	77
3	83	64	62	65	71	73	78	79	78	81
4	59	87	67	65	68	75	77	82	82	82
5	62	63	93	71	70	73	80	82	88	88
TOTAL	**371**	**387**	**405**	**397**	**411**	**428**	**444**	**455**	**467**	**475**

Two Year "Trend" Projection

The Two Year "Trend" model (Table 22) uses the grade progression ratios from the last two years to project future enrollment. Dixon Elementary School resident enrollment is projected to increase from 360 students in 2015/16 to 384 students in 2020/21.

TABLE 22
2 Year "Trend" Projection Model
Dixon Elementary School

	SCHOOL YEAR									
GRADE	**16-17**	**17-18**	**18-19**	**19-20**	**20-21**	**21-22**	**22-23**	**23-24**	**24-25**	**25-26**
K	52	57	58	62	62	62	64	66	68	69
1	52	53	58	59	64	64	64	66	67	69
2	61	57	57	63	64	69	69	69	71	73
3	79	62	58	59	65	66	71	71	71	73
4	59	84	66	62	62	68	70	75	75	75
5	62	63	90	71	66	67	73	75	81	81
TOTAL	**365**	**376**	**387**	**376**	**384**	**397**	**412**	**422**	**433**	**441**

Kindergarten Trend Projection

The Kindergarten Trend model (Table 23) analyzes trends in kindergarten resident enrollment and assumes that the kindergarten trends will be similar in the future as they have recently. This model projects an increase from 360 students in 2015/16 to 421 students in 2020/21.

TABLE 23
Kindergarten Trend Projection Model
Dixon Elementary School

GRADE	**16-17**	**17-18**	**18-19**	**19-20**	**20-21**	**21-22**	**22-23**	**23-24**	**24-25**	**25-26**
K	57	60	62	64	66	68	70	72	74	76
1	55	62	64	66	69	71	73	75	78	80
2	59	58	65	68	70	73	75	77	80	82
3	83	64	62	70	73	75	78	80	83	86
4	59	87	67	65	74	76	79	82	84	87
5	62	63	93	71	70	79	82	85	87	90
TOTAL	**375**	**393**	**413**	**405**	**421**	**442**	**457**	**472**	**487**	**501**

Figure 7 and Table 24 compare the different resident enrollment projection models for Dixon Elementary School. Resident enrollment projections five years into the future range from a low of 362 students to a high of 421 students.

Figure 7

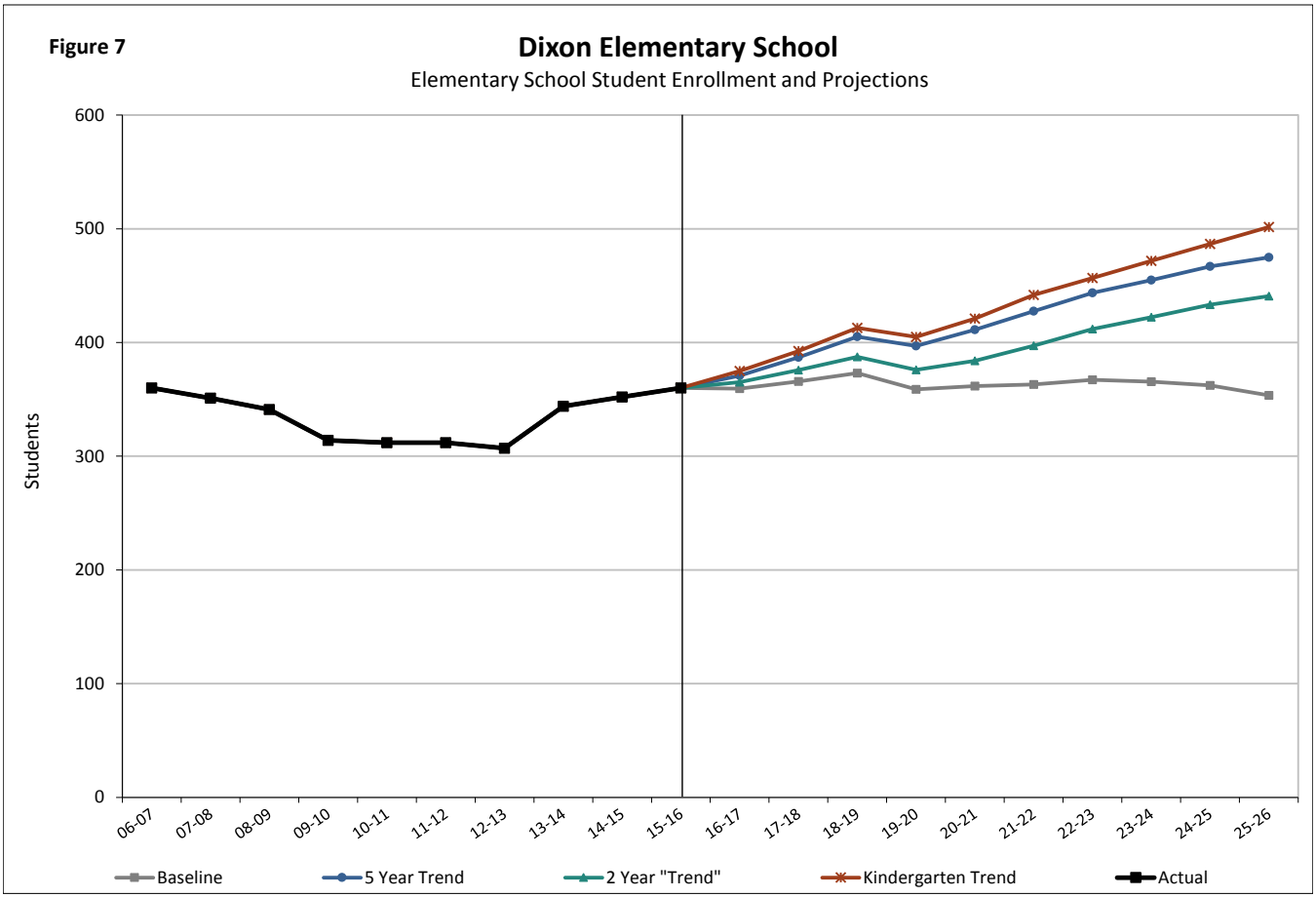


TABLE 24
Summary of Elementary School Enrollment Projections
Dixon Elementary School

	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	24-25	25-26
Baseline	359	366	373	359	362	363	367	366	362	354
5 Year Trend	371	387	405	397	411	428	444	455	467	475
2 Year "Trend"	365	376	387	376	384	397	412	422	433	441
Kindergarten Trend	375	393	413	405	421	442	457	472	487	501

Swanson Elementary School

Enrollment History

The resident enrollment history for Swanson Elementary School has increased by 204 students over the last ten years. The enrollment history and change in enrollment are shown in Tables 25 and 26.

TABLE 25
Student Enrollment
Swanson Elementary School

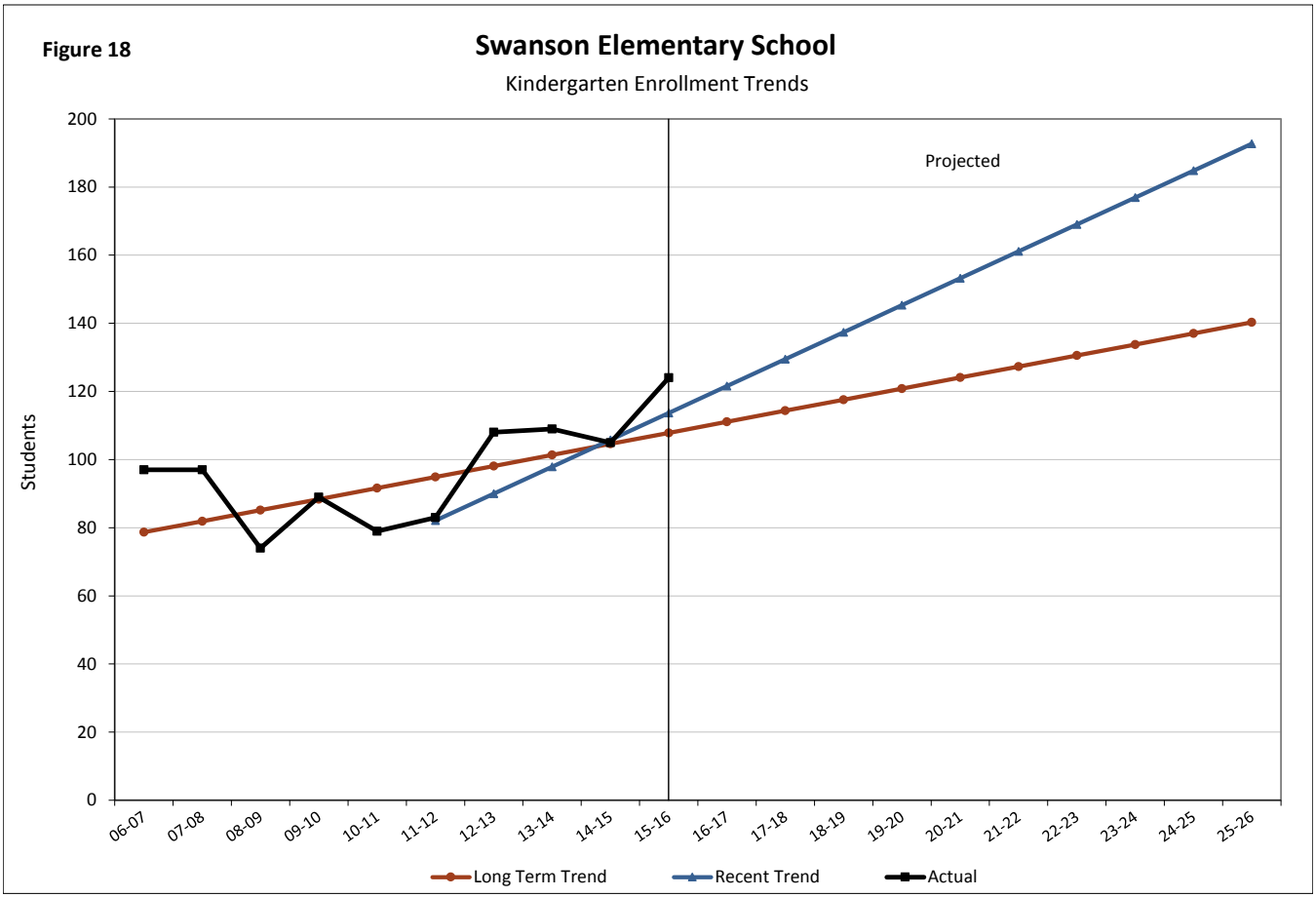
	SCHOOL YEAR									
	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16
K	97	97	74	89	79	83	108	109	105	124
1	94	109	104	82	99	80	98	118	128	124
2	85	93	113	100	87	97	107	107	131	137
3	100	92	95	105	104	95	115	111	108	148
4	92	103	94	102	115	100	112	122	109	120
5	102	98	107	93	100	119	116	122	126	121
TOTAL	**570**	**592**	**587**	**571**	**584**	**574**	**656**	**689**	**707**	**774**

TABLE 26
Student Enrollment Changes
Swanson Elementary School

	ABSOLUTE CHANGE			PERCENT CHANGE			AVERAGE ANNUAL PERCENT CHANGE		
GRADE	'06 to '15	'06 to '10	'11 to '15	'06 to '15	'06 to '10	'11 to '15	'06 to '15	'06 to '10	'11 to '15
K	27	-18	41	27.8	-18.6	49.4	3.1	-4.6	12.3
1	30	5	44	31.9	5.3	55.0	3.5	1.3	13.8
2	52	2	40	61.2	2.4	41.2	6.8	0.6	10.3
3	48	4	53	48.0	4.0	55.8	5.3	1.0	13.9
4	28	23	20	30.4	25.0	20.0	3.4	6.3	5.0
5	19	-2	2	18.6	-2.0	1.7	2.1	-0.5	0.4
TOTAL	**204**	**14**	**200**	**35.8**	**2.5**	**34.8**	**4.0**	**0.6**	**8.7**

Figure 6 shows kindergarten resident enrollment trends for Swanson Elementary School. The long term trend and recent trend show an increase in kindergarten enrollment. The long term trend will be used in the Kindergarten Trend model to project future kindergartners.

Figure 18



Grade progression ratios depict enrollment changes, year to year and grade to grade, measuring the effects of in- and out-migration and the transfer of students between private and public schools. Table 27 shows the grade progression ratios for Swanson Elementary School.

TABLE 27
Grade Progression Ratios
Swanson Elementary School

YEAR CHANGES	B:K	K:1	1:2	2:3	3:4	4:5
06-07/07-08	0.277	1.124	0.989	1.082	1.030	1.065
07-08/08-09	0.219	1.072	1.037	1.022	1.022	1.039
08-09/09-10	0.239	1.108	0.962	0.929	1.074	0.989
09-10/10-11	0.234	1.112	1.061	1.040	1.095	0.980
10-11/11-12	0.253	1.013	0.980	1.092	0.962	1.035
11-12/12-13	0.316	1.181	1.338	1.186	1.179	1.160
12-13/13-14	0.299	1.093	1.092	1.037	1.061	1.089
13-14/14-15	0.297	1.174	1.110	1.009	0.982	1.033
14-15/15-16	0.344	1.181	1.070	1.130	1.111	1.110
Baseline	**0.274**	**1.114**	**1.038**	**1.059**	**1.065**	**1.062**
5 Year Trend	**0.302**	**1.115**	**1.063**	**1.067**	**1.029**	**1.067**
2 Year "Trend"	**0.321**	**1.178**	**1.090**	**1.070**	**1.047**	**1.071**

*Shaded progression ratios are excluded from the Baseline

Baseline Projection

The Baseline model (Table 28) for Swanson Elementary School projects resident enrollment will increase from 774 students in 2015/16 to 787 students in 2020/21.

TABLE 28
Baseline Projection Model
Swanson Elementary School

	SCHOOL YEAR									
	16-17	**17-18**	**18-19**	**19-20**	**20-21**	**21-22**	**22-23**	**23-24**	**24-25**	**25-26**
K	96	105	108	116	108	102	102	102	102	102
1	138	107	117	120	129	120	113	113	113	113
2	129	143	111	122	125	134	125	118	118	118
3	145	136	152	117	129	132	142	132	125	125
4	158	155	145	162	125	137	140	151	141	133
5	127	167	164	154	172	133	146	149	160	150
TOTAL	**793**	**814**	**797**	**791**	**787**	**758**	**768**	**765**	**758**	**740**

Five Year Trend Projection

The 5 Year Trend model (Table 29) projects resident enrollment will increase from 774 students in 2015/16 to 869 students in 2020/21 at Swanson Elementary School.

TABLE 29
5 Year Trend Projection Model
Swanson Elementary School

	SCHOOL YEAR									
GRADE	**16-17**	**17-18**	**18-19**	**19-20**	**20-21**	**21-22**	**22-23**	**23-24**	**24-25**	**25-26**
K	106	116	119	128	128	128	131	135	138	142
1	138	118	130	133	142	143	143	146	150	154
2	132	147	126	138	141	151	152	152	156	160
3	146	141	157	134	147	150	162	162	162	166
4	152	150	145	161	138	151	155	166	167	166
5	128	162	160	154	172	147	161	165	177	178
TOTAL	**802**	**835**	**836**	**848**	**869**	**871**	**903**	**926**	**950**	**967**

Two Year "Trend" Projection

The Two Year "Trend" model (Table 30) uses the grade progression ratios from the last two years to project future enrollment. Swanson Elementary School resident enrollment is projected to increase from 774 students in 2015/16 to 980 students in 2020/21.

TABLE 30
2 Year "Trend" Projection Model
Swanson Elementary School

	SCHOOL YEAR									
GRADE	**16-17**	**17-18**	**18-19**	**19-20**	**20-21**	**21-22**	**22-23**	**23-24**	**24-25**	**25-26**
K	113	124	126	136	136	136	140	143	147	151
1	146	133	146	149	160	160	160	164	169	173
2	135	159	144	159	162	174	175	174	179	184
3	147	145	170	155	170	173	186	187	186	192
4	155	153	151	178	162	178	182	195	196	195
5	129	166	164	162	191	173	190	195	209	209
TOTAL	**824**	**879**	**902**	**938**	**980**	**995**	**1,032**	**1,058**	**1,086**	**1,104**

Kindergarten Trend Projection

The Kindergarten Trend model (Table 31) analyzes trends in kindergarten resident enrollment and assumes that the kindergarten trends will be similar in the future as they have recently. This model projects an increase from 774 students in 2015/16 to 860 students in 2020/21.

TABLE 31
Kindergarten Trend Projection Model
Swanson Elementary School

GRADE	**16-17**	**17-18**	**18-19**	**19-20**	**20-21**	**21-22**	**22-23**	**23-24**	**24-25**	**25-26**
K	111	114	118	121	124	127	131	134	137	140
1	138	124	127	131	135	138	142	146	149	153
2	132	147	132	136	139	143	147	151	155	159
3	146	141	157	141	145	149	153	157	161	165
4	152	150	145	161	145	149	153	157	161	166
5	128	162	160	154	172	154	159	163	168	172
TOTAL	**808**	**839**	**839**	**844**	**860**	**861**	**884**	**908**	**931**	**955**

Figure 19 and Table 32 compare the different resident enrollment projection models for Swanson Elementary School. Resident enrollment projections five years into the future range from a low of 823 students to a high of 980 students.

Figure 19

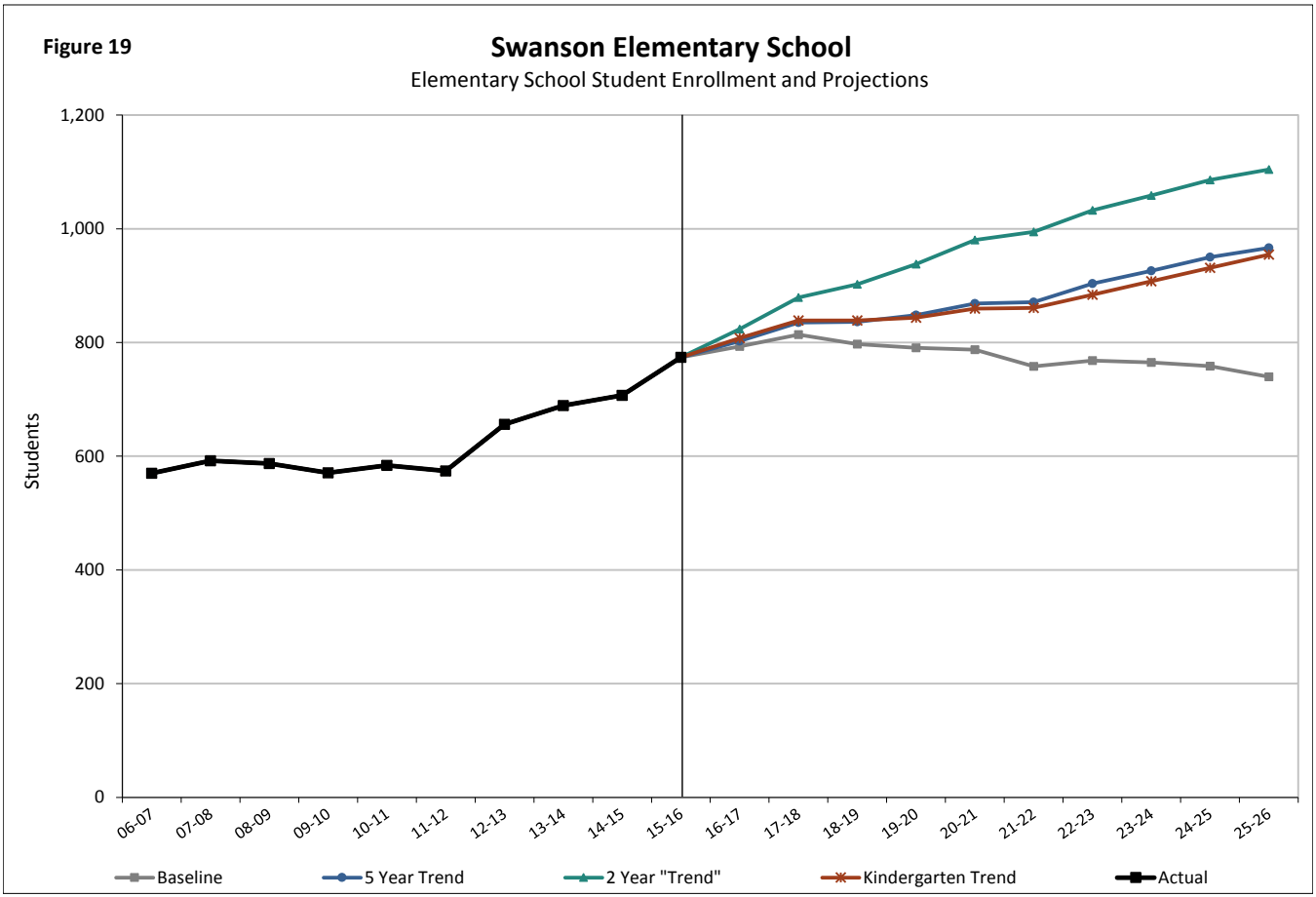


TABLE 32
Summary of Elementary School Enrollment Projections
Swanson Elementary School

	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	24-25	25-26
Baseline	793	814	797	791	787	758	768	765	758	740
5 Year Trend	802	835	836	848	869	871	903	926	950	967
2 Year "Trend"	824	879	902	938	980	995	1,032	1,058	1,086	1,104
Kindergarten Trend	808	839	839	844	860	861	884	908	931	955

Tonawanda Elementary School

Enrollment History

The resident enrollment history for Tonawanda Elementary School has increased by 22 students over the last ten years. The enrollment history and change in enrollment are shown in Tables 33 and 34.

TABLE 33
Student Enrollment
Tonawanda Elementary School

	SCHOOL YEAR									
	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16
K	56	40	52	61	52	60	56	49	63	50
1	54	57	44	49	66	54	62	56	52	62
2	49	59	60	46	56	70	59	60	53	56
3	61	50	61	59	47	55	76	57	64	58
4	62	63	49	59	63	47	54	75	55	68
5	48	56	63	53	63	65	51	54	74	58
TOTAL	**330**	**325**	**329**	**327**	**347**	**351**	**358**	**351**	**361**	**352**

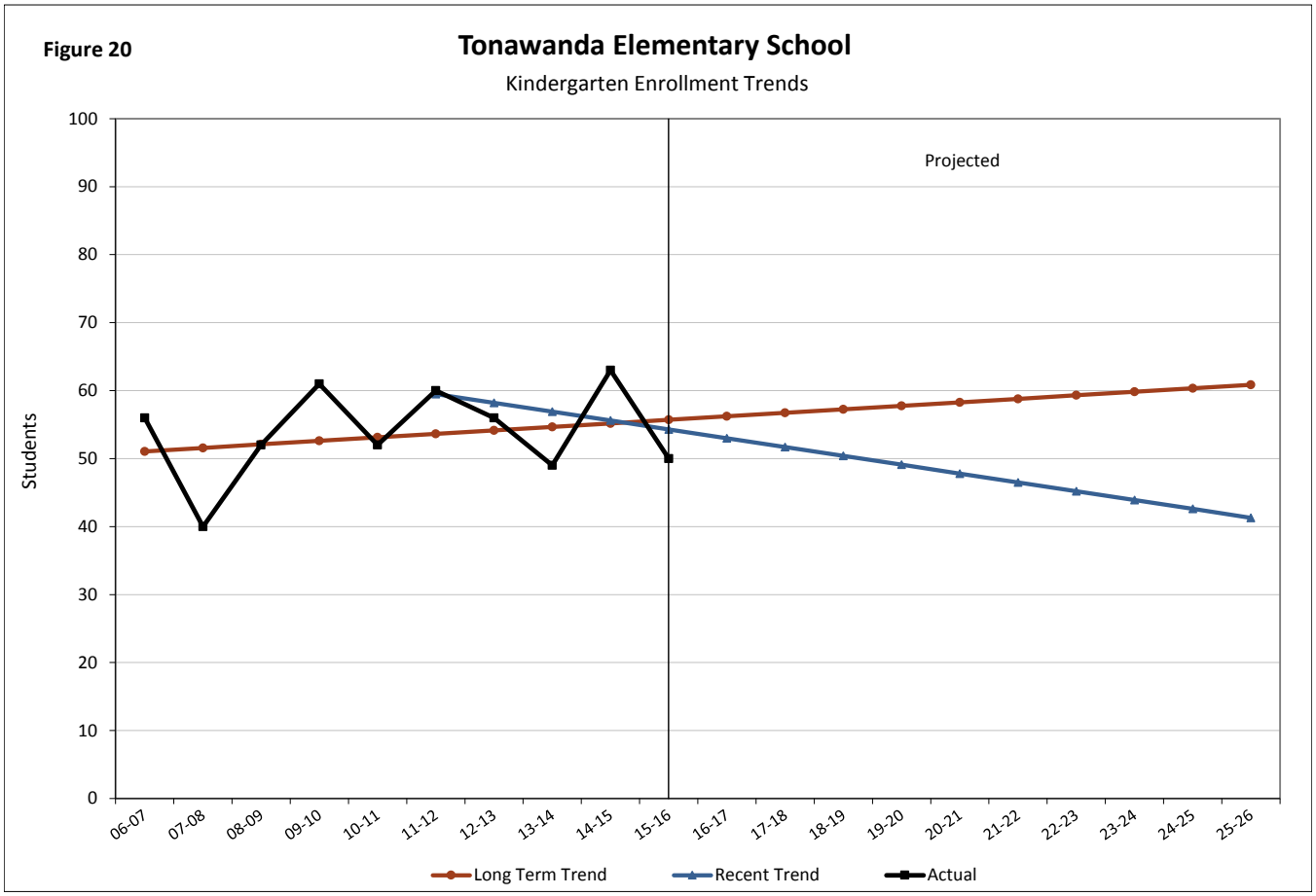
TABLE 34
Student Enrollment Changes
Tonawanda Elementary School

	ABSOLUTE CHANGE			PERCENT CHANGE			AVERAGE ANNUAL PERCENT CHANGE		
GRADE	'06 to '15	'06 to '10	'11 to '15	'06 to '15	'06 to '10	'11 to '15	'06 to '15	'06 to '10	'11 to '15
K	-6	-4	-10	-10.7	-7.1	-16.7	-1.2	-1.8	-4.2
1	8	12	8	14.8	22.2	14.8	1.6	5.6	3.7
2	7	7	-14	14.3	14.3	-20.0	1.6	3.6	-5.0
3	-3	-14	3	-4.9	-23.0	5.5	-0.5	-5.7	1.4
4	6	1	21	9.7	1.6	44.7	1.1	0.4	11.2
5	10	15	-7	20.8	31.3	-10.8	2.3	7.8	-2.7
TOTAL	**22**	**17**	**1**	**6.7**	**5.2**	**0.3**	**0.7**	**1.3**	**0.1**

Kindergarten Enrollment

Figure 6 shows kindergarten resident enrollment trends for Tonawanda Elementary School. The long term trend shows an increase in kindergarten enrollment while the recent trend shows a decline in enrollment. The long term trend will be used in the Kindergarten Trend model to project future kindergartners.

Figure 20



Grade progression ratios depict enrollment changes, year to year and grade to grade, measuring the effects of in- and out-migration and the transfer of students between private and public schools. Table 35 shows the grade progression ratios for Tonawanda Elementary School.

TABLE 35
Grade Progression Ratios
Tonawanda Elementary School

YEAR CHANGES	B:K	K:1	1:2	2:3	3:4	4:5
06-07/07-08	0.114	1.018	1.093	1.020	1.033	0.903
07-08/08-09	0.154	1.100	1.053	1.034	0.980	1.000
08-09/09-10	0.164	0.942	1.045	0.983	0.967	1.082
09-10/10-11	0.154	1.082	1.143	1.022	1.068	1.068
10-11/11-12	0.183	1.038	1.061	0.982	1.000	1.032
11-12/12-13	0.164	1.033	1.093	1.086	0.982	1.085
12-13/13-14	0.135	1.000	0.968	0.966	0.987	1.000
13-14/14-15	0.178	1.061	0.946	1.067	0.965	0.987
14-15/15-16	0.139	0.984	1.077	1.094	1.063	1.055
Baseline	**0.155**	**1.023**	**1.070**	**1.018**	**0.988**	**1.038**
5 Year Trend	**0.160**	**1.023**	**1.029**	**1.039**	**0.999**	**1.032**
2 Year "Trend"	**0.159**	**1.023**	**1.012**	**1.081**	**1.014**	**1.021**

*Shaded progression ratios are excluded from the Baseline

Baseline Projection

The Baseline model (Table 36) for Tonawanda Elementary School projects resident enrollment will increase from 352 students in 2015/16 to 379 students in 2020/21.

TABLE 36
Baseline Projection Model
Tonawanda Elementary School

	SCHOOL YEAR									
	16-17	**17-18**	**18-19**	**19-20**	**20-21**	**21-22**	**22-23**	**23-24**	**24-25**	**25-26**
K	54	60	61	66	61	58	58	58	58	58
1	51	56	61	63	67	63	59	59	59	59
2	66	55	60	65	67	72	67	63	63	63
3	57	68	56	61	67	68	73	68	64	64
4	57	56	67	55	60	66	67	72	67	64
5	71	59	58	69	57	62	68	70	75	70
TOTAL	**357**	**354**	**363**	**379**	**379**	**389**	**393**	**390**	**387**	**378**

Five Year Trend Projection

The 5 Year Trend model (Table 37) projects resident enrollment will increase from 352 students in 2015/16 to 388 students in 2020/21 at Tonawanda Elementary School.

TABLE 37
5 Year Trend Projection Model
Tonawanda Elementary School

	SCHOOL YEAR									
GRADE	**16-17**	**17-18**	**18-19**	**19-20**	**20-21**	**21-22**	**22-23**	**23-24**	**24-25**	**25-26**
K	56	62	63	68	68	68	69	71	73	75
1	51	57	63	64	69	69	69	71	73	75
2	64	53	59	65	66	71	71	71	73	75
3	58	66	55	61	67	69	74	74	74	76
4	58	58	66	55	61	67	69	74	74	74
5	70	60	60	68	56	63	69	71	76	76
TOTAL	**357**	**356**	**366**	**381**	**388**	**407**	**422**	**432**	**444**	**451**

Two Year "Trend" Projection

The Two Year "Trend" model (Table 38) uses the grade progression ratios from the last two years to project future enrollment. Tonawanda Elementary School resident enrollment is projected to increase from 352 students in 2015/16 to 390 students in 2020/21.

TABLE 38
2 Year "Trend" Projection Model
Tonawanda Elementary School

	SCHOOL YEAR									
GRADE	**16-17**	**17-18**	**18-19**	**19-20**	**20-21**	**21-22**	**22-23**	**23-24**	**24-25**	**25-26**
K	56	61	62	67	67	67	69	71	73	75
1	51	57	62	64	69	69	69	71	72	74
2	63	52	58	63	65	69	70	69	71	73
3	61	68	56	62	68	70	75	75	75	77
4	59	61	69	57	63	69	71	76	76	76
5	69	60	63	70	58	64	71	72	78	78
TOTAL	**358**	**359**	**370**	**383**	**390**	**409**	**424**	**434**	**445**	**453**

Kindergarten Trend Projection

The Kindergarten Trend model (Table 39) analyzes trends in kindergarten resident enrollment and assumes that the kindergarten trends will be similar in the future as they have recently. This model projects a decrease from 352 students in 2015/16 to 358 students in 2020/21.

TABLE 39
Kindergarten Trend Projection Model
Tonawanda Elementary School

GRADE	**16-17**	**17-18**	**18-19**	**19-20**	**20-21**	**21-22**	**22-23**	**23-24**	**24-25**	**25-26**
K	56	57	57	58	58	59	59	60	60	61
1	51	58	58	59	59	60	60	61	61	62
2	64	53	59	60	60	61	61	62	62	63
3	58	66	55	62	62	63	63	64	64	65
4	58	58	66	55	61	62	63	63	64	64
5	70	60	60	68	56	63	64	65	65	66
TOTAL	**357**	**351**	**355**	**361**	**358**	**367**	**371**	**374**	**377**	**380**

Figure 21 and Table 40 compare the different resident enrollment projection models for Tonawanda Elementary School. Resident enrollment projections five years into the future range from a low of 358 students to a high of 390 students.

Figure 21

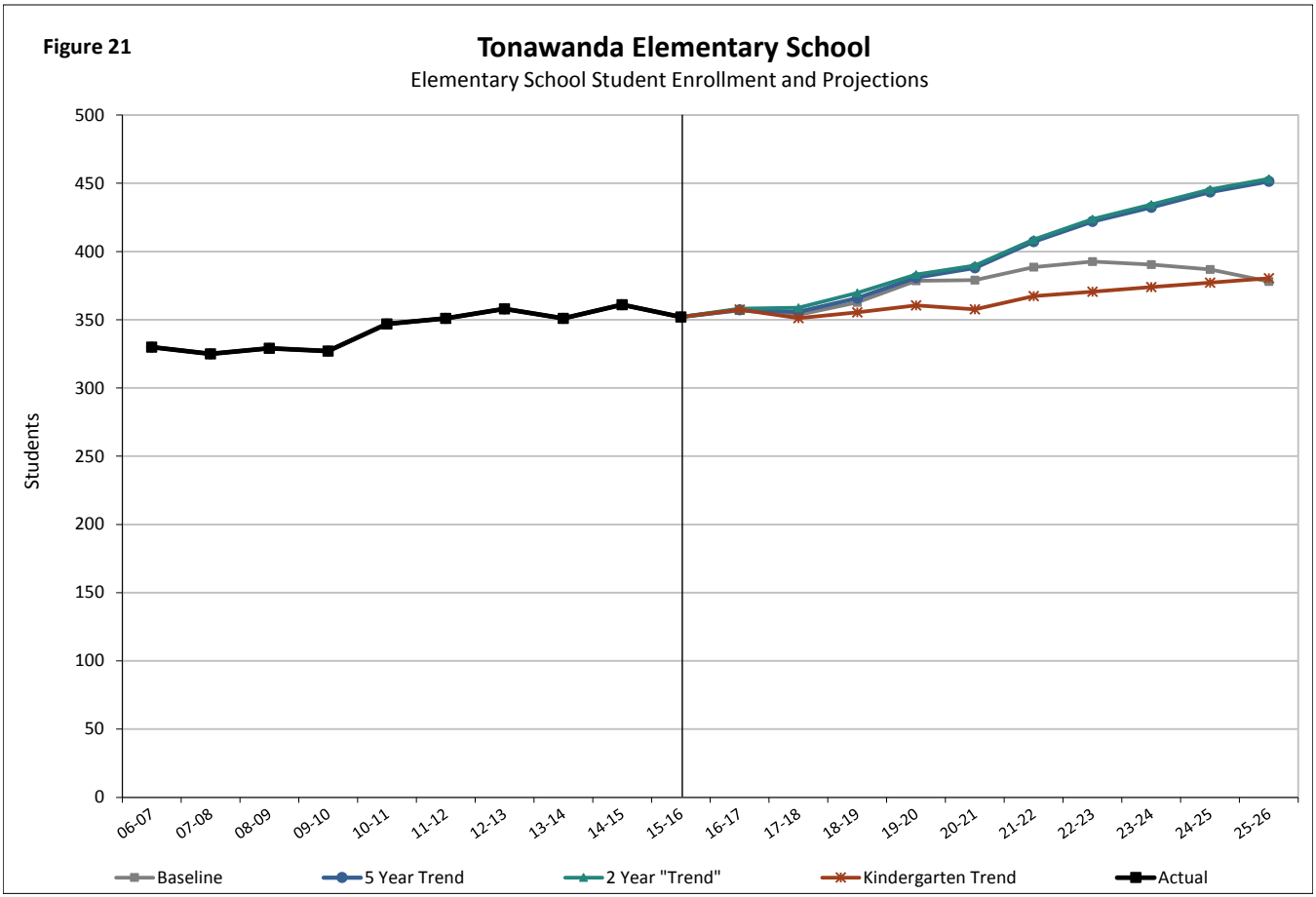


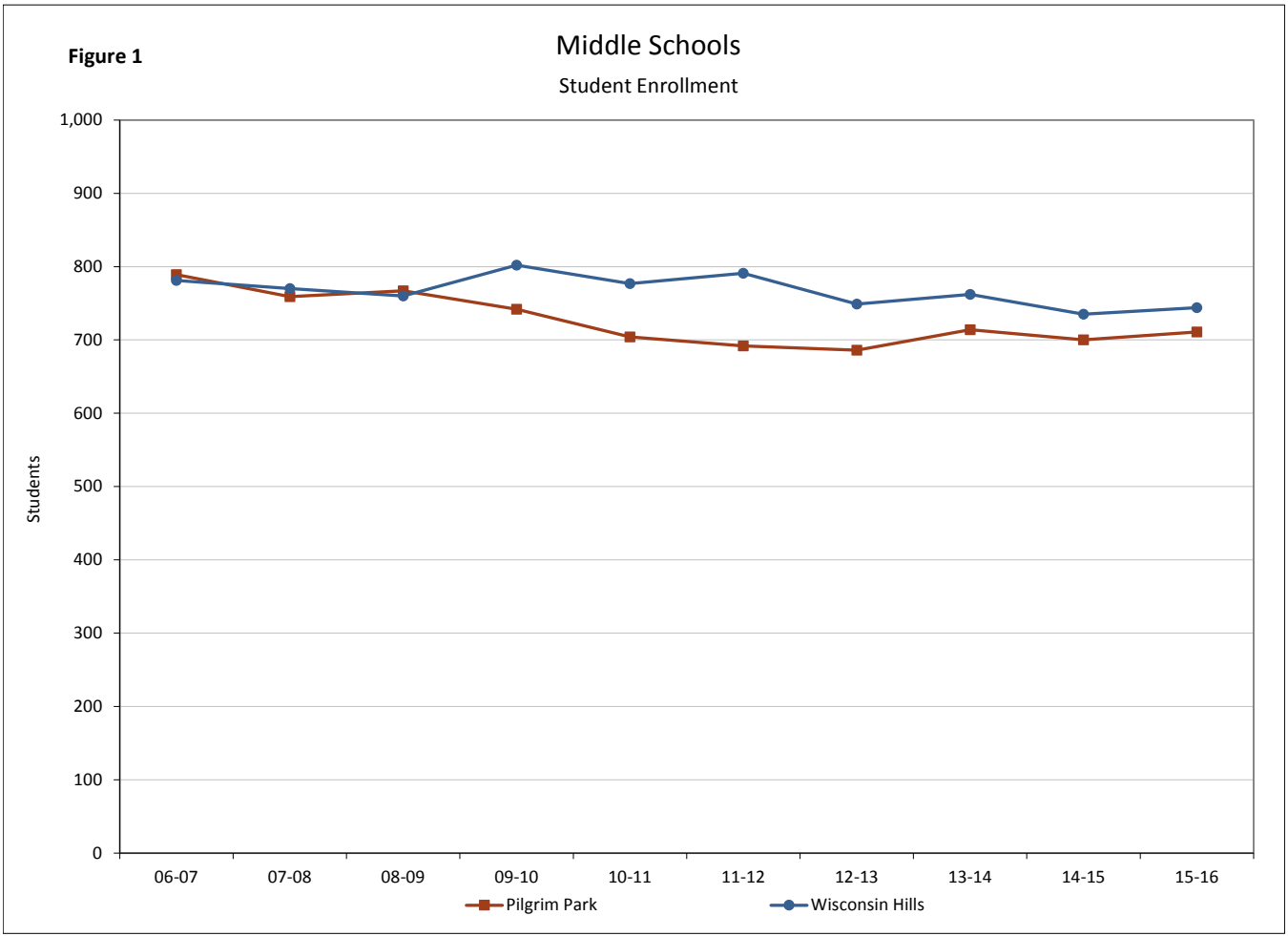
TABLE 40
Summary of Elementary School Enrollment Projections
Tonawanda Elementary School

	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	24-25	25-26
Baseline	357	354	363	379	379	389	393	390	387	378
5 Year Trend	357	356	366	381	388	407	422	432	444	451
2 Year "Trend"	358	359	370	383	390	409	424	434	445	453
Kindergarten Trend	357	351	355	361	358	367	371	374	377	380

Middle School Enrollment Histories

Figure 1 shows resident enrollment history for the middle schools for the School District of Elmbrook. Resident enrollment at Pilgrim Park Middle School has decreased by 10%, while Wisconsin Hills Middle School has decreased by 4.7% over the last ten years.

Figure 1



Pilgrim Park Middle School

Enrollment History

The resident enrollment for Pilgrim Park Middle School has decreased by 78 students over the last ten years. The enrollment history and change in enrollment are shown in Tables 1 and 2.

TABLE 1
Student Enrollment
Pilgrim Park Middle School

	SCHOOL YEAR									
	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16
6	257	232	252	241	205	229	221	229	231	254
7	264	262	248	256	239	216	235	236	226	233
8	268	265	267	245	260	247	230	249	243	224
TOTAL	**789**	**759**	**767**	**742**	**704**	**692**	**686**	**714**	**700**	**711**

TABLE 2
Student Enrollment Changes
Pilgrim Park Middle School

	ABSOLUTE CHANGE			PERCENT CHANGE			AVERAGE ANNUAL PERCENT CHANGE		
GRADE	'06 to '15	'06 to '10	'11 to '15	'06 to '15	'06 to '10	'11 to '15	'06 to '15	'06 to '10	'11 to '15
6	-3	-52	25	-1.2	-20.2	10.9	-0.1	-5.1	2.7
7	-31	-25	17	-11.7	-9.5	7.9	-1.3	-2.4	2.0
8	-44	-8	-23	-16.4	-3.0	-9.3	-1.8	-0.7	-2.3
TOTAL	**-78**	**-85**	**19**	**-9.9**	**-10.8**	**2.7**	**-1.1**	**-2.7**	**0.7**

Grade progression ratios depict enrollment changes, year to year and grade to grade, measuring the effects of in- and out-migration and the transfer of students between private and public schools. Table 3 shows the grade progression ratios for Pilgrim Park Middle School.

TABLE 3
Grade Progression Ratios
Pilgrim Park Middle School

YEAR CHANGES	5:6	6:7	7:8
06-07/07-08	0.979	1.019	1.004
07-08/08-09	1.037	1.069	1.019
08-09/09-10	0.964	1.016	0.988
09-10/10-11	1.030	0.992	1.016
10-11/11-12	1.046	1.054	1.033
11-12/12-13	1.047	1.026	1.065
12-13/13-14	1.060	1.068	1.060
13-14/14-15	1.095	0.987	1.030
14-15/15-16	1.067	1.009	0.991
Baseline Average	**1.048**	**1.025**	**1.020**
Last 5 Year Trend	**1.063**	**1.029**	**1.036**
Last 2 Year "Trend"	**1.081**	**0.998**	**1.010**

*Shaded progression ratios are excluded from the Baseline

Baseline Projection

The Baseline model (Table 4) for Pilgrim Park Middle School projects in five years that resident enrollment will increase from 711 students in 2015/16 to 794 students in 2020/21.

TABLE 4
Baseline Projection Model
Pilgrim Park Middle School

	SCHOOL YEAR									
	16-17	**17-18**	**18-19**	**19-20**	**20-21**	**21-22**	**22-23**	**23-24**	**24-25**	**25-26**
6	235	253	222	277	278	235	237	260	266	285
7	260	241	260	227	284	285	241	243	266	272
8	238	266	246	265	232	289	291	246	248	272
TOTAL	**733**	**760**	**728**	**769**	**794**	**810**	**769**	**748**	**780**	**830**

Five Year Trend Projection

The 5 Year Trend model (Table 5) uses the grade progression ratios from the last five years to project what future enrollments would look like if more recent patterns were representative of future trends. This model projects that resident enrollment will increase from 711 students in 2015/16 to 847 students in 2020/21.

TABLE 5
5 Year Trend Projection Model
Pilgrim Park Middle School

	SCHOOL YEAR									
GRADE	**16-17**	**17-18**	**18-19**	**19-20**	**20-21**	**21-22**	**22-23**	**23-24**	**24-25**	**25-26**
6	239	258	230	296	298	251	268	294	301	323
7	261	246	265	237	304	307	258	276	303	310
8	241	271	254	275	245	315	318	268	286	314
TOTAL	**741**	**774**	**750**	**807**	**847**	**873**	**844**	**838**	**889**	**946**

Two Year "Trend" Projection

According to the Two Year "Trend" model (Table 6), Pilgrim Park Middle School resident enrollment will increase from 711 students in 2015/16 to 838 students in 2020/21.

TABLE 6
2 Year "Trend" Projection Model
Pilgrim Park Middle School

	SCHOOL YEAR									
GRADE	**16-17**	**17-18**	**18-19**	**19-20**	**20-21**	**21-22**	**22-23**	**23-24**	**24-25**	**25-26**
6	243	261	234	299	304	258	279	307	314	337
7	253	243	260	233	298	304	258	279	306	313
8	235	256	245	263	236	301	307	260	282	309
TOTAL	**732**	**759**	**739**	**794**	**838**	**863**	**844**	**845**	**901**	**959**

Kindergarten Trend Projection

The Kindergarten Trend model (Table 7) projects the same growth as the 5 Year Trend model until 2021/22. The model projects an increase in resident enrollment from 711 students in 2015/16 to 847 students in 2020/21.

TABLE 7
Kindergarten Trend Projection Model
Pilgrim Park Middle School

GRADE	**16-17**	**17-18**	**18-19**	**19-20**	**20-21**	**21-22**	**22-23**	**23-24**	**24-25**	**25-26**
6	239	258	230	296	298	251	282	290	298	306
7	261	246	265	237	304	307	258	290	298	306
8	241	271	254	275	245	315	318	268	301	309
TOTAL	**741**	**774**	**750**	**807**	**847**	**873**	**858**	**848**	**897**	**921**

Figure 2 and Table 8 compare the different resident enrollment projection models for Pilgrim Park Middle School. Resident enrollment projections for five years into the future range from a low of 794 students to a high of 847 students.

Figure 2

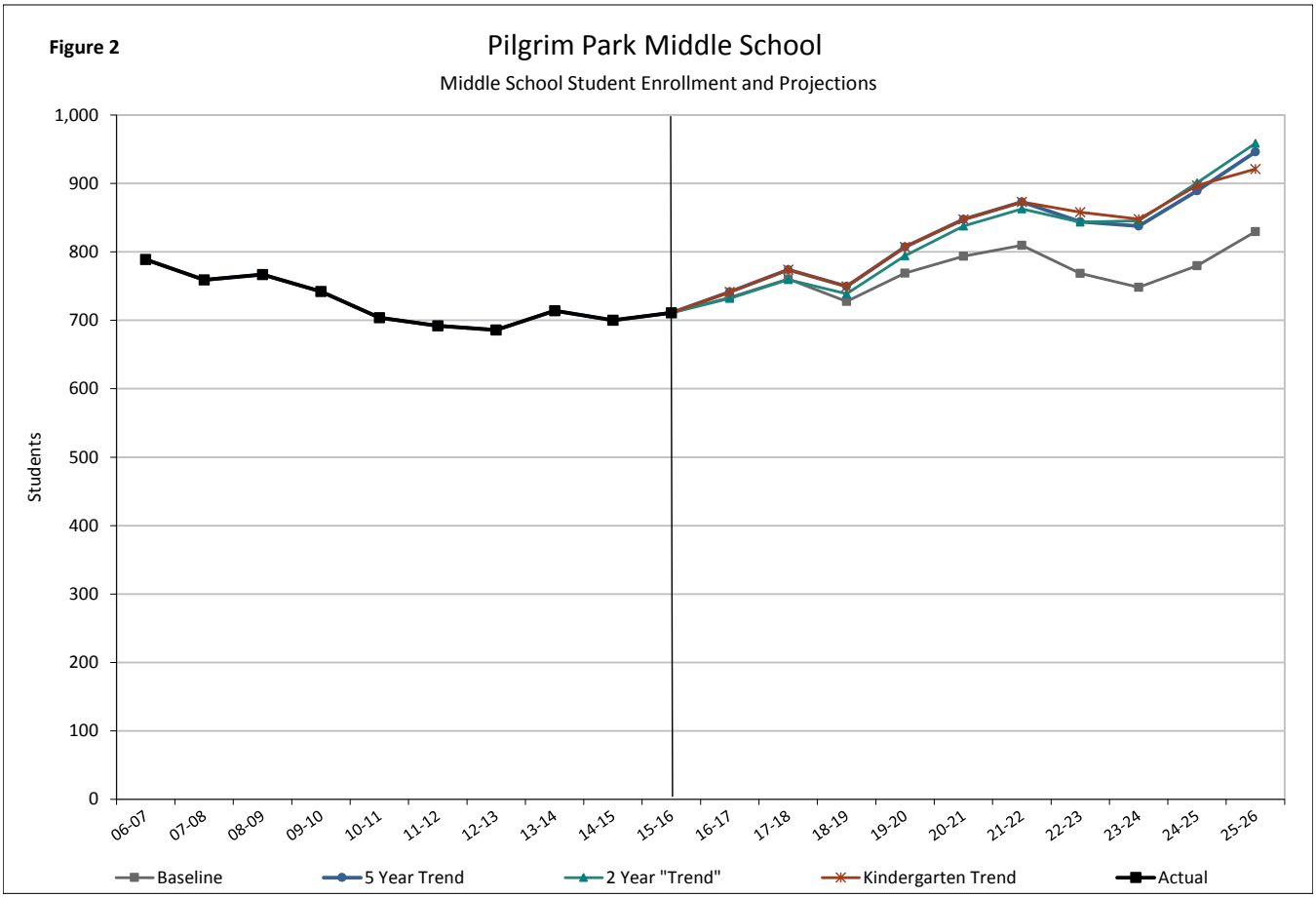


TABLE 8
Summary of Middle School Enrollment Projections
Pilgrim Park Middle School

	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	24-25	25-26
Baseline	733	760	728	769	794	810	769	748	780	830
5 Year Trend	741	774	750	807	847	873	844	838	889	946
2 Year "Trend"	732	759	739	794	838	863	844	845	901	959
Kindergarten Trend	741	774	750	807	847	873	858	848	897	921

Wisconsin Hills Middle School

Enrollment History

The resident enrollment history for Wisconsin Hills Middle School has decreased by 37 students over the last ten years. The enrollment history and change in enrollment are shown in Tables 9 and 10.

TABLE 9
Student Enrollment
Wisconsin Hills Middle School

	SCHOOL YEAR									
	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16
6	241	259	237	283	236	253	251	237	228	246
7	259	245	269	245	294	242	257	252	256	245
8	281	266	254	274	247	296	241	273	251	253
TOTAL	**781**	**770**	**760**	**802**	**777**	**791**	**749**	**762**	**735**	**744**

TABLE 10
Student Enrollment Changes
Wisconsin Hills Middle School

	ABSOLUTE CHANGE			PERCENT CHANGE			AVERAGE ANNUAL PERCENT CHANGE		
GRADE	'06 to '15	'06 to '10	'11 to '15	'06 to '15	'06 to '10	'11 to '15	'06 to '15	'06 to '10	'11 to '15
6	5	-5	-7	2.1	-2.1	-2.8	0.2	-0.5	-0.7
7	-14	35	3	-5.4	13.5	1.2	-0.6	3.4	0.3
8	-28	-34	-43	-10.0	-12.1	-14.5	-1.1	-3.0	-3.6
TOTAL	**-37**	**-4**	**-47**	**-4.7**	**-0.5**	**-5.9**	**-0.5**	**-0.1**	**-1.5**

Grade progression ratios depict enrollment changes, year to year and grade to grade, measuring the effects of in- and out-migration and the transfer of students between private and public schools. Table 11 shows the grade progression ratios for Wisconsin Hills Middle School.

TABLE 11
Grade Progression Ratios
Wisconsin Hills Middle School

YEAR CHANGES	5:6	6:7	7:8
06-07/07-08	1.431	1.017	1.027
07-08/08-09	1.539	1.039	1.037
08-09/09-10	1.459	1.034	1.019
09-10/10-11	1.553	1.039	1.008
10-11/11-12	1.059	1.025	1.007
11-12/12-13	1.059	1.016	0.996
12-13/13-14	1.009	1.004	1.062
13-14/14-15	1.032	1.080	0.996
14-15/15-16	1.021	1.075	0.988
Baseline Average	**1.153**	**1.028**	**1.013**
Last 5 Year Trend	**1.036**	**1.040**	**1.010**
Last 2 Year "Trend"	**1.026**	**1.077**	**0.992**

*Shaded progression ratios are excluded from the Baseline

Baseline Projection

The Baseline model (Table 12) for Wisconsin Hills Middle School projects in five years that resident enrollment will increase from 747 students in 2015/16 to 1,078 students in 2020/21.

TABLE 12
Baseline Projection Model
Wisconsin Hills Middle School

	SCHOOL YEAR									
	16-17	**17-18**	**18-19**	**19-20**	**20-21**	**21-22**	**22-23**	**23-24**	**24-25**	**25-26**
6	293	304	335	364	355	388	277	303	310	332
7	253	301	312	345	374	365	399	285	312	319
8	248	256	305	316	349	379	370	404	288	316
TOTAL	**794**	**861**	**953**	**1,024**	**1,078**	**1,132**	**1,046**	**992**	**910**	**967**

Five Year Trend Projection

The 5 Year Trend model (Table 13) for Wisconsin Hills Middle School projects that resident enrollment will increase from 747 students in 2015/16 to 1,013 students in 2020/21.

TABLE 13
5 Year Trend Projection Model
Wisconsin Hills Middle School

	SCHOOL YEAR									
GRADE	**16-17**	**17-18**	**18-19**	**19-20**	**20-21**	**21-22**	**22-23**	**23-24**	**24-25**	**25-26**
6	274	285	310	338	337	371	310	340	347	372
7	256	285	296	322	352	350	386	323	353	361
8	247	258	288	299	325	355	353	390	326	357
TOTAL	**777**	**828**	**893**	**959**	**1,013**	**1,077**	**1,050**	**1,052**	**1,026**	**1,090**

Two Year "Trend" Projection

According to the Two Year "Trend" model (Table 14), Wisconsin Hills Middle School resident enrollment is projected to increase from 747 students in 2015/16 to 956 students in 2020/21.

TABLE 14
2 Year "Trend" Projection Model
Wisconsin Hills Middle School

	SCHOOL YEAR									
GRADE	**16-17**	**17-18**	**18-19**	**19-20**	**20-21**	**21-22**	**22-23**	**23-24**	**24-25**	**25-26**
6	242	256	281	315	317	356	329	360	368	395
7	265	261	276	303	339	341	384	354	388	397
8	243	263	259	274	300	337	338	381	352	385
TOTAL	**750**	**780**	**816**	**892**	**956**	**1,034**	**1,051**	**1,096**	**1,108**	**1,177**

Kindergarten Trend Projection

The Kindergarten Trend model (Table 15) projects the same decline as the 5 Year Trend model until 2021/22. This model projects an increase in resident enrollment from 747 students in 2015/16 to 1,013 students in 2020/21.

TABLE 15
Kindergarten Trend Projection Model
Wisconsin Hills Middle School

GRADE	**16-17**	**17-18**	**18-19**	**19-20**	**20-21**	**21-22**	**22-23**	**23-24**	**24-25**	**25-26**
6	274	285	310	338	337	371	339	354	368	382
7	256	285	296	322	352	350	386	353	368	383
8	247	258	288	299	325	355	353	390	356	371
TOTAL	**777**	**828**	**893**	**959**	**1,013**	**1,077**	**1,079**	**1,096**	**1,092**	**1,136**

Figure 3 and Table 16 compare the different resident enrollment projection models for Wisconsin Hills Middle School. Resident enrollment projections for five years into the future range from a low of 956 students to a high of 1,078 students.

Figure 3

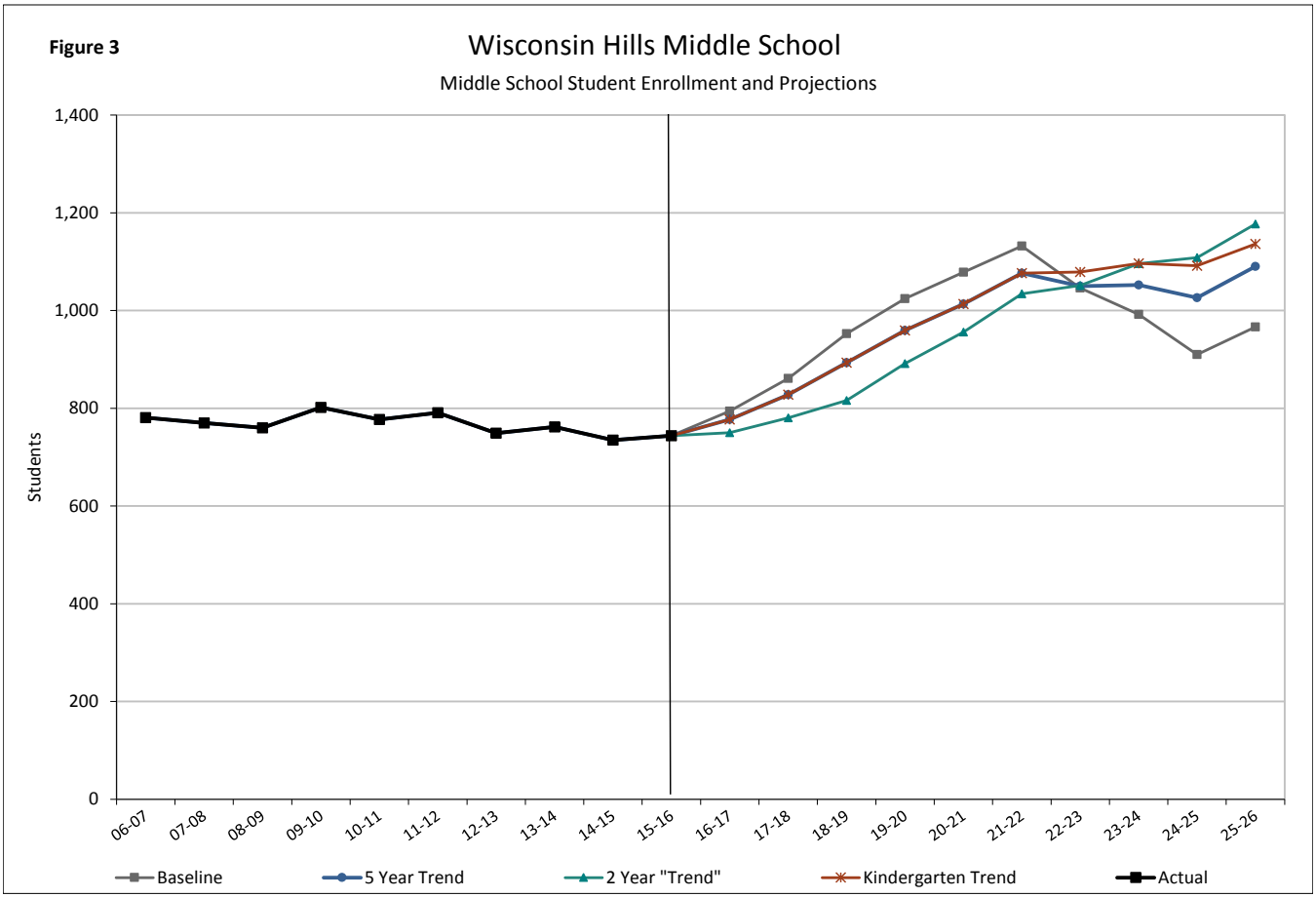


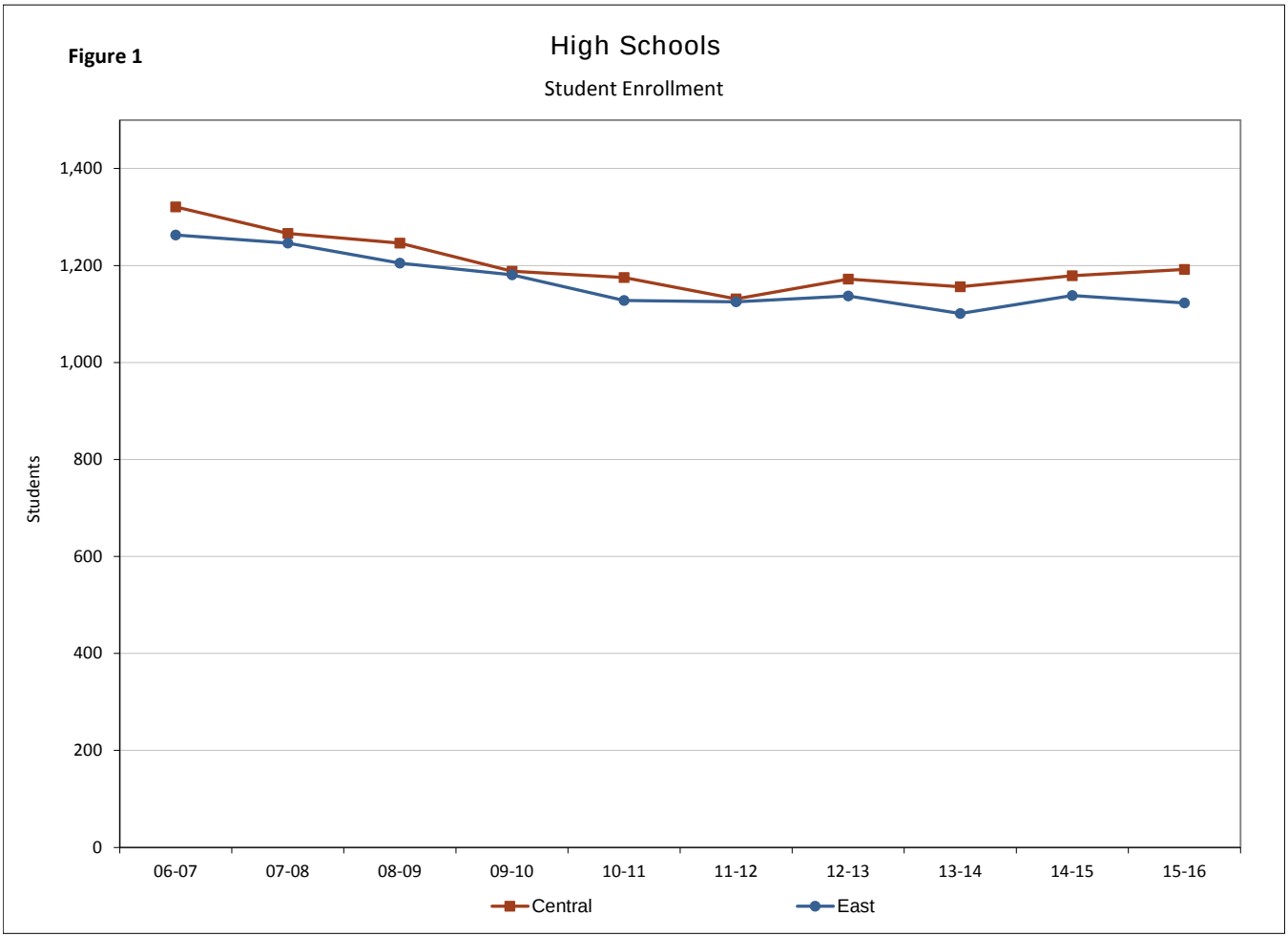
TABLE 16
Summary of Middle School Enrollment Projections
Wisconsin Hills Middle School

	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	24-25	25-26
Baseline	794	861	953	1,024	1,078	1,132	1,046	992	910	967
5 Year Trend	777	828	893	959	1,013	1,077	1,050	1,052	1,026	1,090
2 Year "Trend"	750	780	816	892	956	1,034	1,051	1,096	1,108	1,177
Kindergarten Trend	777	828	893	959	1,013	1,077	1,079	1,096	1,092	1,136

High School Enrollment Histories

Figure 1 shows resident enrollment history for the high schools for the School District of Elmbrook. Resident enrollment at Brookfield Central High School has decreased by 9.8%, while Brookfield East High School has decreased by 11% over the last ten years.

Figure 1



Brookfield Central High School

Enrollment History

The resident enrollment for Brookfield Central High School has decreased by 129 students over the last ten years. The enrollment history and change in enrollment are shown in Tables 1 and 2.

TABLE 1
Student Enrollment
Brookfield Central High School

	SCHOOL YEAR									
	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16
9	302	311	289	281	292	271	323	257	307	286
10	350	302	308	289	282	292	280	326	260	310
11	303	355	305	318	284	275	288	280	328	262
12	366	298	344	300	317	293	281	293	284	334
TOTAL	**1,321**	**1,266**	**1,246**	**1,188**	**1,175**	**1,131**	**1,172**	**1,156**	**1,179**	**1,192**

TABLE 2
Student Enrollment Changes
Brookfield Central High School

	ABSOLUTE CHANGE			PERCENT CHANGE			AVERAGE ANNUAL PERCENT CHANGE		
GRADE	'06 to '15	'06 to '10	'11 to '15	'06 to '15	'06 to '10	'11 to '15	'06 to '15	'06 to '10	'11 to '15
9	-16	-10	15	-5.3	-3.3	5.5	-0.6	-0.8	1.4
10	-40	-68	18	-11.4	-19.4	6.2	-1.3	-4.9	1.5
11	-41	-19	-13	-13.5	-6.3	-4.7	-1.5	-1.6	-1.2
12	-32	-49	41	-8.7	-13.4	14.0	-1.0	-3.3	3.5
TOTAL	**-129**	**-146**	**61**	**-9.8**	**-11.1**	**5.4**	**-1.1**	**-2.8**	**1.3**

Grade Progression Ratios

Grade progression ratios depict enrollment changes, year to year and grade to grade, measuring the effects of in- and out-migration and the transfer of students between private and public schools. Table 3 shows the grade progression ratios for Brookfield Central High School.

TABLE 3
Grade Progression Ratios
Brookfield Central High School

YEAR CHANGES	8:9	9:10	10:11	11:12
06-07/07-08	1.107	1.000	1.014	0.983
07-08/08-09	1.086	0.990	1.010	0.969
08-09/09-10	1.106	1.000	1.032	0.984
09-10/10-11	1.066	1.004	0.983	0.997
10-11/11-12	1.097	1.000	0.975	1.032
11-12/12-13	1.091	1.033	0.986	1.022
12-13/13-14	1.066	1.009	1.000	1.017
13-14/14-15	1.125	1.012	1.006	1.014
14-15/15-16	1.139	1.010	1.008	1.018
Baseline Average	**1.102**	**1.003**	**1.001**	**1.005**
Last 5 Year Trend	**1.104**	**1.013**	**0.995**	**1.021**
Last 2 Year "Trend"	**1.132**	**1.011**	**1.007**	**1.016**

*Shaded progression ratios are excluded from the Baseline Average

Baseline Projection

The Baseline model (Table 4) for Brookfield Central High School projects in five years that resident enrollment will remain steady going from 1,192 students in 2015/16 to 1,194 students in 2020/21.

TABLE 4
Baseline Projection Model
Brookfield Central High School

	SCHOOL YEAR									
	16-17	**17-18**	**18-19**	**19-20**	**20-21**	**21-22**	**22-23**	**23-24**	**24-25**	**25-26**
9	279	273	282	336	349	385	417	408	445	318
10	287	280	274	283	337	350	386	418	409	447
11	310	287	280	275	283	338	350	386	419	410
12	263	312	289	281	276	285	339	352	388	421
TOTAL	**1,139**	**1,152**	**1,125**	**1,175**	**1,245**	**1,357**	**1,492**	**1,564**	**1,662**	**1,595**

Five Year Trend Projection

The 5 Year Trend model (Table 5) uses the grade progression ratios from the last five years to project what future enrollments would look like if more recent patterns were representative of future trends. This model projects that resident enrollment will decrease from 1,192 students in 2015/16 to 1,147 students in 2020/21.

TABLE 5
5 Year Trend Projection Model
Brookfield Central High School

	SCHOOL YEAR									
GRADE	**16-17**	**17-18**	**18-19**	**19-20**	**20-21**	**21-22**	**22-23**	**23-24**	**24-25**	**25-26**
9	279	273	285	317	330	359	392	390	431	360
10	290	283	277	289	321	334	363	397	395	436
11	308	288	281	275	287	320	333	362	395	393
12	267	315	294	287	281	293	326	339	369	403
TOTAL	**1,145**	**1,159**	**1,137**	**1,169**	**1,220**	**1,306**	**1,415**	**1,488**	**1,590**	**1,592**

Two Year "Trend" Projection

According to the Two Year "Trend" model (Table 6), Brookfield Central High School resident enrollment will be the same enrollment from 1,192 students in 2015/16 to 1,194 students in 2020/21.

TABLE 6
2 Year "Trend" Projection Model
Brookfield Central High School

	SCHOOL YEAR									
GRADE	**16-17**	**17-18**	**18-19**	**19-20**	**20-21**	**21-22**	**22-23**	**23-24**	**24-25**	**25-26**
9	286	275	298	293	310	340	381	383	431	398
10	289	289	278	301	296	314	344	385	387	436
11	312	291	291	280	303	298	316	346	388	390
12	266	317	296	296	285	308	303	321	352	394
TOTAL	**1,154**	**1,173**	**1,163**	**1,170**	**1,194**	**1,260**	**1,343**	**1,435**	**1,558**	**1,618**

Kindergarten Trend Projection

The Kindergarten Trend model (Table 7) projects the same growth as the 5 Year Trend model until 2020/21. The model projects a decrease in resident enrollment from 1,192 students in 2015/16 to 1,1,47 students in 2020/21.

TABLE 7
Kindergarten Trend Projection Model
Brookfield Central High School

GRADE	**16-17**	**17-18**	**18-19**	**19-20**	**20-21**	**21-22**	**22-23**	**23-24**	**24-25**	**25-26**
9	279	273	285	317	330	359	392	390	431	393
10	290	283	277	289	321	334	363	397	395	436
11	308	288	281	275	287	320	333	362	395	393
12	267	315	294	287	281	293	326	339	369	403
TOTAL	**1,145**	**1,159**	**1,137**	**1,169**	**1,220**	**1,306**	**1,415**	**1,488**	**1,590**	**1,626**

Figure 2 and Table 8 compare the different resident enrollment projection models for Brookfield Central High School. Resident enrollment projections for five years into the future range from a low of 1,147 students to a high of 1,194 students.

Figure 2

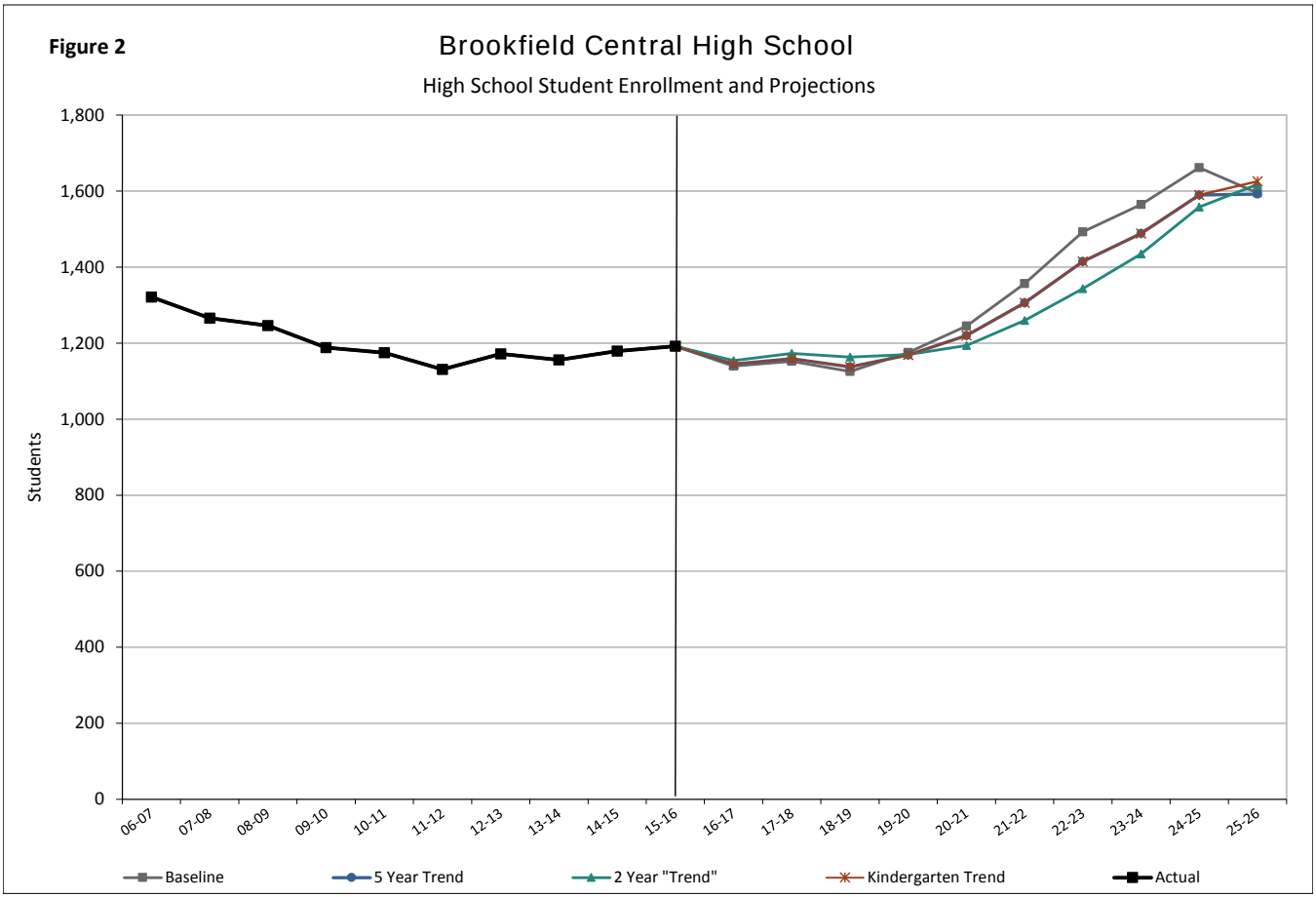


TABLE 8
Summary of High School Enrollment Projections
Brookfield Central High School

	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	24-25	25-26
Baseline	1,139	1,152	1,125	1,175	1,245	1,357	1,492	1,564	1,662	1,595
5 Year Trend	1,145	1,159	1,137	1,169	1,220	1,306	1,415	1,488	1,590	1,592
2 Year "Trend"	1,154	1,173	1,163	1,170	1,194	1,260	1,343	1,435	1,558	1,618
Kindergarten Trend	1,145	1,159	1,137	1,169	1,220	1,306	1,415	1,488	1,590	1,626

Brookfield East High School

Enrollment History

The resident enrollment history for Brookfield East High School has decreased by 140 students over the last ten years. The enrollment history and change in enrollment are shown in Tables 9 and 10.

TABLE 9
Student Enrollment
Brookfield East High School

	SCHOOL YEAR									
	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16
9	312	281	292	300	260	287	280	253	304	272
10	308	315	278	290	299	255	298	286	254	298
11	331	326	319	292	287	299	255	294	283	252
12	312	324	316	299	282	284	304	268	297	301
TOTAL	**1,263**	**1,246**	**1,205**	**1,181**	**1,128**	**1,125**	**1,137**	**1,101**	**1,138**	**1,123**

TABLE 10
Student Enrollment Changes
Brookfield East High School

	ABSOLUTE CHANGE			PERCENT CHANGE			AVERAGE ANNUAL PERCENT CHANGE		
GRADE	'06 to '15	'06 to '10	'11 to '15	'06 to '15	'06 to '10	'11 to '15	'06 to '15	'06 to '10	'11 to '15
9	-40	-52	-15	-12.8	-16.7	-5.2	-1.4	-4.2	-1.3
10	-10	-9	43	-3.2	-2.9	16.9	-0.4	-0.7	4.2
11	-79	-44	-47	-23.9	-13.3	-15.7	-2.7	-3.3	-3.9
12	-11	-30	17	-3.5	-9.6	6.0	-0.4	-2.4	1.5
TOTAL	**-140**	**-135**	**-2**	**-11.1**	**-10.7**	**-0.2**	**-1.2**	**-2.7**	**0.0**

Grade Progression Ratios

Grade progression ratios depict enrollment changes, year to year and grade to grade, measuring the effects of in- and out-migration and the transfer of students between private and public schools. Table 11 shows the grade progression ratios for Brookfield East High School.

TABLE 11
Grade Progression Ratios
Brookfield East High School

YEAR CHANGES	8:9	9:10	10:11	11:12
06-07/07-08	1.049	1.010	1.058	0.979
07-08/08-09	1.102	0.989	1.013	0.969
08-09/09-10	1.124	0.993	1.050	0.937
09-10/10-11	1.061	0.997	0.990	0.966
10-11/11-12	1.104	0.981	1.000	0.990
11-12/12-13	1.134	1.038	1.000	1.017
12-13/13-14	1.100	1.021	0.987	1.051
13-14/14-15	1.221	1.004	0.990	1.010
14-15/15-16	1.119	0.980	0.992	1.064
Baseline Average	**1.106**	**0.997**	**0.996**	**0.988**
Last 5 Year Trend	**1.136**	**1.005**	**0.994**	**1.026**
Last 2 Year "Trend"	**1.170**	**0.992**	**0.991**	**1.037**

*Shaded progression ratios are excluded from the Baseline Average

Baseline Projection

The Baseline model (Table 12) for Brookfield East High School projects in five years that resident enrollment will decrease from 1,123 students in 2015/16 to 1,115 students in 2020/21.

TABLE 12
Baseline Projection Model
Brookfield East High School

	SCHOOL YEAR									
	16-17	**17-18**	**18-19**	**19-20**	**20-21**	**21-22**	**22-23**	**23-24**	**24-25**	**25-26**
9	248	263	294	272	293	256	320	322	272	274
10	271	247	262	293	271	292	256	319	321	271
11	297	270	246	261	292	270	291	255	318	320
12	249	293	267	243	258	288	267	288	252	314
TOTAL	**1,065**	**1,073**	**1,069**	**1,069**	**1,114**	**1,107**	**1,134**	**1,183**	**1,162**	**1,178**

Five Year Trend Projection

The 5 Year Trend model (Table 13) for Brookfield East High School projects that resident enrollment will increase from 1,123 students in 2015/16 to 1,192 students in 2020/21.

TABLE 13
5 Year Trend Projection Model
Brookfield East High School

	SCHOOL YEAR									
GRADE	**16-17**	**17-18**	**18-19**	**19-20**	**20-21**	**21-22**	**22-23**	**23-24**	**24-25**	**25-26**
9	254	274	307	289	312	278	358	361	304	324
10	273	256	275	309	290	314	280	360	362	305
11	296	272	254	274	307	288	312	278	357	360
12	259	304	279	261	281	315	296	320	285	367
TOTAL	**1,082**	**1,105**	**1,115**	**1,132**	**1,190**	**1,195**	**1,245**	**1,318**	**1,309**	**1,356**

Two Year "Trend" Projection

According to the Two Year "Trend" model (Table 14), Brookfield East High School resident enrollment is projected to increase from 1,123 students in 2015/16 to 1,167 students in 2020/21.

TABLE 14
2 Year "Trend" Projection Model
Brookfield East High School

	SCHOOL YEAR									
GRADE	**16-17**	**17-18**	**18-19**	**19-20**	**20-21**	**21-22**	**22-23**	**23-24**	**24-25**	**25-26**
9	262	275	300	287	308	276	352	359	304	329
10	270	260	273	297	285	305	273	349	356	302
11	295	267	258	271	295	282	302	271	346	353
12	261	306	277	267	281	305	292	313	281	359
TOTAL	**1,089**	**1,109**	**1,108**	**1,122**	**1,167**	**1,168**	**1,220**	**1,293**	**1,288**	**1,343**

Kindergarten Trend Projection

The Kindergarten Trend model (Table 15) projects the same decline as the 5 Year Trend model until 2020/21. This model projects an increase in resident enrollment from 1,123 students in 2015/16 to 1,192 students in 2020/21.

TABLE 15
Kindergarten Trend Projection Model
Brookfield East High School

GRADE	**16-17**	**17-18**	**18-19**	**19-20**	**20-21**	**21-22**	**22-23**	**23-24**	**24-25**	**25-26**
9	254	274	307	289	312	278	358	361	304	341
10	273	256	275	309	290	314	280	360	362	305
11	296	272	254	274	307	288	312	278	357	360
12	259	304	279	261	281	315	296	320	285	367
TOTAL	**1,082**	**1,105**	**1,115**	**1,132**	**1,190**	**1,195**	**1,245**	**1,318**	**1,309**	**1,374**

Figure 3 and Table 16 compare the different resident enrollment projection models for Brookfield East High School. Resident enrollment projections for five years into the future range from a low of 1,115 students to a high of 1,192 students.

Figure 3

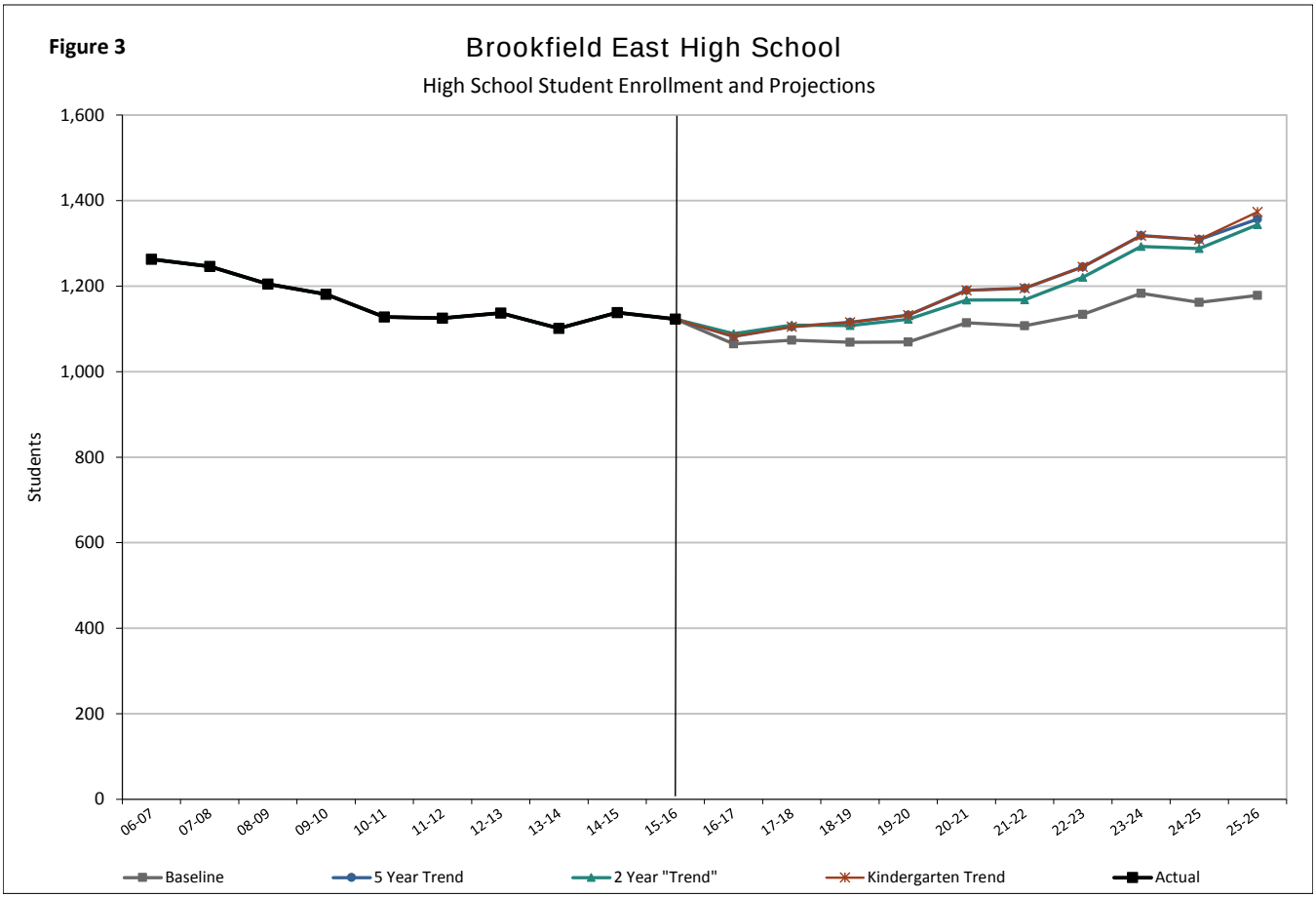


TABLE 16
Summary of High School Enrollment Projections
Brookfield East High School

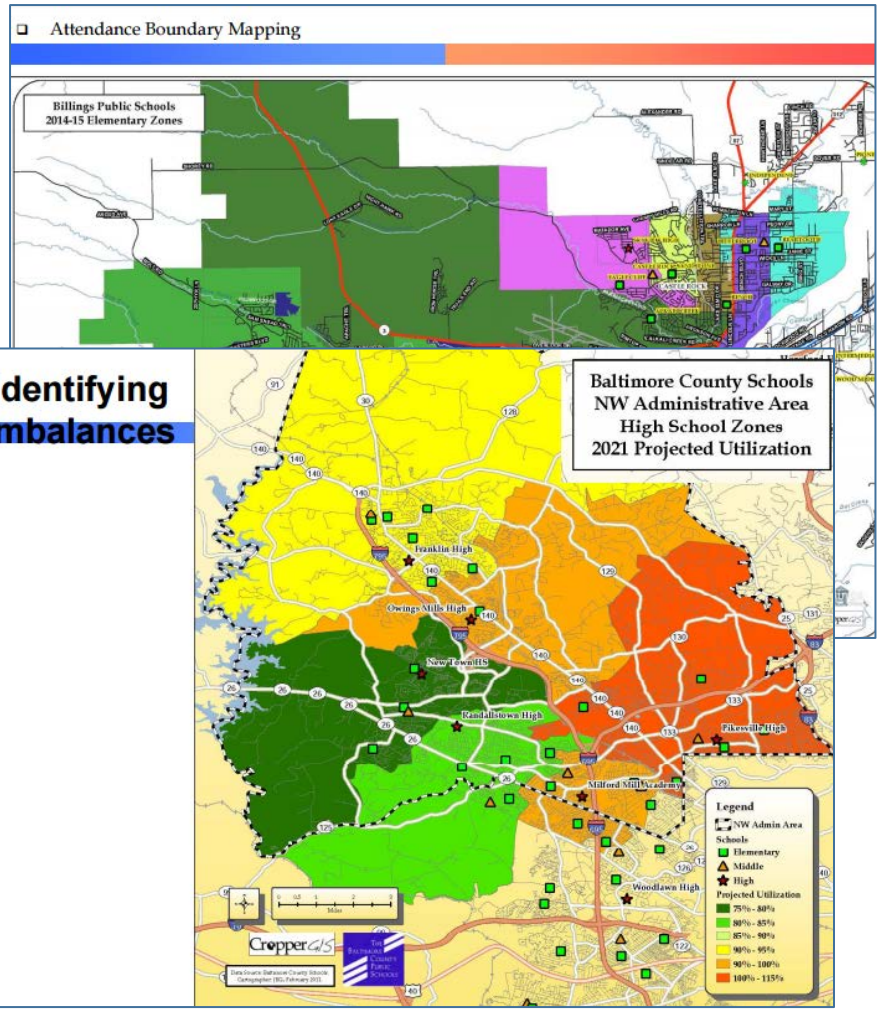
	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	24-25	25-26
Baseline	1,065	1,073	1,069	1,069	1,114	1,107	1,134	1,183	1,162	1,178
5 Year Trend	1,082	1,105	1,115	1,132	1,190	1,195	1,245	1,318	1,309	1,356
2 Year "Trend"	1,089	1,109	1,108	1,122	1,167	1,168	1,220	1,293	1,288	1,343
Kindergarten Trend	1,082	1,105	1,115	1,132	1,190	1,195	1,245	1,318	1,309	1,374

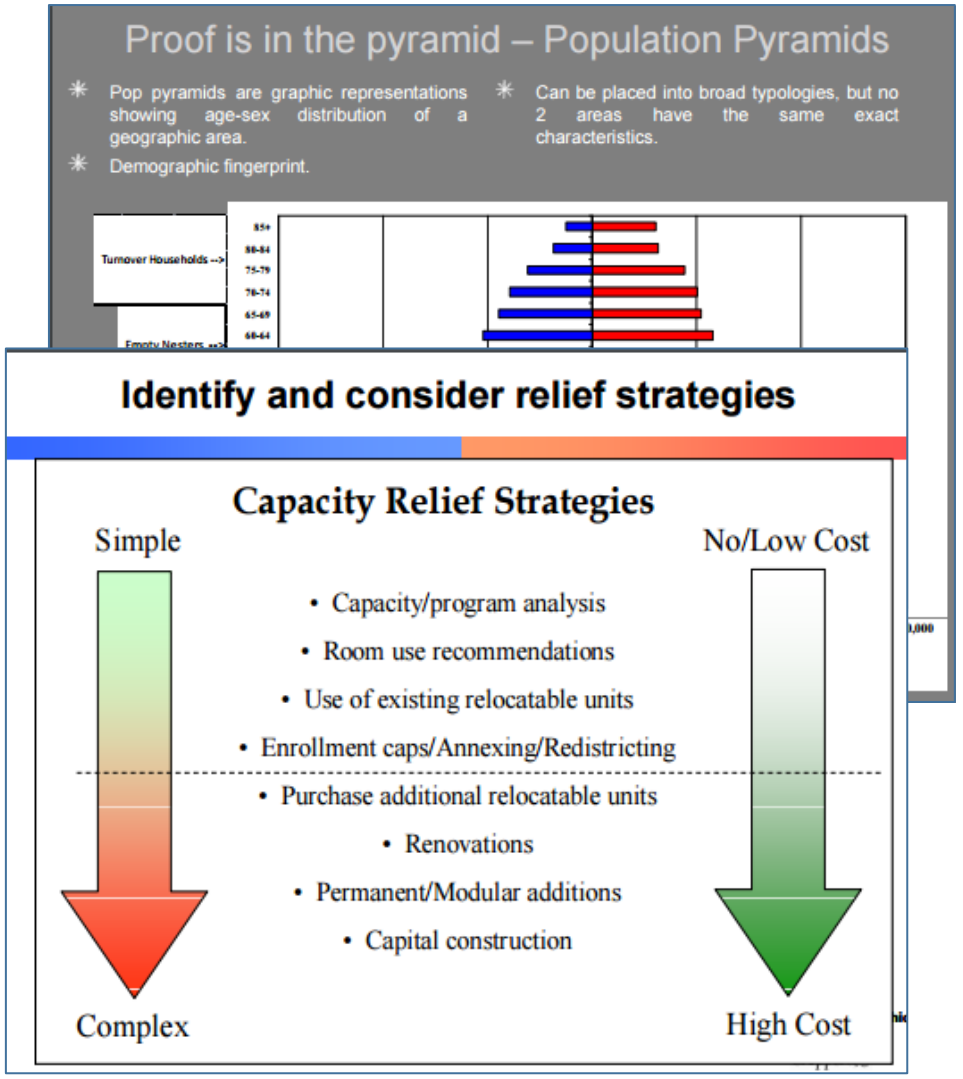
McKibben Demographic Research

Uses census data and geo-visual analytics tool for dynamic modeling of

- Boundary Maps
- Identifying Imbalances
- Developing Population Dynamics

Listed some Capacity Relief Strategies





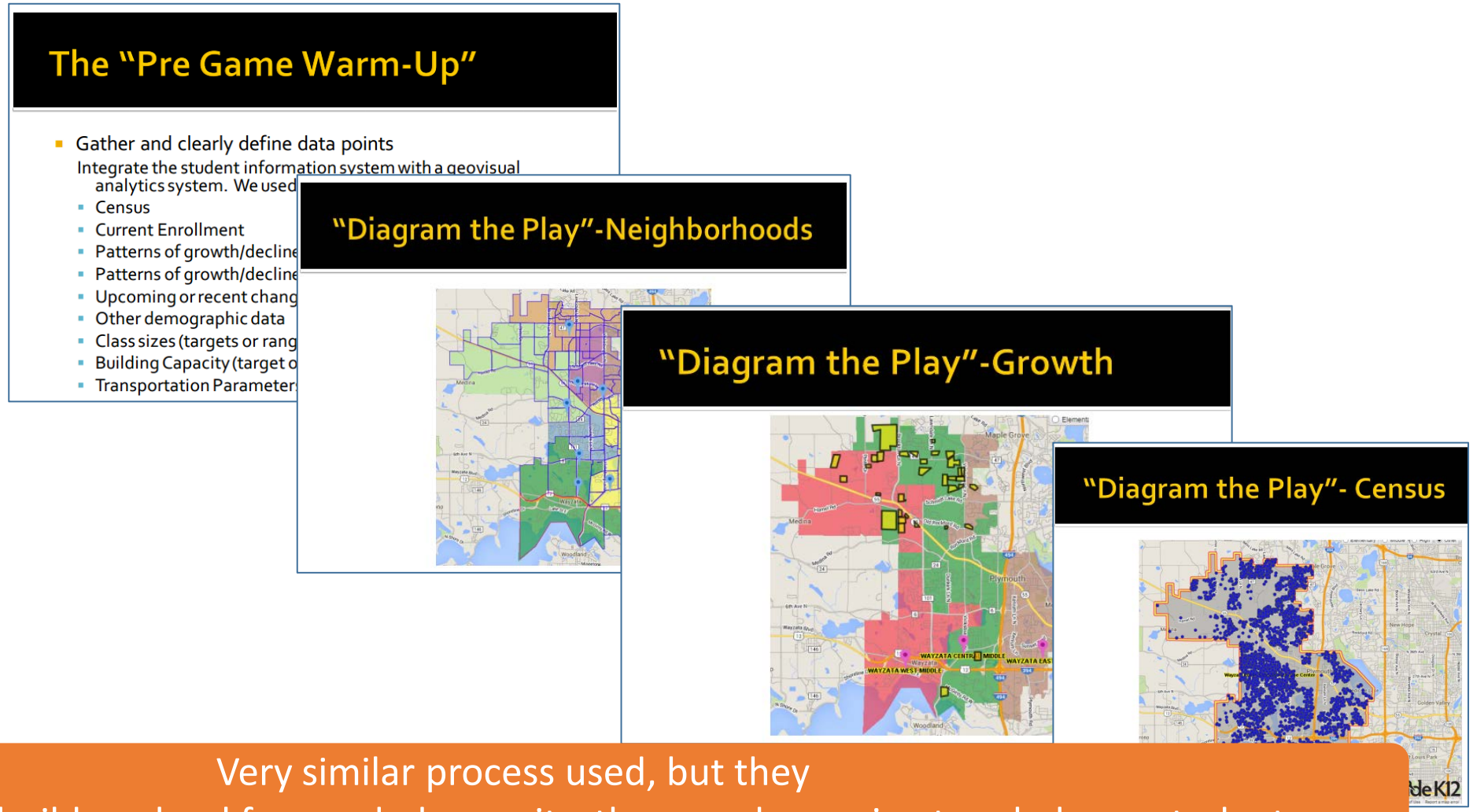
Good to benchmark the experts!

Wayzata Public Schools

Wayzata, MN… Twin Cities Suburbs

Problem Statement: School Boundary Realignment

- ~11,000 students… new elem school opening in Fall 2016… need to re-align boundaries
- Build up data at the "neighborhood level" using district and census data, etc.
- Defined guiding principles/ considerations
- Used geo-visual analytics tool for dynamic modeling



Very similar process used, but they
First decided to build a school for needed capacity, then used mapping to rebalance students.

Oconomowoc Area School District (OASD) (Oct 2015)

Combination of 9 Western Suburbs of Milwaukee

Problem Statement: Aging facilities and Overcapacity in Elem and High School Levels

- ~5,240 students across 9 municipalities, 120 sq miles
- Built up projections at a "large neighborhood level" (40 of them) using district and census data, urban planning info, etc.
- Used urban planning consultant to model new housing impact
- Added 4K and went to new grade splits in 2008… Elem (4K-4), Intermed (5-8), HS (9-12)
- Used geo-visual analytics tool for dynamic modeling

FIGURE B: OASD STUDENT ENROLLMENT PROJECTIONS SUMMARY

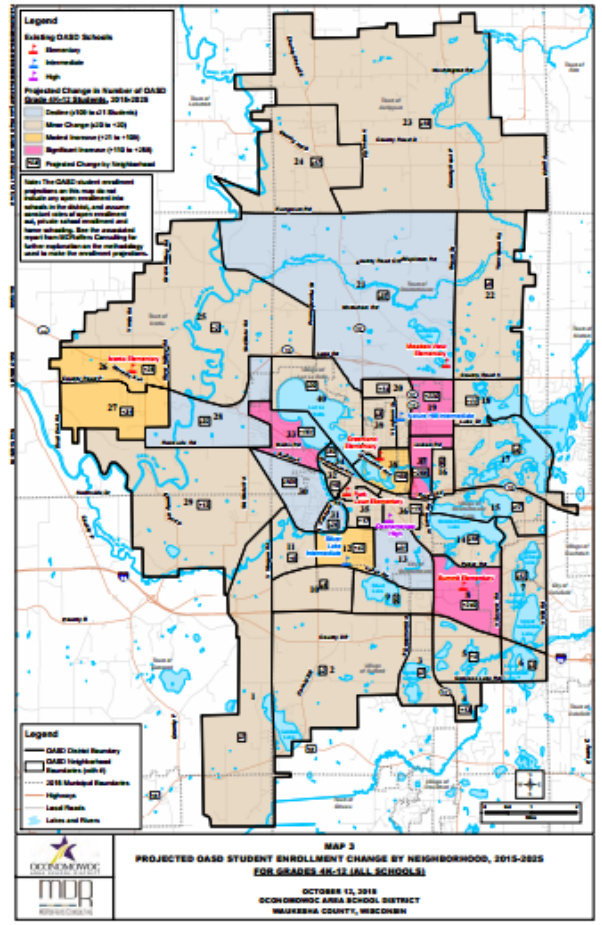
	OASD Student Enrollment			Projected Ten Year Change	Functional Capacity of School [3]
	Sept. 2015	Projected 2020 [2]	Projected 2025 [2]		
Elementary Schools [1]					
Greenland	432	479	510	+78	414
Ixonia	264	234	214	-50	196
Meadow View	505	496	530	+25	430
Park Lawn	430	417	447	+17	444
Summit	502	479	512	+10	503
Total Grades 4K-4	2,133	2,105	2,213	+80	
Intermediate Schools [1]					
Nature Hill	814	901	973	+159	872
Silver Lake	718	741	775	+57	872
Total Grades 5-8	1,532	1,642	1,748	+216	
High School					
Total Grades 9-12	1,575	1,731	1,823	+248	1,517
TOTALS 4K-12	**5,240**	**5,478**	**5,785**	**+544**	

Notes:

[1] Projections assume no changes to elementary school or intermediate school attendance areas from 2015-16 attendance areas.

[2] Projected 2020 and 2025 enrollments assume open-enrollment-out of OASD residents, private schooling, and home schooling at similar rates as in 2015; and do not consider any open enrollment of non-OASD residents into OASD schools.

[3] Functional capacities are per Eppstein Uhen Architects, based on minimum square footage of space per student calculations, not including any trailer classrooms.



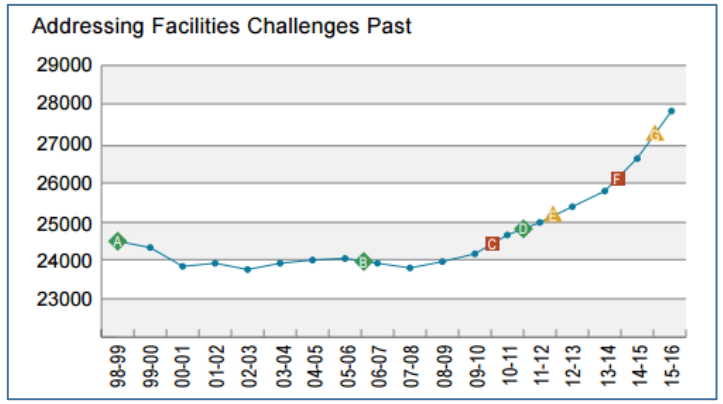
Adjusted grade splits in 2008 (moved 5th grade to intermediate schools);
Used urban planner to model new housing impacts

Lake Washington School District (Nov. 2015)

East of Seattle, WA – Kirkland, Redmond, etc.

Problem Statement: Lack of classroom capacity and aging facilities

- ~25,000 permanent capacity… now at 26,700… ~2,000 in portables
- Going to max out portable capacity in 2017
- 63 member task force met in 20 mtgs from Oct. 2014-Nov 2015
- Last 3 bond measures did not pass with 60% approval from community voters



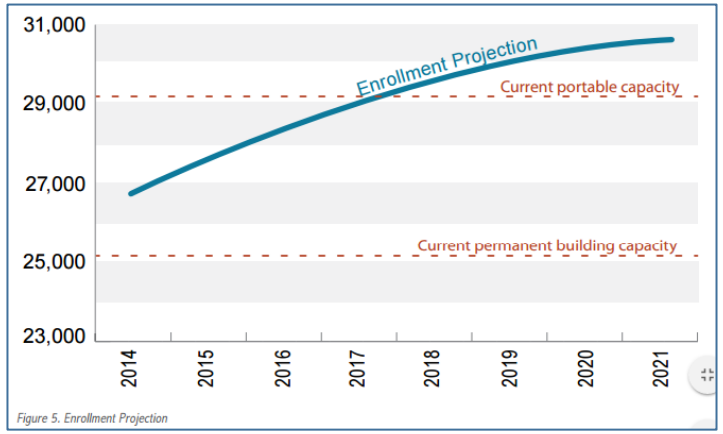


Figure 5. Enrollment Projection

TABLE 2. POTENTIAL STRATEGIES

Strategies to address lack of classroom capacity	Strategies to address aging facilities
Reduce specialized spaces, i.e., art/science, computer labs, etc.	Update and make improvements to building systems (e.g., heat, roofs, etc.)
Revise how spaces are allocated for required programs, i.e., Special Education, English Language Learners, Safety Net, etc.	Replacement of an existing school (new-in-lieu of modernization)
Change school attendance boundaries or move district programs	Remodel existing school buildings' systems and include upgrades to align with current school construction specifications (aka educational specifications)
Limit number of all-day kindergarten classes (If allowable under state guidelines)	
Rent or lease space	
Increase class sizes	
Implement double shifting (two shifts of students attending school per day)	
Change school calendar to a year-round multi-track schedule (with or without air conditioning added)	
Build additional classrooms	
Take back and use Old Redmond School House	
Add teacher planning rooms in non-modernized middle and high schools so classrooms can be used all periods of the day	
Replacement of an existing school (new-in-lieu of modernization)	
Build a new (additional) school building	
Remodel existing school buildings' systems and include upgrades to align with current school construction specifications (aka educational specifications)	
Online learning	

Our <u>current</u> issue is more of an ENROLLMENT IMBALANCE,
but may be heading towards TOTAL CAPACITY PINCH

Lake Washington School District (Nov. 2015)

East of Seattle, WA – Kirkland, Redmond, etc.

Problem Statement: Lack of classroom capacity and aging facilities

Approach Resource Level	No new schools		New (additional or replacement) schools		
	Zero Capital Investment	Capital Investment	Lowest Capital Investment	Mid-Range Capital Investment	Highest Capital Investment
Description	No funds for capital investment to address lack of classroom capacity or aging facilities. Current educational programs or services reduced, and/or modifications made to school attendance areas, schedules or calendars.	Capital investments are limited to improvements made to existing buildings or adding portables. Remodels of aging schools limited to building system upgrades (i.e., roofs, heating systems, etc.).	Schools built at 10 percent lower cost per square foot than current district building assumptions. The cost reduction would come from use of different construction methods or designs and/or less durable materials, finishes, or systems with limited or no environmental enhancements (e.g. geo-thermal heating, solar, etc.).	Schools built to current school construction specifications and similar cost/quality as in recently built projects with building systems that last longer and enhanced environmental features. This resource level reflects assumptions used in the last bond measure.	Schools built with increased square footage, including additional classrooms and increased size of core facilities such as cafeteria, gym, library in anticipation of future enrollment growth. These schools could be "future-proofed" by providing additional capacity above what is needed to meet the district's future enrollment projections.
Strategies	• Reduce specialized spaces (i.e., art/science, computer labs, etc.) • Revise how spaces are allocated for required programs (i.e., special education, English language learners, Safety Net, etc.) • Change school attendance boundaries or move district programs • Limit number of all-day kindergarten classes • Rent or lease space • Increase class sizes • Implement double shifting (two shifts of students attending school per day) • Change school calendar to a year-round multi-track schedule	• Change school calendar to a year-round multi-track schedule (with AC) • Update and make improvements to building systems (heat, roofs, etc.) • Build additional classrooms • Add portable classrooms • Take back and use Old Redmond School House • Add teacher planning rooms in non-modernized middle and high schools so classrooms can be used all periods of the day	• Replacement of an existing school (new-in-lieu of modernization) • Build a new (additional) school building • Remodel existing school buildings' systems and include upgrades to align with current school construction specifications (aka educational specifications)	• Replacement of an existing school (new-in-lieu of modernization) • Build a new (additional) school building • Remodel existing school buildings' systems and include upgrades to align with current school construction specifications (aka educational specifications)	• Replacement of an existing school (new-in-lieu of modernization) • Build a new (additional) school building • Remodel existing school buildings' systems and include upgrades to align with current school construction specifications (aka educational specifications)
Overarching trade offs	This resource level results in changes in schedules, calendars, school attendance boundary assignments and program offerings for no capital costs. For some strategies changes would be significant from current. Some strategies would increase operating costs.	This resource level includes strategies that would increase the number of students per school using limited capital costs that focus on increasing capacity at existing buildings. Increased operating costs for some strategies.	This resource level would implement changes in design and construction methods to simplify projects and would reduce investment in long-term life cycle systems, for lower construction costs. Some initial costs savings could result in higher on-going operating costs and/or increased future capital costs	This resource level includes increased cost per square foot over the Lowest Capital Investment level, for longer lasting building systems and enhanced aesthetics, as well as designs that limit classroom disruption and reduce operating costs.	This resource level includes increased cost per project over the Mid-Range Capital investment level, for expanded school facilities (core areas plus classrooms) beyond anticipated capacity needs to provide for future growth.
Description of educational impacts	• Double shifting would result in less than optimal learning hours for some students and teachers • Year-round schools would result in summer sessions being held in non-air conditioned buildings impacting the quality of learning environment • Double shifting and year-round schools could impact the ability to hire and retain teachers • Increased class size would negatively impact learning environment and reduce teachers' ability to meet all students' learning needs • Reducing spaces allocated for programs may result in less than optimal learning environments, affecting student outcomes • Some lessons or activities may be less feasible without specialized spaces • School boundaries adjustments will cause some students to have to change schools frequently, increasing transitions and impacting learning • Some kindergarten students would lose half a day of instruction • Rented space may be less suitable for classrooms and impact learning	• Number of students per school would increase and more schools would be overcrowded. Research shows learning is enhanced if overcrowding is reduced. • School remodels or upgrades would not meet current educational building standards which have been shown to improve learning • Year-round schools could impact the district's ability to hire and retain teachers	• Building new schools limits school overcrowding which has been shown to increase educational outcomes. • Upgrading older buildings provides features which enhance the learning environment • Greater probability of educational disruption due to building system maintenance and repair	• Building new schools limits school overcrowding which has been shown to increase educational outcomes. • Upgrading older buildings provides features which enhance the learning environment • Current building standards support the learning environment by providing daylighting and other design features which have been shown to enhance learning • Shared instructional spaces and small group rooms support flexible grouping of students which enhances the ability of staff to meet a greater variety of student needs • Facilities are designed so they can be maintained without disrupting learning	• Building new schools limits school overcrowding which has been shown to increase educational outcomes. • Upgrading older buildings provides features which enhance the learning environment • Increased spaces will help to prevent future overcrowding (overcrowding has been shown to have a negative impact on student learning) • Facilities are designed so they can be maintained without disrupting learning

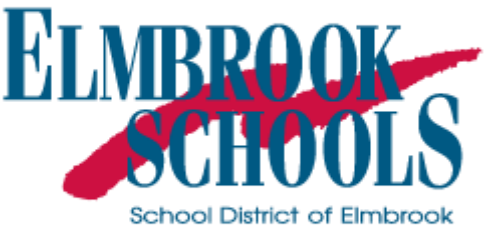
5, h-2. The Task Force encourages the district to evaluate and consider these alternative size, program and building/built project possibilities over the planning period.

Background: A number of ideas emerged that the Task Force did not have time to fully discuss or vet. These ideas arose because of constraints on available parcels, concerns raised by some Task Force and community members over the growing size of schools, and the desire of some to challenge the district to think towards the future when considering educational facilities. As they were not fully explored by the full Task Force, they are included here for the district's consideration. The Task Force strongly recommends the district balance the urgency of addressing capacity needs with a commitment to looking for and seriously considering innovative and creative ideas to address these issues over time.

Most of the ideas described build from the best aspect of "choice" schools: their flexibility. Choice schools can differ by size, governing curriculum concept, hours of operation, location, virtual/standard learning environment hybrid, and other factors. Many of the project ideas listed here leverage this flexibility. The ideas are based on the assumption that, as opposed to pursuing a traditionally-sized and -located school for every new project listed in the table, the

Smart ways to qualitatively summarize their options and impacts & capture "parking lot" ideas

MARCH 2016



CLASS SIZE REPORT
SCHOOL DISTRICT OF ELMBROOK

The following report of the pupil-teacher ratios is provided to the Board of Education:

Official 2015-16 Enrollment:

Elementary (K-5) Class Sizes:

Middle School Class Sizes:

High School Class Sizes:

Summary: The Class Size Report reflects data collected throughout the 2015-16 school year. Class size data provides information about grade level and department class size as well as trends in class size.

The class sizes fall within District guidelines across the system. While there is variability from year to year and grade level to grade level, the system has remained consistently within District parameters.

Teacher Staffing Plan Guidelines 2016-17

When developing staffing plans for 2016-17, the following guidelines is used:

1. Elementary and Middle school staffing based on 2016-17 enrollment projections using a five-year survival ratio. High School staffing based upon average course selection by students.

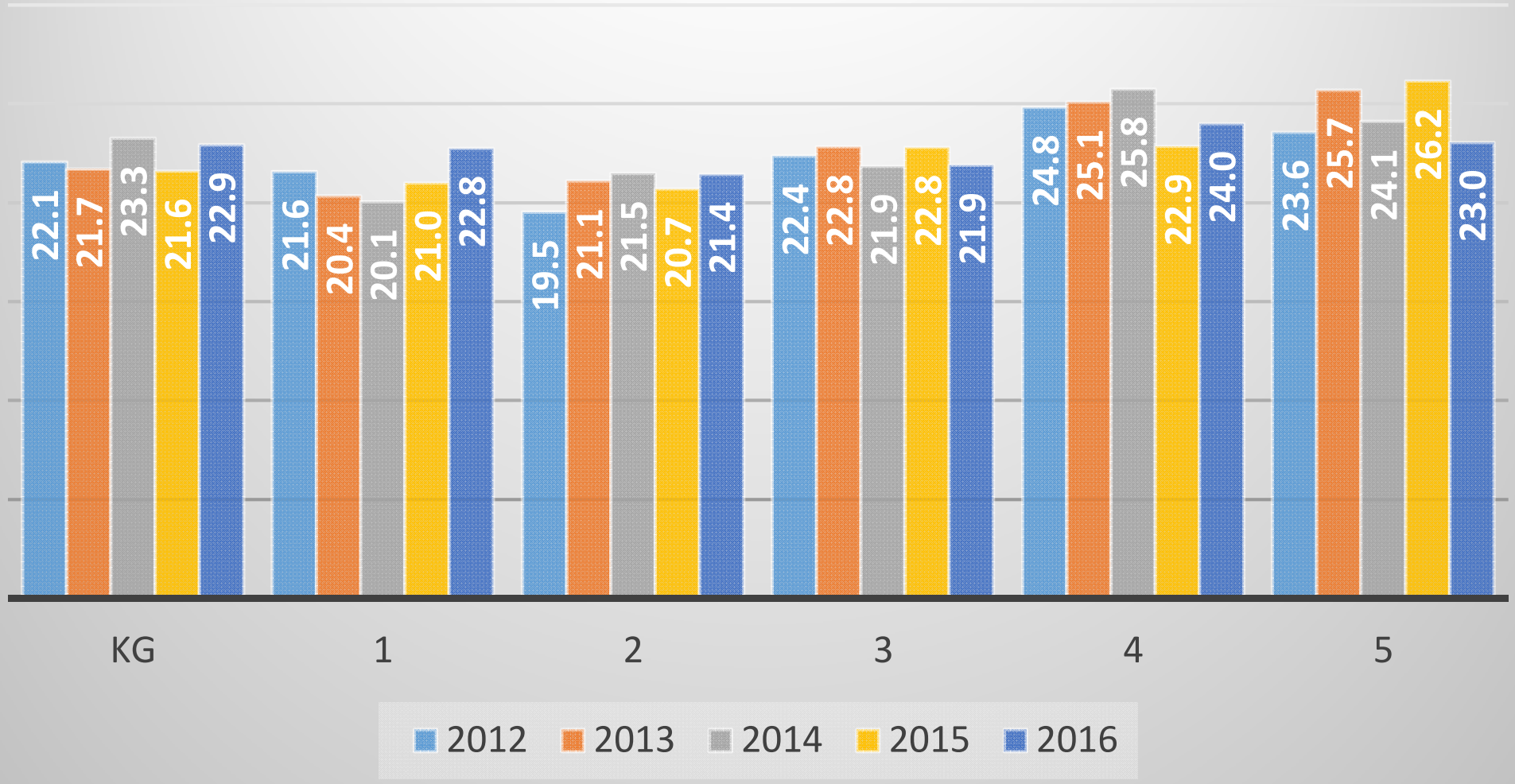
2. Using data from the 2014-16 school years, average class size targets were developed within four categories. The average class size by category are:

	K-3	4-5	6-8	9-12
Class Size Targets	21.5	25	26.9	24.5

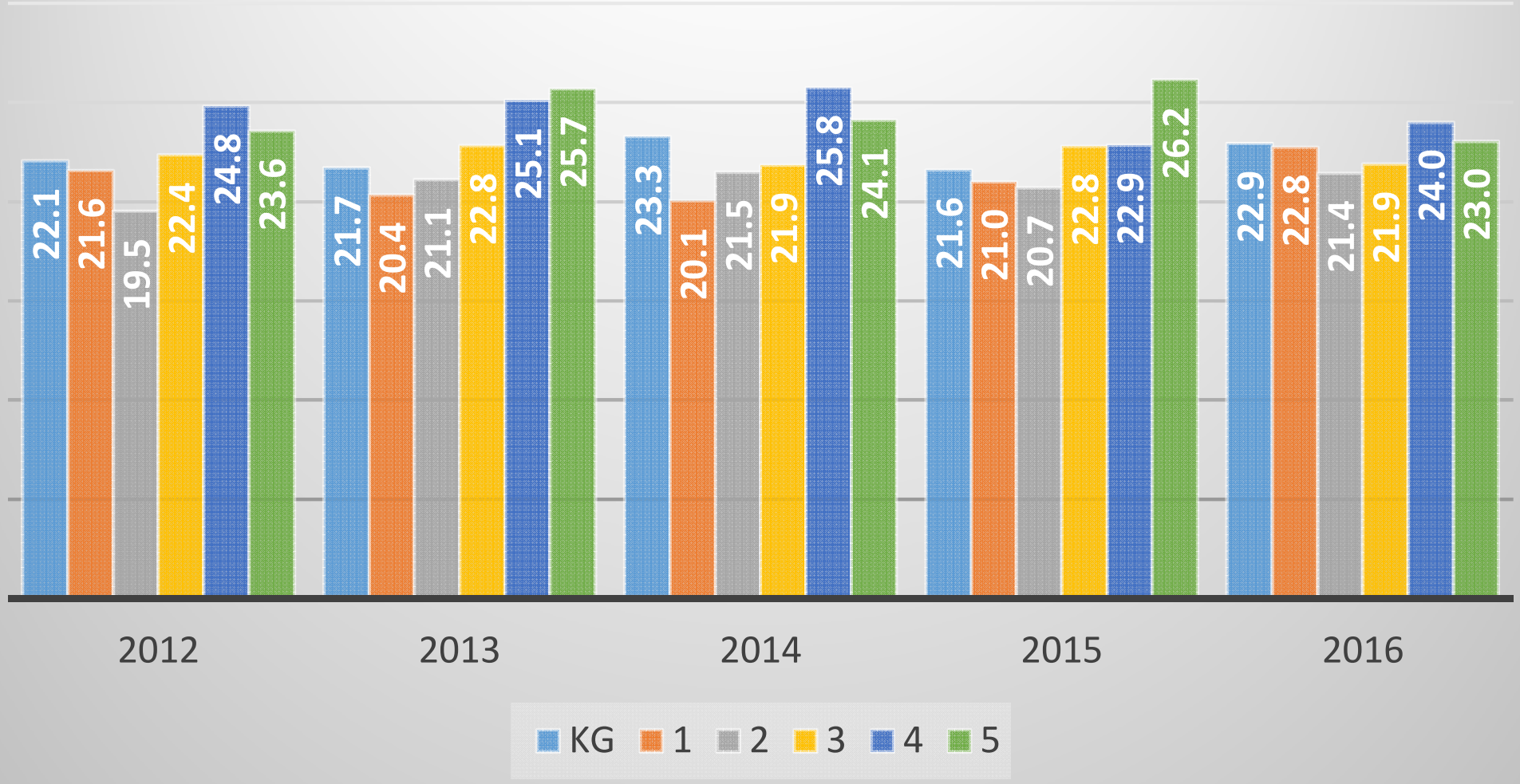
   These class size targets are meant to create targets to provide allocations for the core and house classes at the elementary and middle school levels. At the high school, this target provides allocations as an average across all classes offered.

3. Align to teacher pupil ratios (tpr) as follows:
   a. If K-3 tpr is 1:25 but less than 1:27 we will provide 3.5 hours of aide instruction per day.
   b. Consider additional teacher if a building grade level tpr reaches:
      - K-3 over 1:27
      - 4-5 over 1:29
      - 6-8 over 1:30
      - 9-12 average tpr over 1:25.5

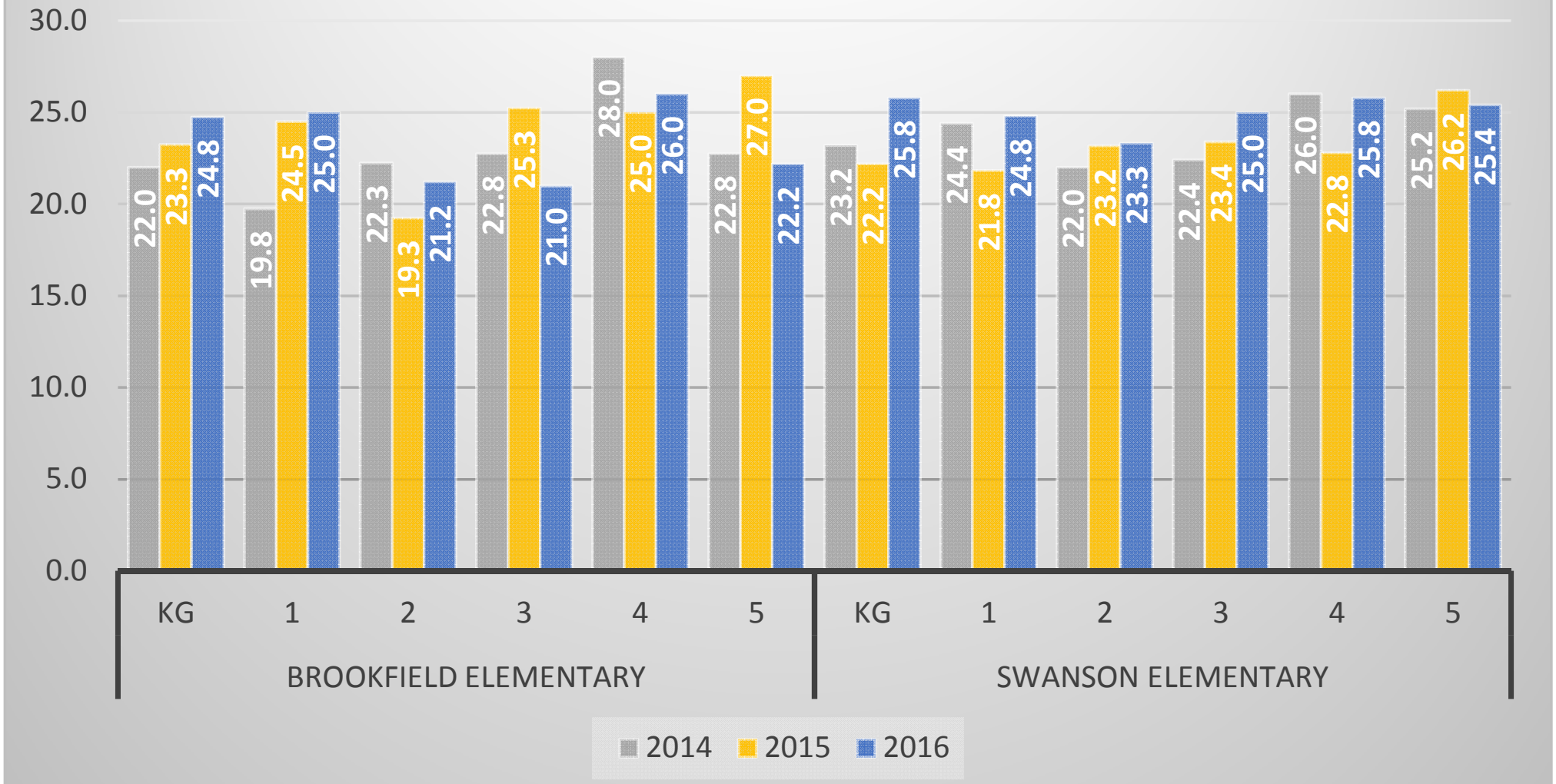
Elementary Class Sizes by Grade



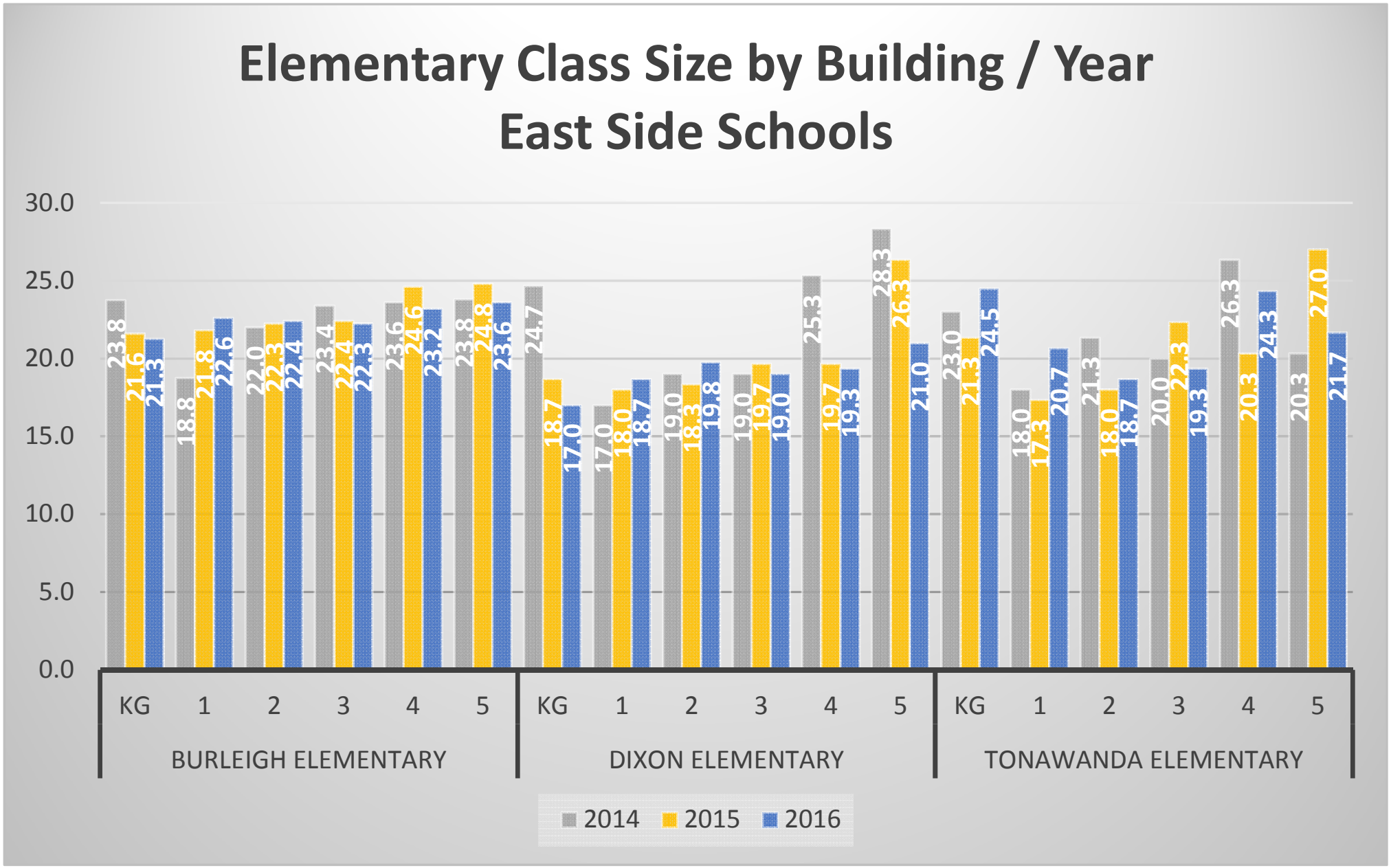
Elementary Class Sizes By Year

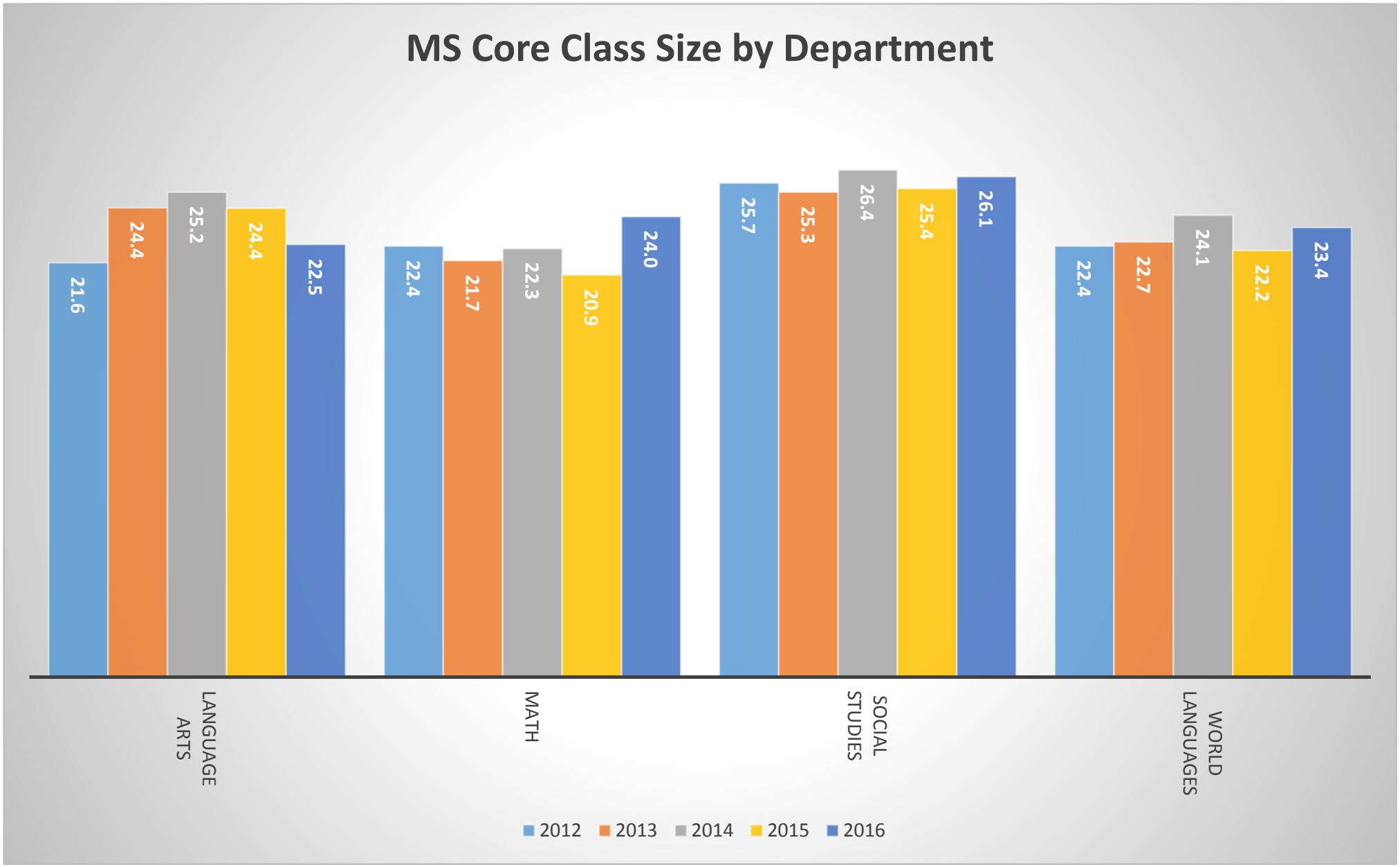


Elementary Class Size by Building / Year
West Side Schools



Elementary Class Size by Building / Year
East Side Schools

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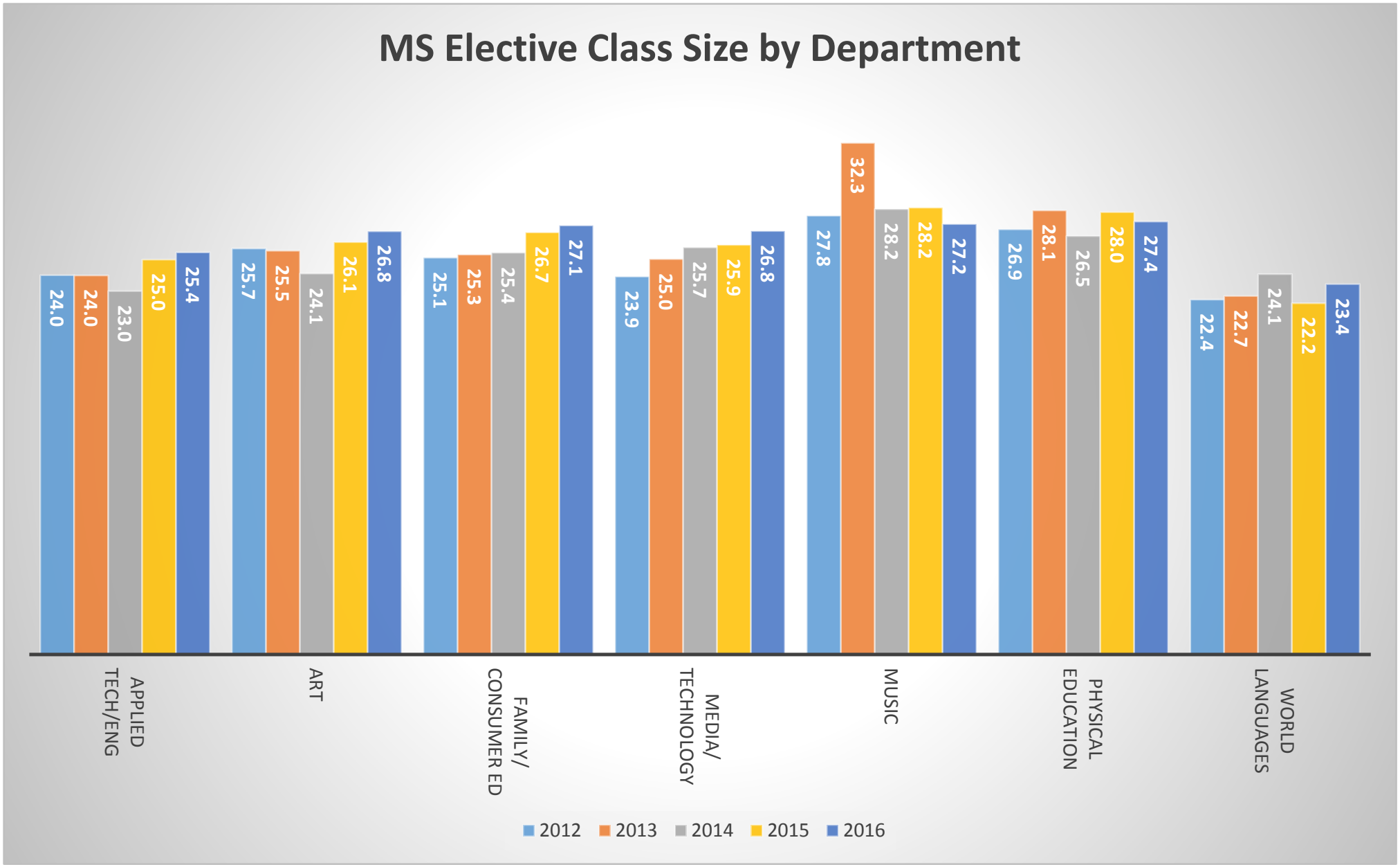
25.2
24.4
22.5
22.4
21.7
22.3
20.9
24.0
25.7
25.3
26.4
25.4
26.1
22.4
22.7
24.1
22.2
23.4
LANGUAGE ARTS
MATH
SOCIAL STUDIES
WORLD LANGUAGES
2012
2013
2014
2015
2016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23.0
25.0
25.4
ART
25.7
25.5
24.1
26.1
26.8
FAMILY/ CONSUMER ED
25.1
25.3
25.4
26.7
27.1
MEDIA/ TECHNOLOGY
23.9
25.0
25.7
25.9
26.8
MUSIC
27.8
32.3
28.2
28.2
27.2
PHYSICAL EDUCATION
26.9
28.1
26.5
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22.4
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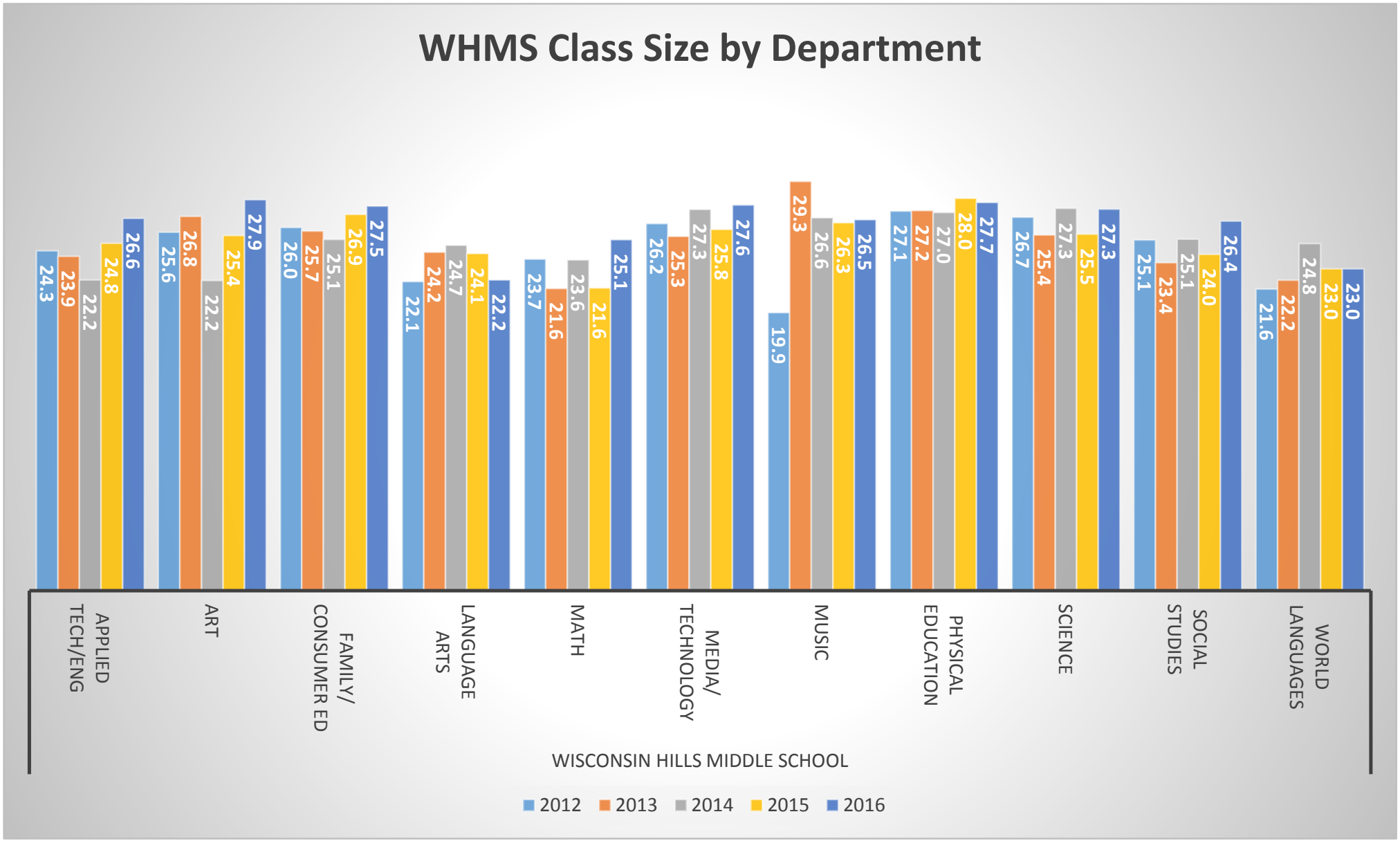
24.1
22.2
23.4
2012
2013
2014
2015
2016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23.0
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23.4
25.1
24.0
26.4
SCIENCE
26.7
25.4
27.3
25.5
27.3
PHYSICAL EDUCATION
27.1
27.2
27.0
28.0
27.7
MUSIC
19.9
29.3
26.6
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MEDIA/ TECHNOLOGY
26.2
25.3
27.3
25.8
27.6
MATH
23.7
21.6
23.6
21.6
25.1
LANGUAGE ARTS
22.1
24.2
24.7
24.1
22.2
FAMILY/ CONSUMER ED
26.0
25.7
25.1
26.9
27.5
ART
25.6
26.8
22.2
25.4
27.9
APPLIED TECH/ENG
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22.2
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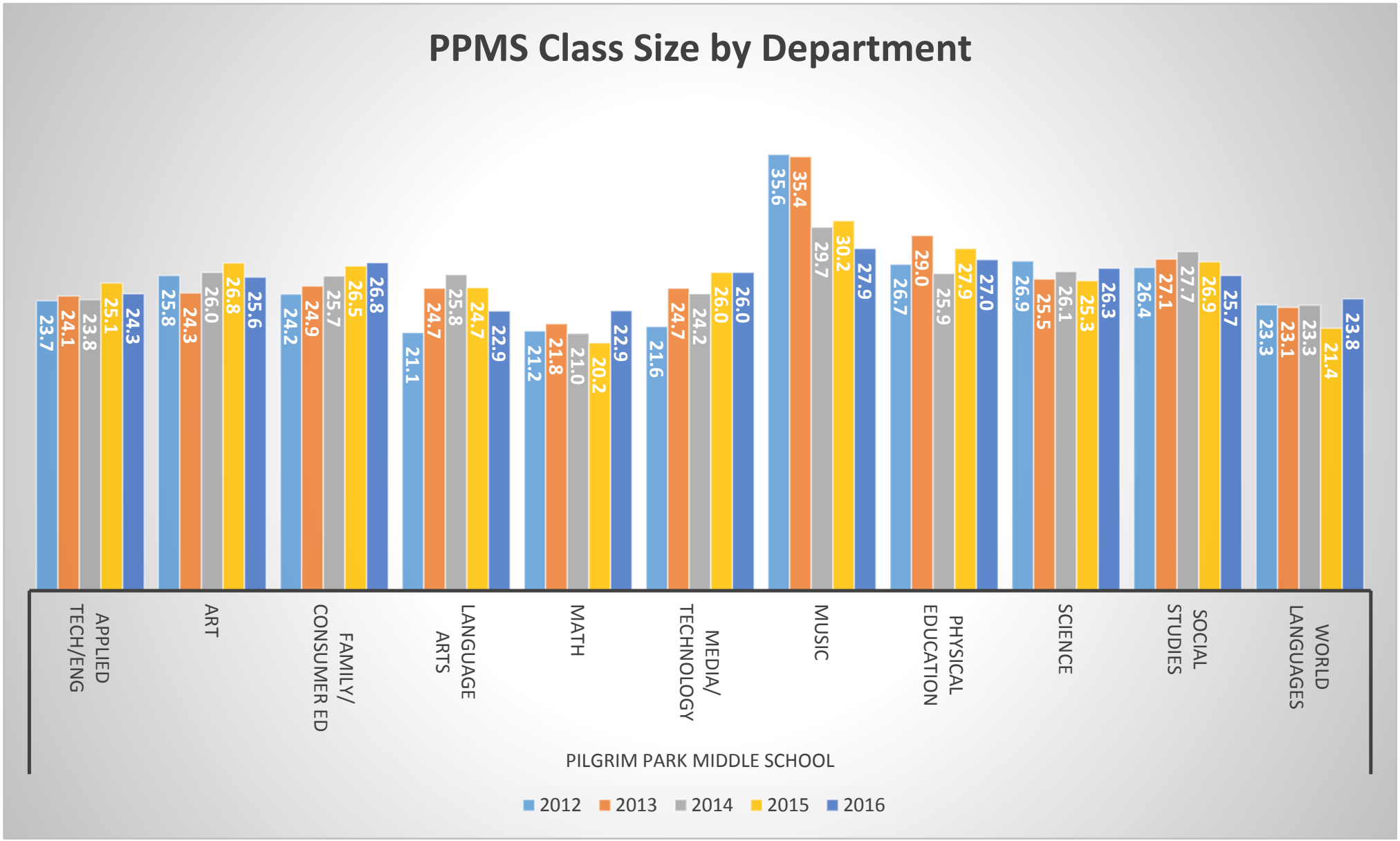
26.6
WISCONSIN HILLS MIDDLE SCHOOL
2012
2013
2014
2015
2016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23.3
21.4
23.8
SOCIAL STUDIES
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27.1
27.7
26.9
25.7
SCIENCE
26.9
25.5
26.1
25.3
26.3
PHYSICAL EDUCATION
26.7
29.0
25.9
27.9
27.0
MUSIC
35.6
35.4
29.7
30.2
27.9
MEDIA/ TECHNOLOGY
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MATH
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21.8
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20.2
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LANGUAGE ARTS
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FAMILY/ CONSUMER ED
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ART
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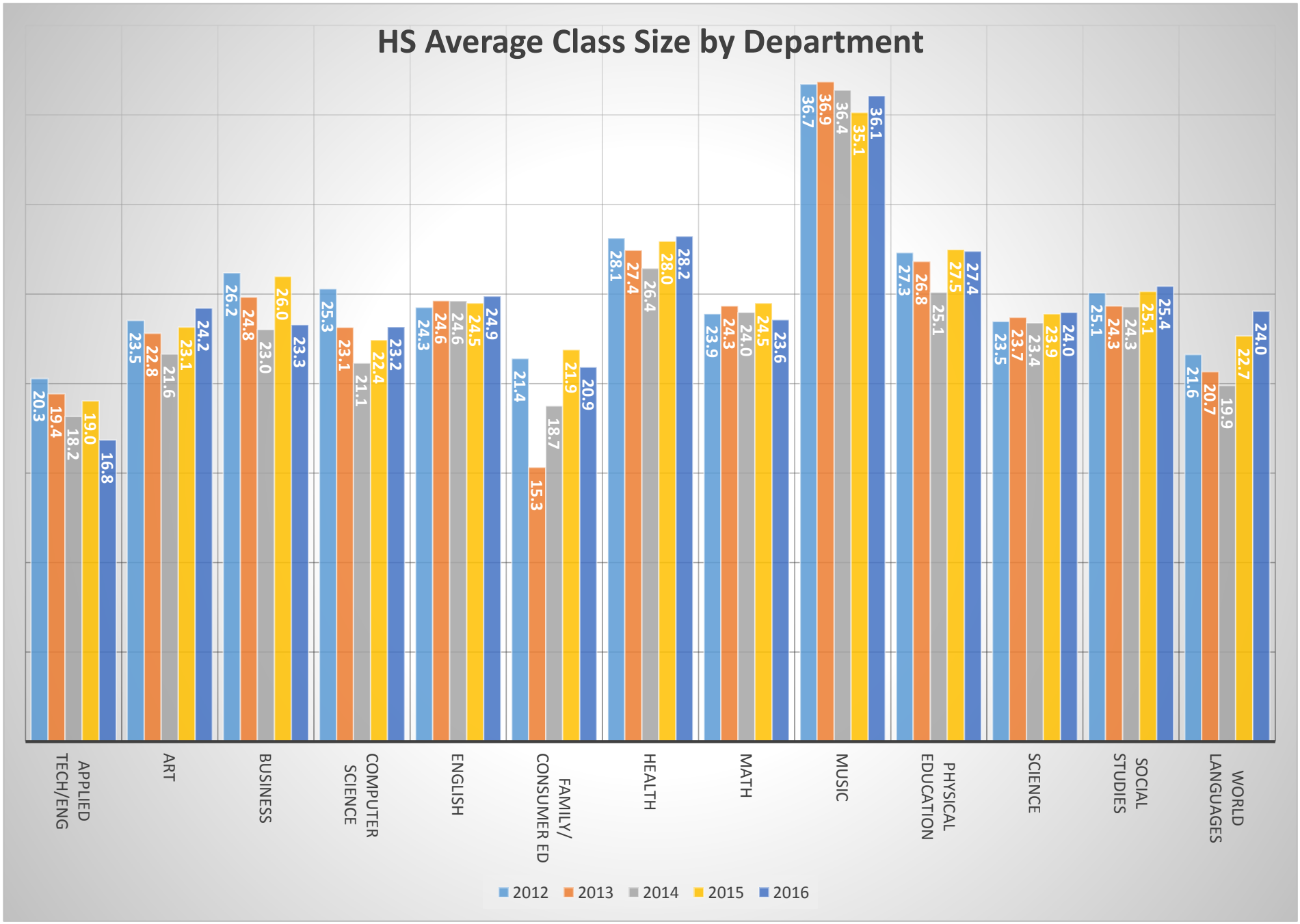
2014
2015
2016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24.0
SOCIAL STUDIES
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24.3
25.1
25.4
SCIENCE
23.5
23.7
23.4
23.9
24.0
PHYSICAL EDUCATION
27.3
26.8
25.1
27.5
27.4
MUSIC
36.7
36.9
36.4
35.1
36.1
MATH
23.9
24.3
24.0
24.5
23.6
HEALTH
28.1
27.4
26.4
28.0
28.2
FAMILY/ CONSUMER ED
21.4
15.3
18.7
21.9
20.9
ENGLISH
24.3
24.6
24.6
24.5
24.9
COMPUTER SCIENCE
25.3
23.1
21.1
22.4
23.2
BUSINESS
26.2
24.8
23.0
26.0
23.3
ART
23.5
22.8
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APPLIED TECH/ENG
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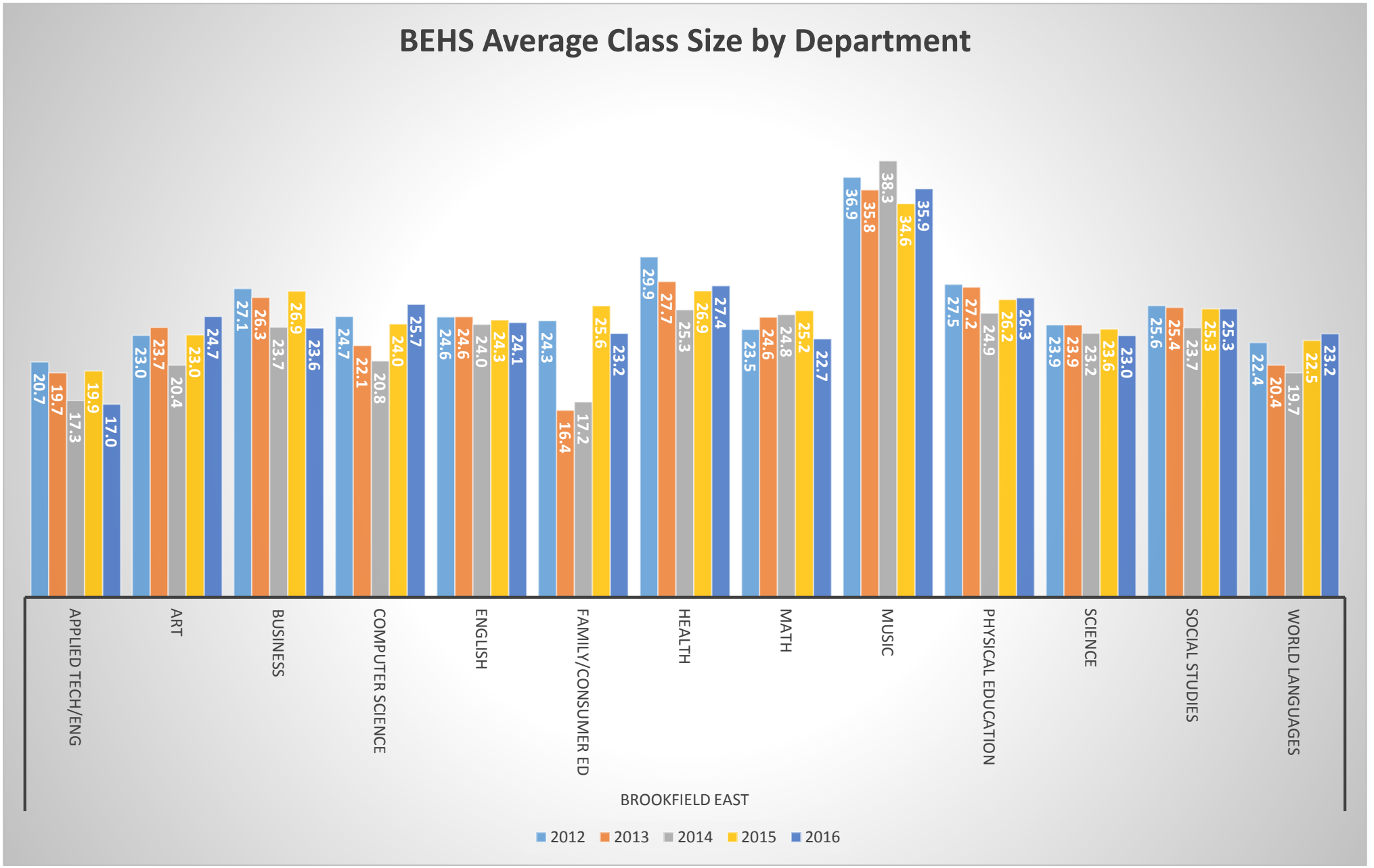
18.2
19.0
16.8
2012
2013
2014
2015
2016


BEHS Average Class Size by Department
APPLIED TECH/ENG
20.7
19.7
17.3
19.9
17.0
ART
23.0
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20.4
23.0
24.7
BUSINESS
27.1
26.3
23.7
26.9
23.6
COMPUTER SCIENCE
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ENGLISH
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24.6
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FAMILY/CONSUMER ED
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16.4
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HEALTH
29.9
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MATH
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MUSIC
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PHYSICAL EDUCATION
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SCIENCE
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SOCIAL STUDIES
25.6
25.4
23.7
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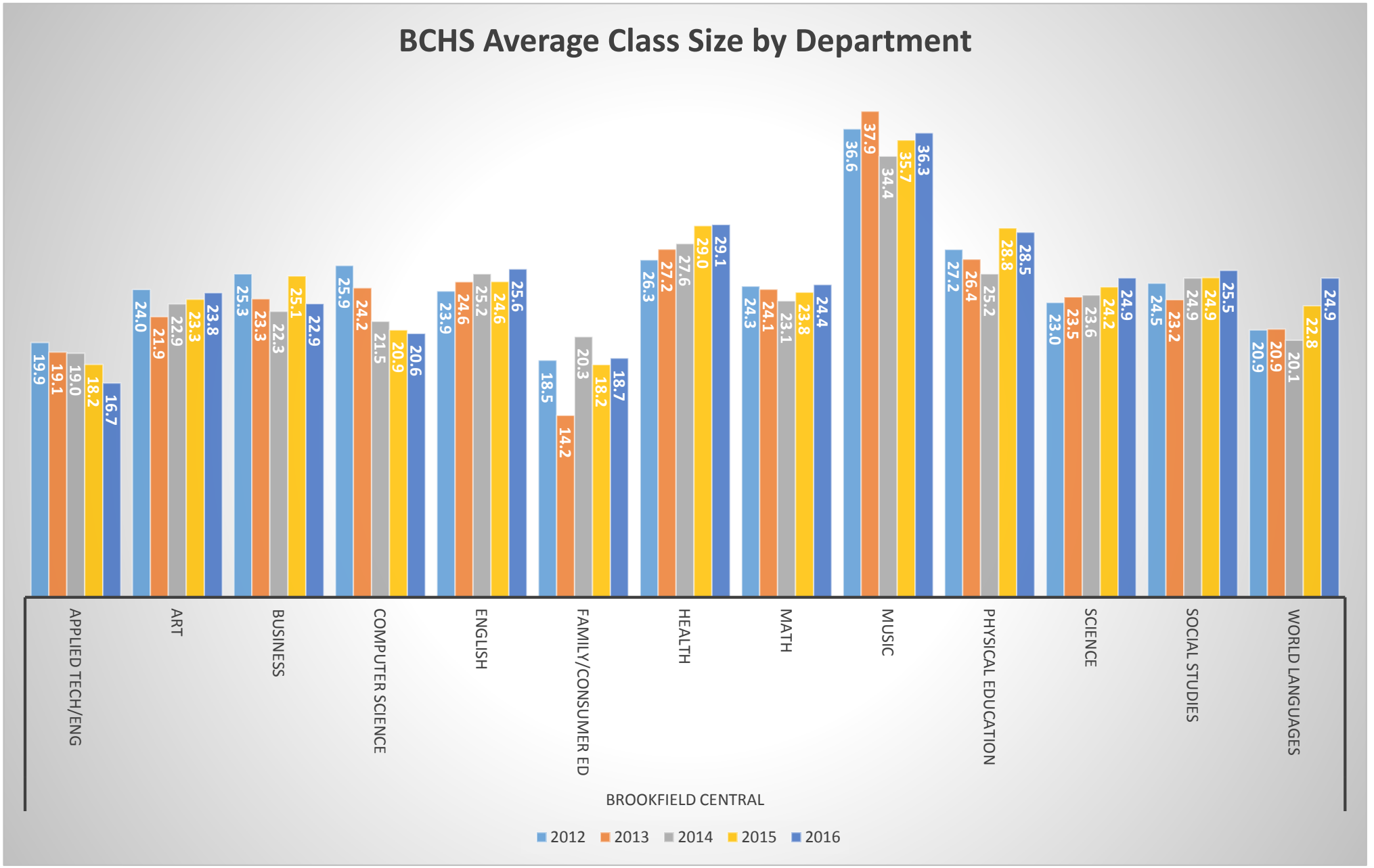
BROOKFIELD EAST
2012
2013
2014
2015
2016


BCHS Average Class Size by Department
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19.9
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16.7
ART
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23.3
23.8
BUSINESS
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22.9
COMPUTER SCIENCE
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ENGLISH
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FAMILY/CONSUMER ED
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HEALTH
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MATH
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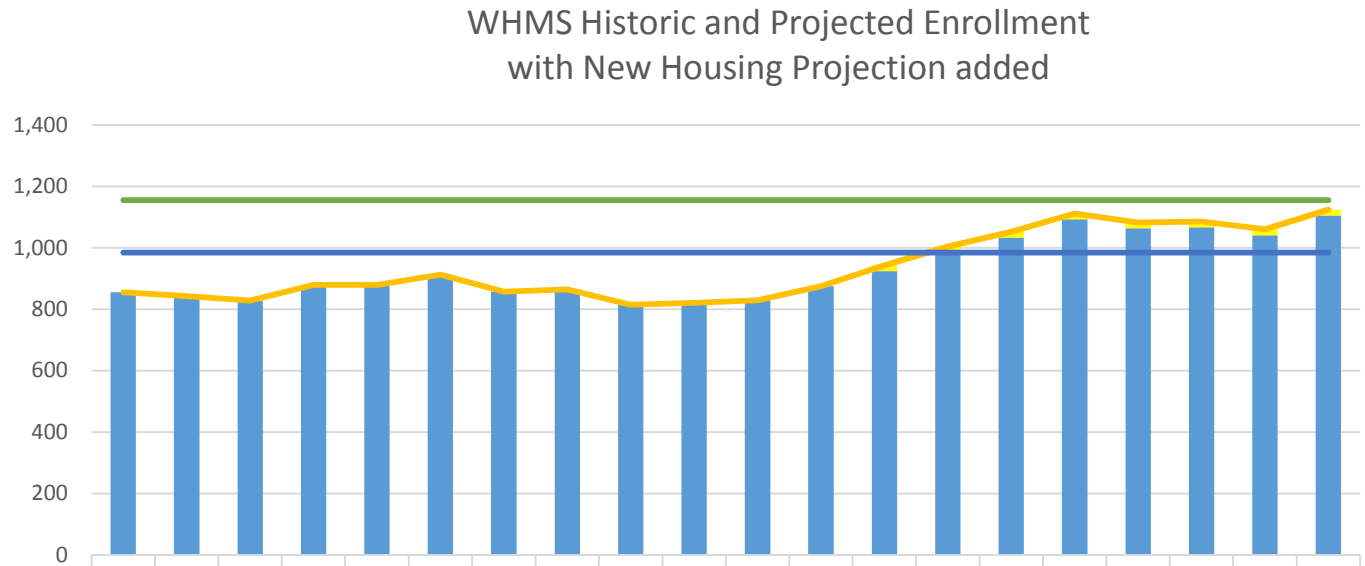
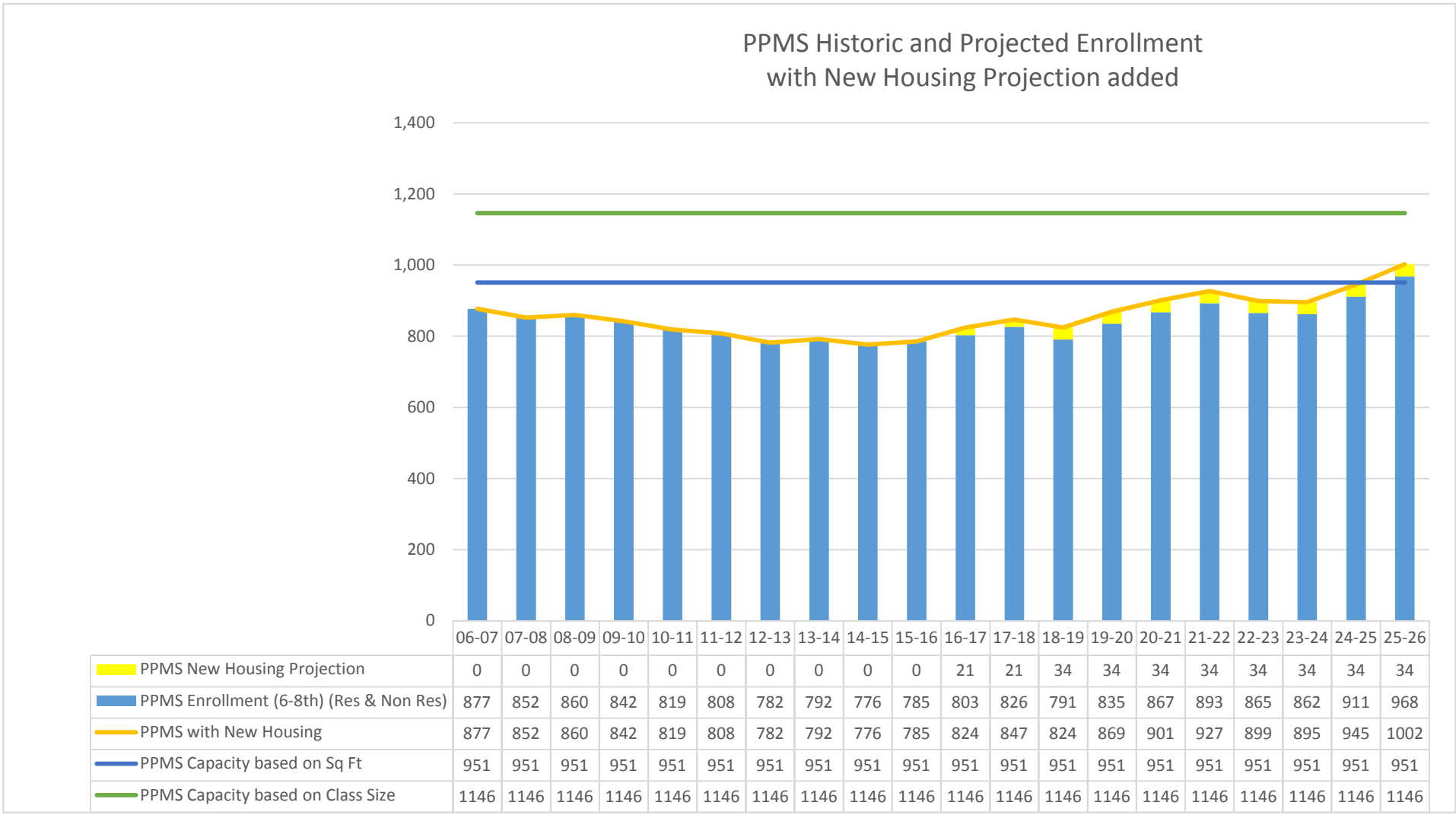
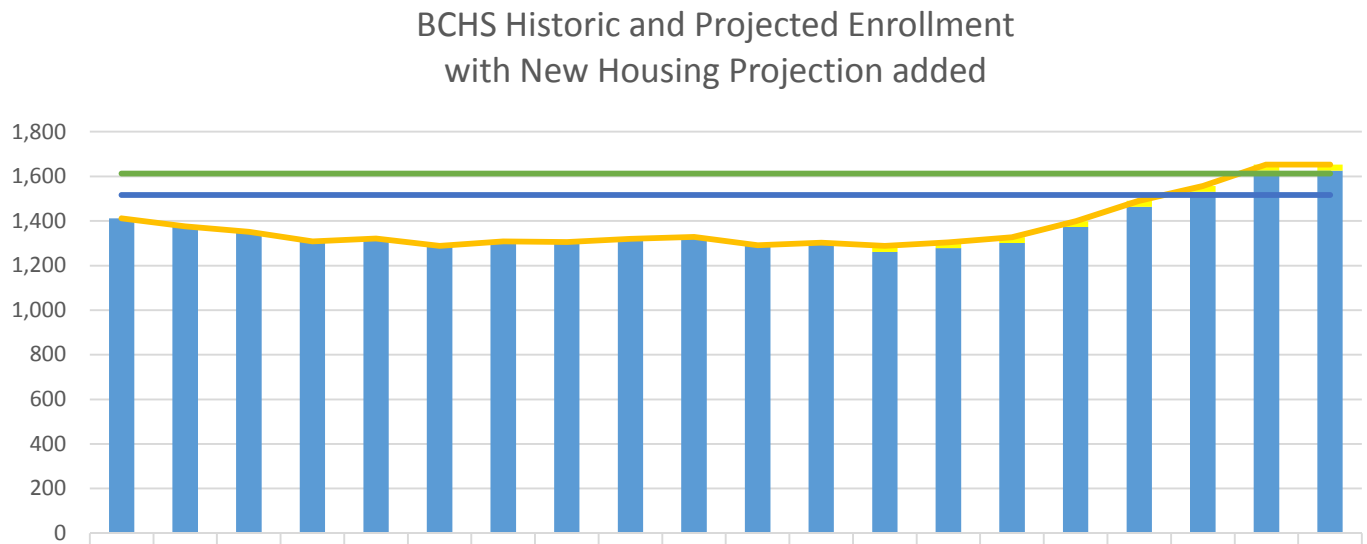
BROOKFIELD CENTRAL
2012
2013
2014
2015
2016



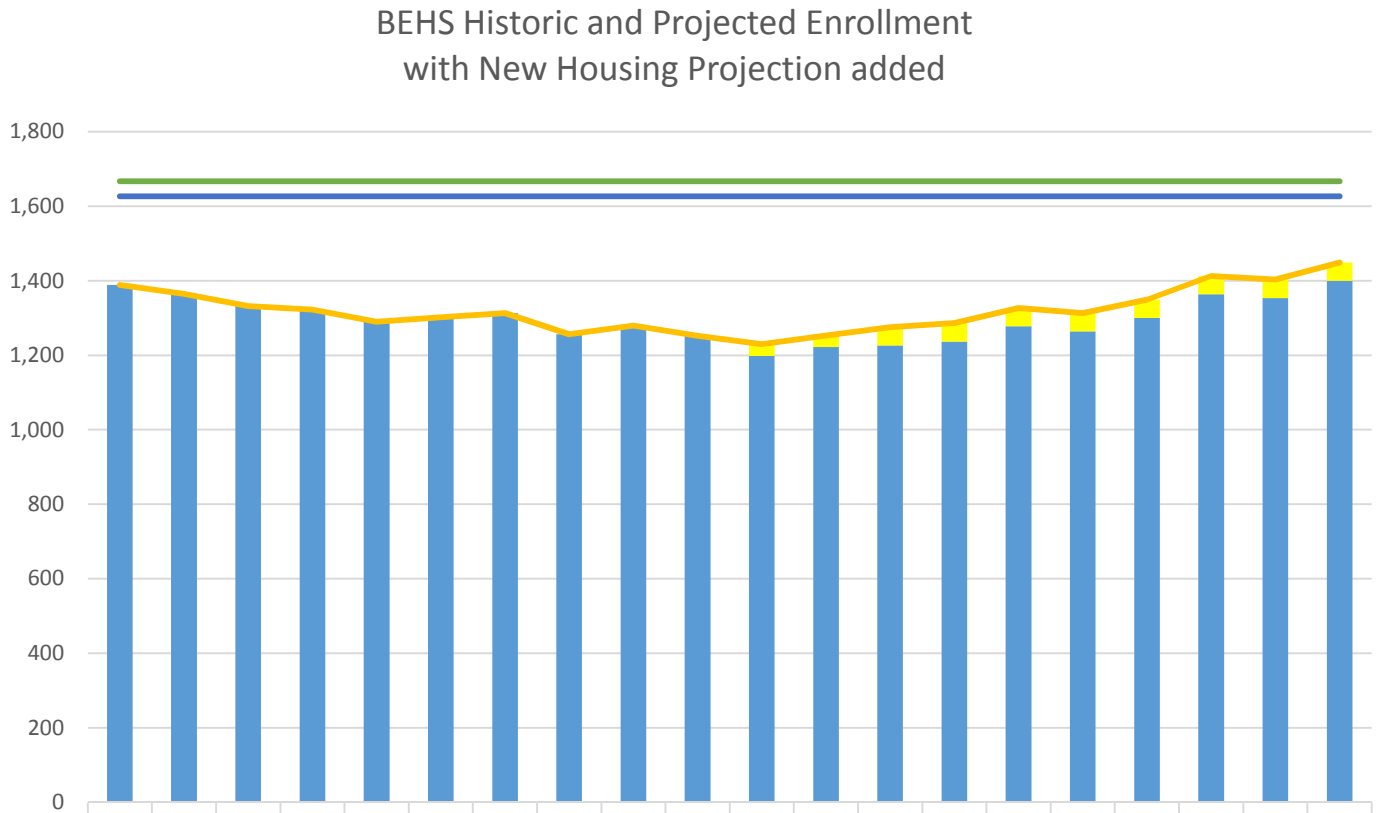
	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	24-25	25-26
WHMS New Housing Projection	0	0	0	0	0	0	0	0	0	0	0	0	19	19	19	19	19	19	19	19
WHMS Enrollment (6-8th) (Res & Non Res)	855	843	828	879	879	913	857	865	815	821	829	875	924	985	1,033	1,093	1,064	1,066	1,041	1,105
WHMS with New Housing	855	843	828	879	879	913	857	865	815	821	829	875	943	1004	1053	1112	1083	1086	1060	1124
WHMS Capacity based on Sq Ft	985	985	985	985	985	985	985	985	985	985	985	985	985	985	985	985	985	985	985	985
WHMS Capacity based on Class Size	1155	1155	1155	1155	1155	1155	1155	1155	1155	1155	1155	1155	1155	1155	1155	1155	1155	1155	1155	1155



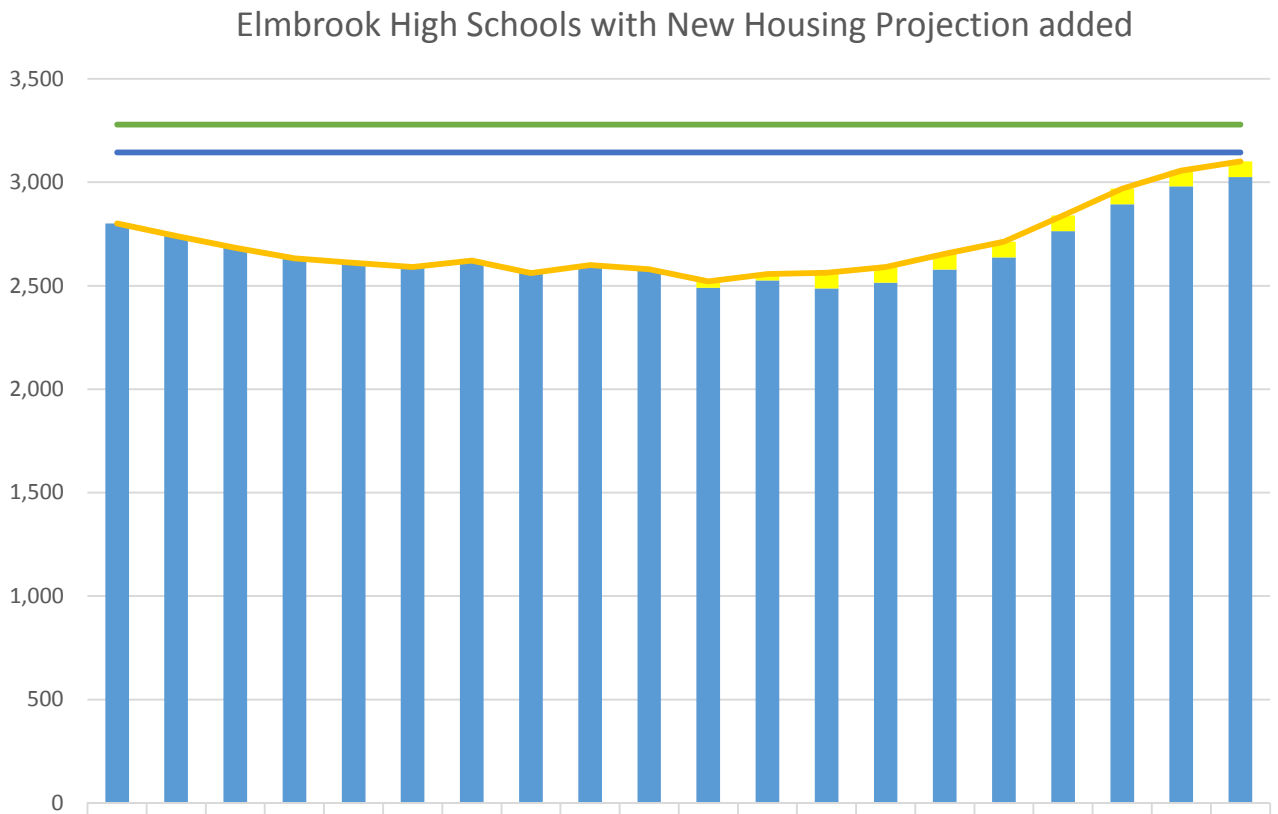
	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	24-25	25-26
PPMS New Housing Projection	0	0	0	0	0	0	0	0	0	0	21	21	34	34	34	34	34	34	34	34
PPMS Enrollment (6-8th) (Res & Non Res)	877	852	860	842	819	808	782	792	776	785	803	826	791	835	867	893	865	862	911	968
PPMS with New Housing	877	852	860	842	819	808	782	792	776	785	824	847	824	869	901	927	899	895	945	1002
PPMS Capacity based on Sq Ft	951	951	951	951	951	951	951	951	951	951	951	951	951	951	951	951	951	951	951	951
PPMS Capacity based on Class Size	1146	1146	1146	1146	1146	1146	1146	1146	1146	1146	1146	1146	1146	1146	1146	1146	1146	1146	1146	1146



	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	24-25	25-26
BCHS New Housing Projection	0	0	0	0	0	0	0	0	0	0	0	0	27	27	27	27	27	27	27	27
BCHS Enrollment (9-12th) (Res & Non Res)	1,412	1,376	1,351	1,309	1,321	1,288	1,308	1,305	1,320	1,328	1,292	1,303	1,261	1,278	1,301	1,372	1,464	1,530	1,626	1,626
BCHS with New Housing	1412	1376	1351	1309	1321	1288	1308	1305	1320	1328	1292	1303	1288	1304	1327	1399	1490	1557	1653	1653
BCHS Capacity based on Sq Ft	1517	1517	1517	1517	1517	1517	1517	1517	1517	1517	1517	1517	1517	1517	1517	1517	1517	1517	1517	1517
BCHS Capacity based on Class Size	1612	1612	1612	1612	1612	1612	1612	1612	1612	1612	1612	1612	1612	1612	1612	1612	1612	1612	1612	1612



	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	24-25	25-26
BEHS New Housing Projection	0	0	0	0	0	0	0	0	0	0	31	31	49	49	49	49	49	49	49	49
BEHS Enrollment (9-12th) (Res & Non Res)	1,389	1,365	1,332	1,323	1,290	1,302	1,313	1,256	1,280	1,252	1,198	1,222	1,226	1,237	1,278	1,264	1,300	1,364	1,354	1,399
BEHS with New Housing	1389	1365	1332	1323	1290	1302	1313	1256	1280	1252	1230	1253	1276	1286	1327	1313	1349	1413	1403	1449
BEHS Capacity based on Sq Ft	1627	1627	1627	1627	1627	1627	1627	1627	1627	1627	1627	1627	1627	1627	1627	1627	1627	1627	1627	1627
BEHS Capacity based on Class Size	1667	1667	1667	1667	1667	1667	1667	1667	1667	1667	1667	1667	1667	1667	1667	1667	1667	1667	1667	1667



	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	24-25	25-26
Total HS New Housing Projection	0	0	0	0	0	0	0	0	0	0	31	31	76	76	76	76	76	76	76	76
Total HS Enrollment (9-12th) (Res & Non Res)	2,80	2,74	2,68	2,63	2,61	2,59	2,62	2,56	2,60	2,58	2,49	2,52	2,48	2,51	2,57	2,63	2,76	2,89	2,98	3,02
Total HS Enrollment w/New Housing	2,80	2,74	2,68	2,63	2,61	2,59	2,62	2,56	2,60	2,58	2,52	2,55	2,56	2,59	2,65	2,71	2,84	2,97	3,05	3,10
Total HS Capacity - based on Sq Ft	3144	3144	3144	3144	3144	3144	3144	3144	3144	3144	3144	3144	3144	3144	3144	3144	3144	3144	3144	3144
Total HS Capacity - based on Class Size	3279	3279	3279	3279	3279	3279	3279	3279	3279	3279	3279	3279	3279	3279	3279	3279	3279	3279	3279	3279

ANALYSIS OF BUILDING CAPACITIES

There are several ways to evaluate a school's maximum capacity.

1. Design Capacity: Determine the maximum population for instructional spaces based on Best Practice square feet per student.
2. Follow Board of Education class size goal (if available).
3. Gross Building Square Footage: Take the existing building overall square footage and divide it by the recommended square footage per student based on Best Practice.

As enrollment fluctuations affect school districts nationwide, the physical capability of each building will determine whether or not enrollment should increase beyond its present level, or if it will be necessary to move students to other buildings more capable of accommodating such enrollment shifts. This analysis should provide a guide to measure each building's capability to handle a student population and provide a measuring stick to keep up with the changing needs.

HISTORICAL PERSPECTIVE ON SCHOOL CAPACITY

It is worthwhile to briefly cover why buildings are not able to contain the same number of students as when they were originally constructed. America's public schools can be traced back to 1640 when founders assumed families bore the responsibility of raising a child. Gradually, programs were added by Federal and State mandates that have dramatically affected the educational environment. The trend of increasing responsibilities for public schools has accelerated ever since.

1900-1910
- Health Instruction added

1910-1930
- Physical Education
- Vocational Education (Home Economics & Agriculture)

1940's
- Business Education
- Art & Music
- Speech & Drama
- Half-Day Kindergarten
- Lunch provided

1950's
- Expanded Science & Math
- Expanded Art & Music
- Foreign Language

1960's
- Advanced Placement
- Head Start
- Title I (Reading)
- Consumer & Career Education

1970's
- Special Education
- Title IX (equality for girl's athletics
- Behavior Adjustment
- Breakfast provided

1980's
- Computer Education
- English as a Second Language
- Early Childhood
- Full-Day Kindergarten
- At-Risk Programs
- After School Programs

1990's
- Expanded Computer / Internet
- Inclusion of Special Education Learners
- School-to-Work Programs

2000's
- Standardized Testing
- Project Lead the Way
- STE(A)M

2010's
- Makerspace
- BYOD (Bring Your Own Device)

In many districts, spaces that were once used as standard classrooms have been transformed into multiple educational environments that have to act as offices, teaching space for 4-6 students, and reference libraries for several different areas associated with Special Education. One of the most dramatic program requirements of the past 30 years may become obsolete in the near future. Computers first made their presence in schools in the early 1980s when a single Apple II was assigned to one building in may national schools. Now, many elementary schools assign a single lab to each grade, and the future may reverse these spaces back into classrooms as laptops and hand-held tablets become the norm

for student production and research. The bottom line is the demand on educational space is always changing, and it should be expected that buildings need to change along with those programs.

TYPES OF CAPACITY CALCULATIONS

1. FUNCTIONAL CAPACITY BY AREA

Historically, building capacity has been determined by counting the number of classrooms and multiplying by the average number of students. This method of capacity calculation is sometimes called the "Design Capacity."

A more accurate Design Capacity, however, can be derived from evaluating the best practice square footage allowances per student in each individual room. Based on the best data currently available, we recommend 55 SF (square feet) per student at the kindergarten level, 35 SF per student for grades 1-5, and 30 SF per student at the middle and high school levels. This allows a standard elementary classroom (1375 SF kindergarten, 875 SF grades 1-5) to support a class of 25 students. At the middle school and high school levels, a standard 900 SF classroom can support up to 30 students. To calculate the total capacity of a building, then:

Each academic space (core subjects) has a calculated square footage. This square footage is then divided by the recommended SF/student. Other academic spaces throughout the building have their own "Best Practice" square footage allowances per student. The total population is then calculated by adding the student population of each academic space.

At the elementary level, only standard classrooms are included in the capacity analysis because students remain in their assigned classroom most of the day. At the Middle and High School, all instructional spaces are used in the calculation because students are rarely in the same room for more than one period.

Several areas are not included in this calculation:

- Special Education rooms are not included because it is unlikely that other students would fill their classroom seats while they are getting additional instruction elsewhere in the building.

- Labs are also not factored into this calculation because the intent of these spaces is to serve as resource areas for classes that would otherwise be located somewhere else in the school. For example, a computer lab dedicated to an English Department is not included because the students are physically leaving one space to use the other as a resource.

However, the Design Capacity method alone becomes flawed because it is unlikely that every room will be used at 100% capacity all the time. At the middle and high school levels, the capacity calculation needs to account for teacher prep time, bell schedules, and tutoring which would drop the total utilization of any one space. Even at the elementary school level, because of fluctuations in student population, it is impractical to expect every classroom to be filled completely to design capacity in any given school year. Taking school schedules, programmatic issues, and fluctuations in student populations into consideration, the Design Capacity is modified to create the final "**Functional Design Capacity**."

It's important to note that as a rule:

90% utilization is considered to be the **Functional Design Capacity** targeted at the **elementary level**.
80% utilization is considered to be the **Functional Design Capacity** targeted at the **middle and high school levels.**

For example, the targeted utilization at a middle or high school level represents scheduled use of a core subject room 6 to 7 periods out of an 8 period day, or between 75% and 88% of the time available for use.

2. CAPACITY BASED ON GROSS BUILDING SQUARE FOOTAGE

Information for determining recommended school capacity based on gross area per student is typically used for initial analysis of building enrollment capacity. Building area standards are derived from historic data compilation, optimal planning models for space utilization, and are found through regional and national educational research and planning organizations. There is not a recognized national standard for use in such reviews, and available data most current and determined to be most relevant to the School District's locality is utilized. The following ranges shown in the standards consulted indicate regional and programmatic differences between the school districts reviewed. The lower end square foot per student numbers may indicate that few auxiliary type spaces are provided. The higher end square foot per student numbers may indicate that more auxiliary type spaces are provided, i.e. Auditorium, Field House, Natatorium, etc. For smaller schools, the numbers are typically higher than for larger schools.

Gross square footage for school planning based on school building projects built in Wisconsin over the last 15 years.

- *Elem. School*: 130 – 160 sq.ft. per student (average of 145 sq.ft.)
- *Middle School*: 150 – 180 sq.ft. per student (average of 165 sq.ft.)
- *High School*: 200 – 250 sq.ft. per student (average of 225 sq.ft.)

Gross square footage for school planning recommended by the *Minnesota Department of Children, Families & Learning - Guide for Planning Construction Projects*. This is one of the few State sponsored publications that actually lists size recommendations for educational environments. These area ranges were established to plan for the space needs of technology and new forms of instruction (Published 2002).

- *Elem. School*: 125 – 155 sq. ft. per student (average of 140 sq. ft.)
- *Middle School*: 170 – 200 sq. ft. per student (average of 185 sq. ft.)
- *High School*: 200 – 320 sq. ft. per student (average of 260 sq. ft.)

In order to keep the evaluation current and account for the present and future space needs of technology and new forms of instruction, the Wisconsin data and Minnesota DCFL information has been approximately averaged to create the unit of measure used in this report:

- 140 sq. ft. per student for the Elementary Schools
- 172 sq. ft. per student for the Middle School
- 242 sq. ft. per student for the High School

The gross square foot per student recommendations should be considered as a **baseline guide** for planning and analysis, and remain flexible in order to reflect the immediate needs and long term goals of the School District.

The maximum capacity is based on the existing building SF divided by the average recommended SF per student listed. The resulting data can then be used as an indicator to show how the schools compare with National and State recommendations.

DETAIL – WISCONSIN HILLS MS

Wisconsin Hills Middle School has a 6 period day with alternating "A" & "B" days. This study takes both days into consideration when looking at capacity and utilization.

Functional Capacity by Area
This calculation included all regular classroom academic spaces. Spaces not included in this calculation include:

- Music
- Band
- Orchestra
- Art
- Special education classrooms and rooms serving special needs students
- Gym
- Cafeteria
- Library
- Computer lab
- Multi-purpose spaces

Utilization
A-Day:

- On average the current utilization is **60.6%** which is below the recommended 80% which means that some spaces could be further utilized during the school day.
- On average each learning space is utilized **3.6** hours of the day, 4.8 would indicate an 80% utilization rate which would indicate that some rooms could be utilized more hours of the day.
- On average each learning space has **24.3** student which compared to the board goal of 28 would indicate that more students could be added to some of the learning spaces throughout the day.

B-Day:

- On average the current utilization is **61.0%** which is below the recommended 80% which means that some spaces could be further utilized during the school day.
- On average each learning space is utilized **3.7** hours of the day, 4.8 would indicate an 80% utilization rate which would indicate that some rooms could be utilized more hours of the day.
- On average each learning space has **24.3** student which compared to the board goal of 28 would indicate that more students could be added to some of the learning spaces throughout the day.

This Maximum Design Capacity equates to **1566 students** if each space was occupied to capacity every minute of the day. As stated earlier in this document, the Functional Design Capacity is 80% of that value. This means that the Functional Design Capacity for the school is **1253 students**.

Functional School Board Capacity Goal
This calculation assumes learning space are filled to the maximum Board Capacity Goal and equates to **1444 students**. If we apply 80% to the maximum Board Capacity Goal it equates to **1155 students**.

Capacity Based on Building Area
When the total building square footage is divided by the recommended area per student, the capacity calculation yields: 169,454 sq. ft. divided by 172 sq. ft. per student, equates to only **985 students**.

CONCLUSION

Functional Design Capacity would indicate that additional student capacity is available. The average utilization percentages, the average room usage throughout the day and the average student population would also indicate that additional capacity is available.

DETAIL – PILGRIM PARK MS

Pilgrim Hills Middle School has a 6 period day with alternating "A" & "B" days. This study takes both days into consideration when looking at capacity and utilization.

Functional Capacity by Area
This calculation included all regular classroom academic spaces. Spaces not included in this calculation include:

- Music
- Band
- Orchestra
- Art
- Special education classrooms and rooms serving special needs students
- Gym
- Cafeteria
- Library
- Computer lab
- Multi-purpose spaces

Utilization
A-Day:

- On average the current utilization is **67.3%** which is below the recommended 80% which means that some spaces could be further utilized during the school day.
- On average each learning space is utilized **4.0** hours of the day, 4.8 would indicate an 80% utilization rate which would indicate that some rooms could be utilized more hours of the day.
- On average each learning space has **23.3** student which compared to the board goal of 28 would indicate that more students could be added to some of the learning spaces throughout the day.

B-Day:

- On average the current utilization is **66.3%** which is below the recommended 80% which means that some spaces could be further utilized during the school day.
- On average each learning space is utilized **4.0** hours of the day, 4.8 would indicate an 80% utilization rate which would indicate that some rooms could be utilized more hours of the day.
- On average each learning space has **24.7** student which compared to the board goal of 28 would indicate that more students could be added to some of the learning spaces throughout the day.

This Maximum Design Capacity equates to **1490 students** if each space was occupied to capacity every minute of the day. As stated earlier in this document, the Functional Design Capacity is 80% of that value. This means that the Functional Design Capacity for the school is **1192 students**.

Functional School Board Capacity Goal
This calculation assumes learning space are filled to the maximum Board Capacity Goal and equates to **1433 students**. If we apply 80% to the maximum Board Capacity Goal it equates to **1146 students**.

Capacity Based on Building Area
When the total building square footage is divided by the recommended area per student, the capacity calculation yields: 163,525 sq. ft. divided by 172 sq. ft. per student, equates to only **951 students**.

CONCLUSION

Functional Design Capacity would indicate that additional student capacity is available. The average utilization percentages, the average room usage throughout the day and the average student population would also indicate that additional capacity is available.

DETAIL – BROOKFIELD EAST HIGH SCHOOL

Brookfield East High School has a 5 period day with alternating "A" & "B" days. This study takes both days into consideration when looking at capacity and utilization.

Functional Capacity by Area
This calculation included all regular classroom academic spaces. Spaces not included in this calculation include:

- Special education classrooms and rooms serving special needs students
- Cafeteria
- Library
- Computer lab
- Multi-purpose spaces

Utilization
A-Day:

- On average the current utilization is **69.7%** which is below the recommended 80% which means that some spaces could be further utilized during the school day.
- On average each learning space is utilized **3.5** hours of the day, 4.8 would indicate an 80% utilization rate which would indicate that some rooms could be utilized more hours of the day.
- On average each learning space has **19.8** student which compared to the board goal of 28 would indicate that more students could be added to some of the learning spaces throughout the day.

B-Day:

- On average the current utilization is **70.3%** which is below the recommended 80% which means that some spaces could be further utilized during the school day.
- On average each learning space is utilized **3.5** hours of the day, 4.8 would indicate an 80% utilization rate which would indicate that some rooms could be utilized more hours of the day.
- On average each learning space has **20.1** student which compared to the board goal of 28 would indicate that more students could be added to some of the learning spaces throughout the day.

This Maximum Design Capacity equates to **2084 students** if each space was occupied to capacity every minute of the day. As stated earlier in this document, the Functional Design Capacity is 80% of that value. This means that the Functional Design Capacity for the school is **1667 students**.

Functional School Board Capacity Goal
This calculation assumes learning space are filled to the maximum Board Capacity Goal and equates to **2034 students**. If we apply 80% to the maximum Board Capacity Goal it equates to **1627 students**.

Capacity Based on Building Area
When the total building square footage is divided by the recommended area per student, the capacity calculation yields: 297,988 sq. ft. divided by 242 sq. ft. per student, equates to only **1231 students**.

CONCLUSION

Functional Design Capacity would indicate that additional student capacity is available. The average utilization percentages, the average room usage throughout the day and the average student population would also indicate that additional capacity is available. However, the overall building square foot area would seem to indicate the building is as capacity. The contradiction between the data would seem to indicate that the learning spaces and common space may be less than optimal in area.

DETAIL – BROOKFIELD CENTRAL HIGH SCHOOL

Brookfield Central High School has a 4 period day.

Functional Capacity by Area
This calculation included all regular classroom academic spaces. Spaces not included in this calculation include:

- Special education classrooms and rooms serving special needs students
- Cafeteria
- Library
- Computer lab
- Multi-purpose spaces

Utilization

- On average the current utilization is **67.9%** which is below the recommended 80% which means that some spaces could be further utilized during the school day.
- On average each learning space is utilized **2.7** hours of the day, 4.8 would indicate an 80% utilization rate which would indicate that some rooms could be utilized more hours of the day.
- On average each learning space has **22.2** student which compared to the board goal of 28 would indicate that more students could be added to some of the learning spaces throughout the day.

This Maximum Design Capacity equates to **1922 students** if each space was occupied to capacity every minute of the day. As stated earlier in this document, the Functional Design Capacity is 80% of that value. This means that the Functional Design Capacity for the school is **1537 students**.

Functional School Board Capacity Goal
This calculation assumes learning space are filled to the maximum Board Capacity Goal and equates to **1803 students**. If we apply 80% to the maximum Board Capacity Goal it equates to **1442 students**.

Capacity Based on Building Area
When the total building square footage is divided by the recommended area per student, the capacity calculation yields: 274,275 sq. ft. divided by 242 sq. ft. per student, equates to only **1133 students**.

CONCLUSION

Functional Design Capacity would indicate that additional student capacity is available. The average utilization percentages, the average room usage throughout the day and the average student population would also indicate that additional capacity is available. The room usage per day is particularly low and can be somewhat attributed to 5 computer labs that are now being converted to programmable space.

eppstein uhen : architects

Brookfield Wisconsin Hills Middle School "B" Day Utilization Study

Room No.	Primary Use of Room (Subject)	S.F. Area	Based on Square Feet per Student of Space	Based on School Board Goals	Based on Total Square Feet 169,454	Periods 1	2	3	4	5	6	Avrg Class Size	% of use	# periods used (6)
101	Collaboration	878												
103	Collaboration	167												
105	Collaboration	878												
108	coaches	866												
110	6th	887	30	28		28	27	27	28			27.5	66.6	4
112	6th	901	30	28			11	6	3	24	2	9.2	83.3	5
114	6th	888	30	28		26	27	30	26			27.3	66.6	4
116	6th	897	30	28		26	27	21	21			23.8	66.6	4
118	6th	897	30	28		31	29	31	30			30.3	66.6	4
120	6th	888	30	28		28	29	25	27			27.3	66.6	4
122	sped	856												
124	sped	830												
126	6th	879	29	28		27	28	26	28			27.3	66.6	4
128	6th	879	29	28		26	26	28	29			27.3	66.6	4
130	6th	879	29	28		27	26	27	26			26.5	66.6	4
132	6th	879	29	28								0.0	0.0	0
134	6th	879	29	28		56	56	56	56			56.0	66.6	4
136	sped	840												
138	Choral	1900	54	54		36	6	6	6	41	32	21.2	100.0	6
140	Band	2704	54	54		6	6	43	36	6	33	21.7	100.0	6
142	Tech Ed	1935	39	28		29	23	28	26	28		26.8	83.3	5
144	Orchestra	1023	20	20		6	6	6	6	37	26	14.5	100.0	6
146	Tech Ed	1812	36	28						26	29	27.5	33.3	2
148	Art	1287	26	28							27	27.0	16.7	1
150	PE	799												
152	Art	1216	24	28		31	31		30	27	26	29.0	83.3	5
154	Multi Purpose	2425												
163	Wildcat Cafe	704												
165	Computers	904	23	28		28	29	30	28		26	28.2	83.3	5
167	Computers	903	23	28								0.0	0.0	0
133	Home EC	1139	23	28					28	26	26	26.7	50.0	3
131	Home EC	1116	22	28		29	28	29	28		28	28.4	83.3	5
125	Library	5399												
200	7th	922	31	28								0.0	0.0	0
201	7th	991	33	28		25	30			25	23	25.8	66.6	4
202	7th	917	31	28		30	30			27	22	27.3	66.6	4
204	7th	917	31	28		30	30			28	26	28.5	66.6	4
205	7th	1322	44	28		26	25			28	24	25.8	66.6	4
206	7th	917	31	28		29	21			30	21	25.3	66.6	4
208	7th	917	31	28		23	28			20	24	23.8	66.6	4
209	7th	1320	44	28		27	23			29	26	26.3	66.6	4
210	7th	887	30	28		22	25			23	26	24.0	66.6	4
211	7th	932	31	28		26	27			30	29	28.0	66.6	4
212	7th	902	30	28		27	25			30	29	27.8	66.6	4
213	7th	592	20	28			4	1	4		1	2.5	66.6	4
214	Sped	888												
216	Learning lab	898												
218	8th	898	30	28				3	31		26	20.0	50.0	3
220	8th	885	30	28				30	30	30	30	30.0	66.6	4
222	8th	802	27	28				30	30	30	30	30.0	66.6	4
224	sped 8th	831												
225	sped	592												
226	8th	879	29	28				25	28	26	26	26.3	66.6	4
227	8th	934	31	28				25	27	22	30	26.0	66.6	4
228	8th	874	29	28				31	28	19	33	27.8	66.6	4
229	8th	1317	44	28				30	30	30	30	30.0	66.6	4
230	8th	879	29	28				26	24	20	31	25.3	66.6	4
234	8th	879	29	28				24				24.0	16.7	1
235	8th	1320	44	28				30	30	30	30	30.0	66.6	4
236	8th	1017	34	28				26	26	26	28	26.5	66.6	4
237	8th	993	33	28				30	30	30	30	30.0	66.6	4
238	Foreign Langiage	885	29	28		9	14	24				15.7	50.0	3
240	Foreign Langiage	875	29	28		32	28	29	26			28.8	66.6	4
242	Foreign Langiage	885	29	28				30				30.0	16.7	1
244	Foreign Langiage	1055	35	28			15	19				17.0	33.3	2
	AVERAGE											24.3	61.0	3.7
	Max Capacity		1566	1444	985									
	Functional Capacity		**1253**	**1155**										
	2015-16 Enroll.	822												
	Actual Hourly Total					746	740	832	806	748	830			

Note: Greyed out rows indicated that those spaces are not added into the calculated sums

4/21/2016

eppstein uhen : architects

Brookfield Wisconsin Hills Middle School "A"
Day Utilization Study

Room No.	Primary Use of Room (Subject)	S.F. Area	Based on Square Feet per Student of Space	Based on School Board Goals	Based on Total Square Feet 169,454	Periods 1	2	3	4	5	6	Avrg Class Size	% of use	# periods used (8)
101	Collaboration	878												
103	Collaboration	167												
105	Collaboration	878												
108	coaches	866				A/B	A/B	A/B	A/B	A/B	A/B			
110	6th	887	30	28		28	27	27	28			27.5	66.6	4
112	6th	901	30	28			11	6	3	24	2	9.2	83.3	5
114	6th	888	30	28		26	27	30	26			27.3	66.6	4
116	6th	897	30	28		26	27	21	21			23.8	66.6	4
118	6th	897	30	28		31	29	31	30			30.3	66.6	4
120	6th	888	30	28		28	29	25	27			27.3	66.6	4
122	sped	856												
124	sped	830												
126	6th	879	29	28		27	28	26	28			27.3	66.6	4
128	6th	879	29	28		26	26	28	29			27.3	66.6	4
130	6th	879	29	28		27	26	27	29			27.3	66.6	4
132	6th	879	29	28								0.0	0.0	0
134	6th	879	29	28		56	56	56	56			56.0	66.6	4
136	sped	840												
138	Choral	1900	54	54		6	6	6	44	40	6	18.0	100.0	6
140	Band	2704	54	54		28	46	6	6	44	42	28.7	100.0	6
142	Tech Ed	1935	39	28		27	21	28	28	28		26.4	83.3	5
144	Orchestra	1023	20	20		19	6	6	32	6	6	12.5	100.0	6
146	Tech Ed	1812	36	28						26	29	27.5	33.3	2
148	Art	1287	26	28							27	27.0	16.7	1
150	PE	799												
152	Art	1216	24	28		30	28	30		27	26	28.2	83.3	5
154	Multi Purpose	2425												
163	Wildcat Cafe	704												
165	Computers	904	23	28		28	28	29	30		26	28.2	83.3	5
167	Computers	903	23	28								0.0	0.0	0
133	Home EC	1139	23	28						26	26	26.0	33.3	2
131	Home EC	1116	22	28		29	26	28	30		28	28.2	83.3	5
125	Library	5399												
200	7th	922	31	28								0.0	0.0	0
201	7th	991	33	28		25	30			25	23	25.8	66.6	4
202	7th	917	31	28		30	30			27	22	27.3	66.6	4
204	7th	917	31	28		30	30			28	26	28.5	66.6	4
205	7th	1322	44	28		26	25			28	24	25.8	66.6	4
206	7th	917	31	28		29	21			30	21	25.3	66.6	4
208	7th	917	31	28		23	28			20	24	23.8	66.6	4
209	7th	1320	44	28		27	23			29	26	26.3	66.6	4
210	7th	887	30	28		22	25			23	26	24.0	66.6	4
211	7th	932	31	28		26	27			30	29	28.0	66.6	4
212	7th	902	30	28		27	25			30	29	27.8	66.6	4
213	7th	592	20	28			4	1	3	1	1	2.0	83.3	5
214	Sped	888												
216	Learning lab	898												
218	8th	898	30	28				3	31		26	20.0	50.0	3
220	8th	885	30	28				30	30	30	30	30.0	66.6	4
222	8th	802	27	28				30	30	30	30	30.0	66.6	4
224	sped 8th	831												
225	sped	592												
226	8th	879	29	28				25	28	26	26	26.3	66.6	4
227	8th	934	31	28				25	27	22	30	26.0	66.6	4
228	8th	874	29	28				31	28	19	33	27.8	66.6	4
229	8th	1317	44	28				30	30	30	30	30.0	66.6	4
230	8th	879	29	28				26	24	20	31	25.3	66.6	4
234	8th	879	29	28				24				24.0	16.7	1
235	8th	1320	44	28				30	30	30	30	30.0	66.6	4
236	8th	1017	34	28				26	26	26	28	26.5	66.6	4
237	8th	993	33	28				30	30	30	30	30.0	66.6	4
238	Foreign Langiage	885	29	28		9	14					11.5	33.3	2
240	Foreign Langiage	875	29	28		32	28	28				29.3	50.0	3
242	Foreign Langiage	885	29	28			30		32			31.0	33.3	2
244	Foreign Langiage	1055	35	28			15	21				18.0	33.3	2
	AVERAGE											24.3	60.6	3.6
	Max Capacity		1566	1444	985									
	Functional Capacity		**1253**	**1155**										
	2015-16 Enroll.	822												
	Actual Hourly Total					748	802	770	796	755	793			

Note: Greyed out rows indicated that those spaces are not added into the calculated sums

4/21/2016

eppstein uhen : architects

Brookfield Pilgrim Park Middle School "B" Day
Utilization Study

Room No.	Primary Use of Room (Subject)	S.F. Area	Based on Square Feet per Student of Space	Based on School Board Goals	Based on Total Square Feet 163,525	Periods 1	2	3	4	5	6	7 No Classes (not included)	Avrg Class Size	% of use	# periods used (6)
E04	Chorus	1612	46	46		59	53	14	14	14	37	6	31.8	100.0	6
E05	Band	2141	43	43		48	35	40	45		59	20	45.4	83.3	5
E06	Band Small Lessons	712	14	28		20	20	20			22	15	20.5	66.6	4
E07	Art	1503	30	28		27							27.0	16.7	1
E08	Becoming Independent	1109	22	28		29		29	26	27	28		27.8	83.3	5
E09	Studio Art	1844	37	28		26	26	24	24	21	21		23.7	100.0	6
E10	Foods	1330	27	28		28	26		25				26.3	50.0	3
E11	Strings	1203	24	28		15	7		29	7	20	6	15.6	83.3	5
E12	Engineering Woods	1959	39	28		28		26	26	21	19		24.0	83.3	5
E13	Exploring engineering	1898	38	28		28	24	24					25.3	50.0	3
M01	Library	4440													
M07	Computer Digital Life	862	22	28		28	26	27	28	24	25		26.3	100.0	6
M22	Computer Lab	851	21	28		27							27.0	16.7	1
M24	Spanish	815	27	28				28	29	30			29.0	50.0	3
M25	Language Arts	713	24	28		2	8	2	4	3	5		4.0	100.0	6
M26	Office	256	3												
M27	Frwnch	834	28	28						21			21.0	16.7	1
M28	German	882	29	28						8			8.0	16.7	1
M29	Math am/Spanish pm	894	30	28		3	26			31	32		23.0	66.6	4
L02	Social Studies 8	882	29	28		26	22	28	24			26	25.0	66.6	4
L03	Algebra 8	880	29	28		21	17	20	27			25	21.3	66.6	4
L04	Spec Ed	876													
L05	Extra Classroom	882	29	28				3					3.0	16.7	1
L06	Spec Ed	902													
L07	Language Arts 8	906	30	28		24	26	26	23			23	24.8	66.6	4
L08A	Spec Ed Time out	262													
L09	Social Studies 8	976	33	28		27	27	24	24			24	25.5	66.6	4
L10	Language Arts 8	1023	34	28		28	25	25	23			25	25.3	66.6	4
L12	Algebra 8	1076	36	28		21	17	31	29			26	24.5	66.6	4
L14	Science 8	1316	44	28		26	26	24	25			26	25.3	66.6	4
L15	Office	230													
L16	Science 8	1437	48	28		24	23	26	25			24	24.5	66.6	4
L17	Learning Support	750													
L18	Algebra 8 am/Science 8	1285	43	28		26	21	24	25			24	24.0	66.6	4
L20	Science 7	1327	27	28		25	27			27	27	27	26.5	66.6	4
L21	Language Arts 7	918	31	28		29	25			24	28	25	26.5	66.6	4
L22	Social Studies 7	918	31	28		26	29			26	23	26	26.0	66.6	4
L23	Math 7	918	31	28		24	23			29	28	26	26.0	66.6	4
L24	Spec Ed	918													
L26	Language Arts/Social S 8	863	29	28		27	26	25	24			25	25.5	66.6	4
U02A	Spec ed one on one	167													
U03	book library	916													
U04	Math 7	835	28	28		34	24			24	20	25	25.5	66.6	4
U05	Spec Ed	917													
U06	Language Arts 7	836	28	28		25	23			29	25	27	25.5	66.6	4
U07	Classroom with Support	942	31	28		3	3	3	3	3	3	3	3.0	100.0	6
U08	Social Studies 7	861	29	28		22	28			25	28	25	25.8	66.6	4
U09	Spec ed small group	387													
U10	Spec Ed Meeting area	822													
U11	Science 7	1207	24	28		21	27			25	29	25	25.5	66.6	4
U12	Science 7/Math 7 pm	1196	24	28		28	27			27	28	27	27.5	66.6	4
U13	Social S 7/Lang Arts pm	872	29	28		27	28			28	27	28	27.5	66.6	4
U14	Math/Science 6	867	29	28				30	22	30	26	28	27.0	66.6	4
U15	Lang Art/ Social S 6	871	29	28				26	30	26	30	28	28.0	66.6	4
U16	Lang Arts 6	866	29	28				228	27	30	27	29	78.0	66.6	4
U17	Science 6	862	17	28				28	27	29	28	26	28.0	66.6	4
U18	Spec Ed	862										1			
U19	Social Studies 6	871	29	28				28	24	31	30	27	28.3	66.6	4
U20	Math 6am/Math 7 pm	866	29	28				28	27	22	27	30	26.0	66.6	4
U21	Speech Classroom	802	27	28		2	2	2	2	2	2	2	2.0	100.0	6
U22	Office Small Group	392										1			
U23	Math 7 am/Math 6 pm	913	30	28				26	20	24	27	28	24.3	66.6	4
U24	Lang Arts 6	845	28	28				29	26	26	26	28	26.8	66.6	4
U25	Science 6	911	18	28				27	26	28	26	24	26.8	66.6	4
U26	Social Studies 6	856	29	28		1		25	25	29	28	27	21.6	83.3	5
	AVERAGE												24.7	66.3	4.0
	Max Capacity		1490	1433	884										
	Functional Capacity		**1192**	**1146**											
	2014-15 Enroll.	786													
	Actual Hourly Total					885	747	970	758	751	811	838			

Note: Greyed out rows indicated that those spaces are not added into the calculated sums

4/21/2016

eppstein uhen : architects

Brookfield Pilgrim Park Middle School "A" Day
Utilization Study

Room No.	Primary Use of Room (Subject)	S.F. Area	Based on Square Feet per Student of Space	Based on School Board Goals	Based on Total Square Feet 163,525	Periods 1	2	3	4	5	6	7 No Classes (not included)	Avrg Class Size	% of use	# periods used (6)
E04	Chorus	1612	46	46		15	14	53	14	22	14	6	22.0	100.0	6
E05	Band	2141	43	43		48	31	35	40	45	59	20	43.0	100.0	6
E06	Band Small Lessons	712	14	28		20	20	20			20	15	20.0	66.6	4
E07	Art	1503	30	28		27							27.0	16.7	1
E08	Becoming Independent	1109	22	28		27		27	25	26	26		26.2	83.3	5
E09	Studio Art	1844	37	28		26	26	24	24	21	21		23.7	100.0	6
E10	Foods	1330	27	28		26	26		28				26.7	50.0	3
E11	Strings	1203	24	28		6	36		7	7	7	6	12.6	83.3	5
E12	Engineering Woods	1959	39	28		27		24	23	21	16		22.2	83.3	5
E13	Exploring engineering	1898	38	28		25	23	23					23.7	50.0	3
M01	Library	4440													
M07	Computer Digital Life	862	22	28		28	26	25	28	23	25		25.8	100.0	6
M22	Computer Lab	851	21	28		27							27.0	16.7	1
M24	Spanish	815	27	28				26	25	30			27.0	50.0	3
M25	Language Arts	713	24	28		2	6	2	4	3	5		3.7	100.0	6
M26	Office	256													
M27	French	834	28	28					31	21			26.0	33.3	2
M28	German	882	29	28					16	8			12.0	33.3	2
M29	Math am/Spanish pm	894	30	28		3	25			31	32		22.8	66.6	4
L02	Social Studies 8	882	29	28		26	22	28	21			26	24.3	66.6	4
L03	Algebra 8	880	29	28		21	17	20	27			25	21.3	66.6	4
L04	Spec Ed	876													
L05	Extra Classroom	882	29	28				3					3.0	16.7	1
L06	Spec Ed	902													
L07	Language Arts 8	906	30	28		24	26	26	23			23	24.8	66.6	4
L08A	Spec Ed Time out	262													
L09	Social Studies 8	976	33	28		27	26	24	18			24	23.8	66.6	4
L10	Language Arts 8	1023	34	28		28	25	25	23			25	25.3	66.6	4
L12	Algebra 8	1076	36	28		21	17	31	29			26	24.5	66.6	4
L14	Science 8	1316	44	28		26	26	23	25			26	25.0	66.6	4
L15	Office	230													
L16	Science 8	1437	48	28		24	23	26	25			24	24.5	66.6	4
L17	Learning Support	750													
L18	Algebra 8 am/Science 8	1285	43	28		26	21	23	25			24	23.8	66.6	4
L20	Science 7	1327	27	28		25	26			27	27	27	26.3	66.6	4
L21	Language Arts 7	918	31	28		29	25			24	28	25	26.5	66.6	4
L22	Social Studies 7	918	31	28		28	29			26	22	26	26.3	66.6	4
L23	Math 7	918	31	28		24	23			29	28	26	26.0	66.6	4
L24	Spec Ed	918													
L26	Language Arts/Social S 8	863	29	28		27	26	25	21			25	24.8	66.6	4
U02A	Spec ed one on one	167													
U03	book library	916													
U04	Math 7	835	28	28		34	24			24	20	25	25.5	66.6	4
U05	Spec Ed	917						4	1	1					
U06	Language Arts 7	836	28	28		25	23			29	25	27	25.5	66.6	4
U07	Classroom with Support	942	31	28		3	3	3	3	3	3	3	3.0	100.0	6
U08	Social Studies 7	861	29	28		22	28			25	28	25	25.8	66.6	4
U09	Spec ed small group	387													
U10	Spec Ed Meeting area	822													
U11	Science 7	1207	24	28		21	27			25	29	25	25.5	66.6	4
U12	Science 7/Math 7 pm	1196	24	28		28	27			27	28	27	27.5	66.6	4
U13	Social S 7/Lang Arts pm	872	29	28		27	28			28	27	28	27.5	66.6	4
U14	Math/Science 6	867	29	28				30	22	29	26	28	26.8	66.6	4
U15	Lang Art/ Social S 6	871	29	28				26	30	26	29	28	27.8	66.6	4
U16	Lang Arts 6	866	29	28				28	27	30	27	29	28.0	66.6	4
U17	Science 6	862	17	28				28	27	29	28	26	28.0	66.6	4
U18	Spec Ed	862										1			
U19	Social Studies 6	871	29	28				25	23	31	30	27	27.3	66.6	4
U20	Math 6am/Math 7 pm	866	29	28				28	27	22	27	30	26.0	66.6	4
U21	Speech Classroom	802	27	28		2	2	2	2	2	2	2	2.0	100.0	6
U22	Office Small Group	392										1			
U23	Math 7 am/Math 6 pm	913	30	28				26	20	24	27	28	24.3	66.6	4
U24	Lang Arts 6	845	28	28				29	26	26	26	28	26.8	66.6	4
U25	Science 6	911	18	28				27	26	28	26	24	26.8	66.6	4
U26	Social Studies 6	856	29	28		1		25	25	29	28	27	21.6	83.3	5
	AVERAGE												23.3	67.3	4.0
	Max Capacity		1490	1433	884										
	Functional Capacity		**1192**	**1146**											
	2015-16 Enroll.	786													
	Actual Hourly Total					826	727	794	761	802	766	838			

Note: Greyed out rows indicated that those spaces are not added into the calculated sums

eppstein uhen : architects

Brookfield Central High School
Utilization Study

Room No.	Primary Use of Room (Subject)	S.F. Area	Based on Square Feet per Student of Room Size	Based on School Board Goal	Based on Total Square Feet 274,275	Periods 1B 7:55-9:29	2B 9:38-11:16	3B1 11:25-12:59	3B2 11:56-1:30	4B 1:39-3:13	Avrg Class Size	% of use	# periods used (4)
32	Physics	1449	29	28		24	31		30	24	27.3	100.0	4
33	Physics	1457	29	28		29			25	24	26.0	75.0	3
34	Spec Ed	493											
35	At Risk/Excel	601											
36	Biology	1457	29	28		18			28	30	25.3	75.0	3
37	Biology	1457	29	28		29			24	28	27.0	75.0	3
39	Science	1119	22	28			14		30	30	24.7	75.0	3
47	Spec Ed/At Risk	395											
55	Math	906	30	28		29	28	27			28.0	75.0	3
57	Spec Ed	372											
58	Math	717	24	28		24	19	23			22.0	75.0	3
59	Chemistry	1438	29	28		27	30		28		28.3	75.0	3
61	Science	1470	29	28		28	26		30		28.0	75.0	3
62	Math	719	24	28			16	26		26	22.7	75.0	3
63	Math	717	24	28		27		24		13	21.3	75.0	3
64	Chemistry	1474	29	28			11		24	28	21.0	75.0	3
66	Biology	1474	29	28		11	25		23	14	18.3	100.0	4
67	Math	717	24	28		1	16	30		28	18.8	100.0	4
68	Math	717	24	28		27		27		25	26.3	75.0	3
69	Math	1075	36	28		26	24			27	25.7	75.0	3
70	Math/Spec Ed	722											
71	Social Studies	906	30	28			24		23	12	19.7	75.0	3
72	Spec Ed	1312											
73	Math	872	29	28		23	26			26	25.0	75.0	3
76	Spec Ed	427											
77	Art	1891	38	28				13		18	15.5	50.0	2
82	Art	871	17	28		28	29				28.5	50.0	2
83	Art	2202	44	28		19	23	21		31	23.5	100.0	4
172	Health	984	33	28		30	32	31			31.0	75.0	3
175	Band	3354	67	67		52	33				42.5	50.0	2
183	Auto Shop	4630	93	28		15					15.0	25.0	1
191	Wood Shop	3448	69	28		17	17		7		13.7	75.0	3
195	CAD Lab	1602	32	28		16	9		30	12	16.8	100.0	4
198	MAC Lab	2318	46	28		18	21		22	18	19.8	100.0	4
199	Applied Tech	1990	40	28		13	22			9	14.7	75.0	3
2004	English	772	26	28		29			32	33	31.3	75.0	3
2005	Social Studies	842	28	28		1	18		32	30	20.3	100.0	4
2006	Social Studies	1047	35	28		20			20	33	24.3	75.0	3
2007	Economics	1162	39	28		16			33	27	25.3	75.0	3
2008	Social Studies	743	25	28		29					29.0	25.0	1
2009	Social Studies	740	25	28		27	29			26	27.3	75.0	3
2010	Social Studies	993	33	28			32		23	19	24.7	75.0	3
2011	Social Studies	728	24	28		28	18			27	24.3	75.0	3
2012	Social Studies	728	24	28			33		32	25	30.0	75.0	3
2013	Social Studies	728	24	28		28	24			30	27.3	75.0	3
2014	English	728	24	28		24	25			29	26.0	75.0	3
2015	English	728	24	28		19			33	32	28.0	75.0	3
2016	English	889	30	28		28			27	21	25.3	75.0	3
2017	English	728	24	28		17			27		22.0	50.0	2
2018	English	865	29	28		25	29			30	28.0	75.0	3
2019	English	728	24	28			22		30	26	26.0	75.0	3
2020	English	1003	33	28		27	28			30	28.3	75.0	3
2021	English	733	24	28		20	21			16	19.0	75.0	3
2024	TLS/AVID	860											
2025	Latin	805	27	28			24	24		24	24.0	75.0	3
2026	Math	733	24	28		22	12	20			18.0	75.0	3
2027	Spanish	599	20	28			30	24			27.0	50.0	2
2028	Soc St/Chinese	734	24	28		29		23			26.0	50.0	2
2029	Spanish	801	27	28			28	23		28	26.3	75.0	3
2030	Spanish	731	24	28		25		31		25	27.0	75.0	3
2031	German	701	23	28		20	27			21	22.7	75.0	3
2032	Spanish	917	31	28			23	20		17	20.0	75.0	3
2033	French	701	23	28			19	22		32	24.3	75.0	3
LL02	Fashion/Study Hall	1001	20	28		7	30		25		20.7	75.0	3
LL03	Business Ed	1222	41	28			17		21	29	22.3	75.0	3
LL08	Business Ed	1192	40	28		29	20		11		20.0	75.0	3
81	Computer Lab	962	24	28							0.0	0.0	0
1026	Computer Lab	770	19	28							0.0	0.0	0
2003	Computer Lab	999	25	28							0.0	0.0	0
LL06	Computer Lab	1057	26	28							0.0	0.0	0
LL09	Computer Lab	1057	26	28							0.0	0.0	0
AVERAGE											22.2	67.9	2.7
	Max Capacity		1922	1803	1133								
	Functional Capacity		**1537**	**1442**									
	2015-16 Enroll.	1330											
	Actual Hourly Total					1001	985	409	670	1033			

Note: Greyed out rows indicate that those learning spaces are not added into the calculated sums other than the Actual Hourly Total

eppstein uhen : architects

Brookfield East High School - "A" DAY
Utilization Study

Room No.	Primary Use of Room (Subject)	S.F. Area	Based on Square Feet per Student of Room Size	Based on School Board Goal	Based on Total Square Feet 297,988	Periods 1A 7:55-9:29	ResourceA	2A 9:38-11:16	3AEarly 11:25-12:59	3ALate 11:56-1:30	3ASplit	4A 1:39-3:13	Avrg Class Size	% of use	# periods used (5)
100	Main Office	1240													
100A	Work Room	170													
100B	Asst Princ	196													
100C	Asst Princ	169													
100D	Princ	226													
101	Science Office	376													
102	Science Lab	1416	28	28		31	16	28				23	24.5	80.0	4
103	Science Prep	211	as needed with room 102?												
104	Health Room	177													
105/107	Conf Room	270													
106	Sensory Room	131													
108	FACE	1263	25	28			29					25	27.0	40.0	2
109	Special Ed Room	570													
110	Special Ed Room	1017													
111	World Lan Office	695	as needed with rooms 112/113?												
112	World Lan	890	30	28		25	16	11				10	15.5	80.0	4
113	World Lan	710	24	28		21	16	27			18		20.5	80.0	4
114	Special Ed Room Speech	403													
115	World Lan	902	30	28			16	28			30	17	22.8	80.0	4
116	World Lan	914	30	28		19	15	27			29	17	21.4	100.0	5
117	World Lang	725	24	28		18	15				21	22	19.0	80.0	4
118	ESL	455													
119	Special Ed Room	725													
120	Special Ed Office	489	as needed with room 119?												
121	World Lan	722	24	28		14	16				28	28	21.5	80.0	4
122	Tech Lab	828	17	28			16	29					22.5	40.0	2
123	Copy Room	110													
125	World Lan Lab	1088	36	28			15						15.0	20.0	1
128	World Lan	920	31	28		28	16	29				27	25.0	80.0	4
129	Computer Science	957	24	28		16	18	18	29			16	19.4	100.0	5
130/131	Excellence Rm	1653													
132	Café	7088													
132A	Teacher Lounge	738													
132B	Kitchen	2020													
132E	Main Kitchen	1249													
133	AVID	866													
135	Physics	1388	28	28		25	17			20		26	22.0	80.0	4
137	Physics	1347	27	28		26	16	16		33		27	23.6	100.0	5
140	RtI Intervention	857	17	28			15	4					9.5	40.0	2
141	Art	1808	36	28		28	17					29	24.7	60.0	3
142	Business Ed	1218	41	28		13	16			30		14	0.0	80.0	4
143	Drama Work Rm	1464	29	28									0.0	0.0	0
145	Business Ed	1265	42	28		12	16	27	29			30	22.8	100.0	5
146	Art	1546	31	28		26	16	30		29			25.3	80.0	4
147	Applied Tech	3151	63	28			16			17		22	18.3	60.0	3
147B	Applied Tech	2855	as needed with room 147?												
148	Weight Rm	2378													
149	Applied Tech	1196	24	28		12	16	13					13.7	60.0	3
151	Applied Tech	1399	28	28		11	16					10	12.3	60.0	3
152	Applied Tech	1272	25	28									0.0	0.0	0
152A	Applied Tech	3200	64	28									0.0	0.0	0
153	Athletic Trainer	255													
159	Field House	35093	100	100		44		32		37		63	44.0	80.0	4
160	Girls Team Room	1296													
166	Health Rm	1020	34	28		25	15			28			22.7	60.0	3
167	Office Area	418													
168	Guidance Office	1410													
170	Science Office	217	as needed with room 171?												
171	LMC East Wing	1395													
172	Biology	1497	30	28		21	16	25	23			23	21.6	100.0	5
173	LMC Office	197													
174	Biology	1354	27	28		19	16	24	19				19.5	80.0	4
175	LMC	3873													
176	Biology	775	16	28									0.0	0.0	0
177	Biology	1362	27	28		1	30	32	25			29	23.4	100.0	5
178	Spartan Union	1369													
180	Art Display	530													
181	Choir	2789	80	80		28	18	45					30.3	60.0	3
182	Chemistry	1479	30	28		27	14	27	12				20.0	80.0	4
183	Chemistry	1278	26	28		25	17				28	27	24.3	80.0	4
184	Drama Rm	2590	52	28			16						16.0	20.0	1
185	Science Lab	1380	28	28		18	17	28	20			27	22.0	100.0	5
192	Orchestra	1592	32	32			16						16.0	20.0	1
193	Pool	7211													
194	Band Rm	2910	58	58		36	16						26.0	40.0	2
195	Boys Team Rm	2510													
196	Debate Office	268													
201	Tech Lab	987	20	28			16						16.0	20.0	1
202	English	711	24	28		13	16			19		26	18.5	80.0	4
203	English Office	795	as needed with room 202?												
204	English	795	27	28		15	16	30				30	22.8	80.0	4
205	English	724	24	28			15	10	14			30	17.3	80.0	4
206	English	779	26	28		30	17	24				23	23.5	80.0	4
207	English	727	24	28		2	17	13			30	29	18.2	100.0	5
208	English	930	31	28			16	1	30			28	18.8	80.0	4
209	English	871	29	28		11	17	25				29	20.5	80.0	4
210	English	883	29	28			16	26			28		23.3	60.0	3
211	English	445	15	28		32	16		30			25	25.8	80.0	4
212	English	1121	37	28		30	16	29	16				22.8	80.0	4
213	Math	871	29	28		19	16	1		10		27	14.6	100.0	5
214	Math	729	24	28			15	12			25	13	16.3	80.0	4
215	Math	729	24	28		26	17		29				24.0	60.0	3
216	Math	1085	36	28		15	14	30	22			14	19.0	100.0	5
217	Math	793	26	28		21	16	11				29	19.3	80.0	4
218	Math	720	24	28		21	15	23	30			23	22.4	100.0	5
219	Math	854	28	28		11	16	1		25		28	16.2	100.0	5
220	Math	748	25	28		15	16	23		30		25	21.8	100.0	5
221	Math	817	27	28		26		30	25			25	26.5	80.0	4
222	Social Sci	731	24	28		22	14	32	16				21.0	80.0	4
223	Math and Social Sci Office	727	as needed with room 222?												
224	Social Sci	715	24	28		29	15			29		25	24.5	80.0	4
225	Social Sci	720	24	28		29	16	30			29		26.0	80.0	4
226	Social Sci	744	25	28			18	24			30		24.0	60.0	3
227	Social Sci	920	31	28			16	18			27		20.3	60.0	3
228	Social Sci	736	25	28		19	16	25			30		22.5	80.0	4
229	Special Ed	448													
230	Social Sci	736	25	28		24	17	25				10	19.0	80.0	4
231	Special Ed	525													
232	Social Sci	736	25	28		26	16	31	31			31	27.0	100.0	5
233	Special Ed	862													
234	Social Sci	1059	35	28		29	16	28			29	24	25.2	100.0	5
235	Wrestling Balc	3331													
238	Pool Balc	2156													
AVERAGE													19.8	69.7	3.5
	Max Capacity		2084	2034	1231										
	Functional Capacity		**1667**	**1627**											
	2015-16 Enroll.	1254													
	Actual Hourly Total					1034	1003	1002	400	307	382	1006			

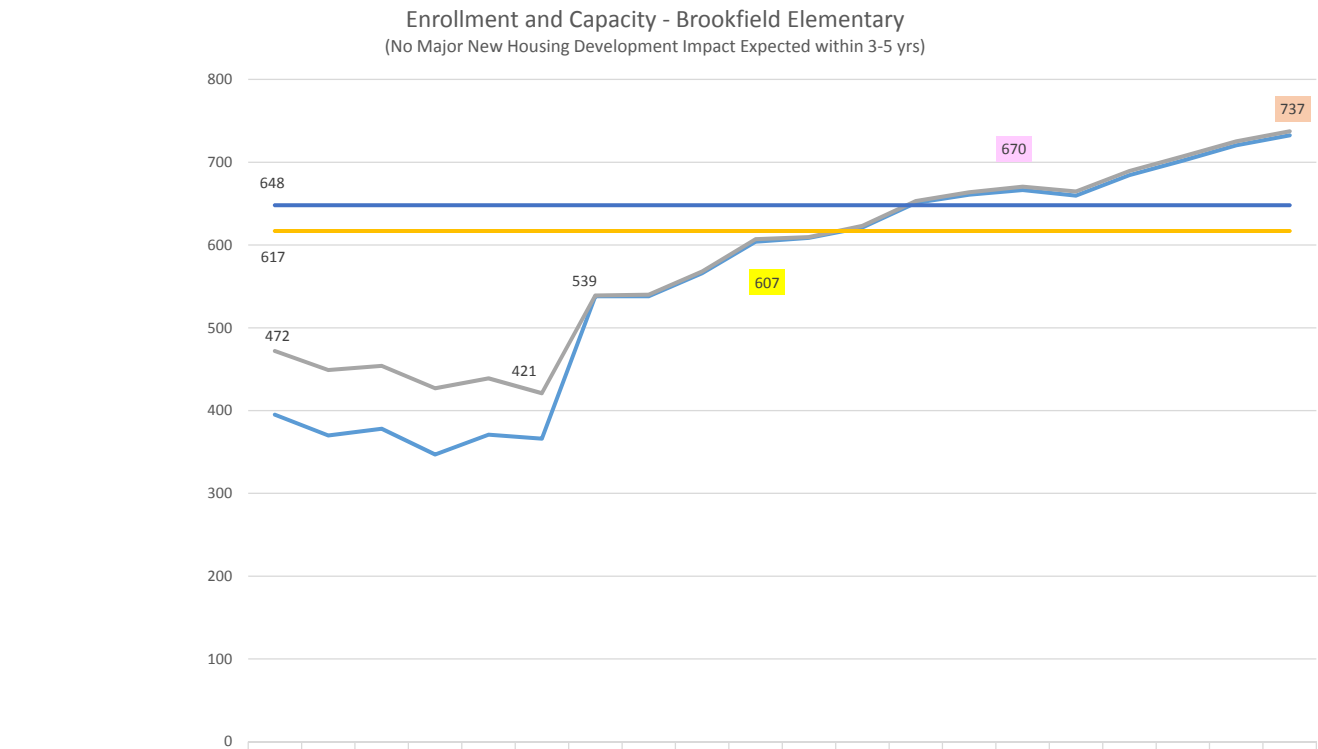
Note: Greyed out rows indicate that those learning spaces are not added into the calculated sums other than the Actual Hourly Total

eppstein uhen : architects

Brookfield East High School - "B" DAY
Utilization Study

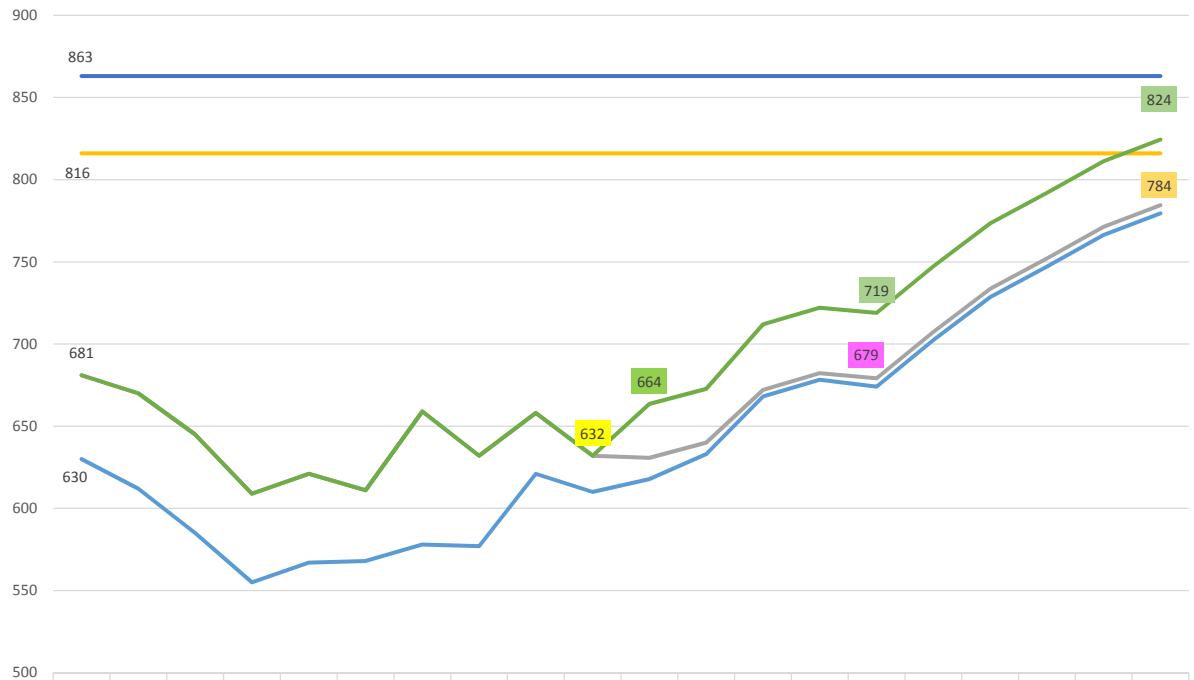
Room No.	Primary Use of Room (Subject)	S.F. Area	Based on Square Feet per Student of Room Size	Based on School Board Goal	Based on Total Square Feet 297,988	Periods 1B 7:55-9:29	ResourceB	2B 9:38-11:16	3BEarly 11:25-12:59	3BLate 11:56-1:30	3BSplit	4B 1:39-3:13	Avrg Class Size	% of use	# periods used (5)
100	Main Office	1240													
100A	Work Room	170													
100B	Asst Princ	196													
100C	Asst Princ	169													
100D	Princ	226													
101	Science Office	376													
102	Science Lab	1416	28	28		18	16	28				23	21.3	80.0	4
103	Science Prep	211	as needed with room 102?												
104	Health Room	177													
105/107	Conf Room	270													
106	Sensory Room	131													
108	FACE	1263	25	28			29					25	27.0	40.0	2
109	Special Ed Room	570													
110	Special Ed Room	1017													
111	World Lan Office	695	as needed with rooms 112/113?												
112	World Lan	890	30	28		25	16	11				10	15.5	80.0	4
113	World Lan	710	24	28		21	16	27			18		20.5	80.0	4
114	Special Ed Room Speech	403					9								
115	World Lan	902	30	28			16	27			30	17	22.5	80.0	4
116	World Lan	914	30	28		19	15	27			29	17	21.4	100.0	5
117	World Lang	725	24	28		18	15				21	22	19.0	80.0	4
118	ESL	455													
119	Special Ed Room	725													
120	Special Ed Office	489	as needed with room 119?												
121	World Lan	722	24	28		14	16				28	28	21.5	80.0	4
122	Tech Lab	828	17	28			16						16.0	20.0	1
123	Copy Room	110													
125	World Lan Lab	1088	36	28			15						15.0	20.0	1
128	World Lan	920	31	28		28	16	29				27	25.0	80.0	4
129	Computer Science	957	24	28		16	18	18	29			16	19.4	100.0	5
130/131	Excellence Rm	1653													
132	Café	7088													
132A	Teacher Lounge	738													
132B	Kitchen	2020													
132E	Main Kitchen	1249													
133	AVID	866													
135	Physics	1388	28	28			17	16		20		26	19.8	80.0	4
137	Physics	1347	27	28		26	16	15		33		27	23.4	100.0	5
140	RtI Intervention	857	17	28			15	4					9.5	40.0	2
141	Art	1808	36	28		28	17	18				29	23.0	80.0	4
142	Business Ed	1218	41	28		13	16			30		14	0.0	80.0	4
143	Drama Work Rm	1464	29	28									0.0	0.0	0
145	Business Ed	1265	42	28		12	16	27	29			30	22.8	100.0	5
146	Art	1546	31	28		26	16	30		29			25.3	80.0	4
147	Applied Tech	3151	63	28			16			17		22	18.3	60.0	3
147B	Applied Tech	2855	as needed with room 147?												
148	Weight Rm	2378													
149	Applied Tech	1196	24	28		12	16	13					13.7	60.0	3
151	Applied Tech	1399	28	28		11	16					10	12.3	60.0	3
152	Applied Tech	1272	25	28									0.0	0.0	0
152A	Applied Tech	3200	64	28									0.0	0.0	0
153	Athletic Trainer	255													
159	Field House	35093	100	100		44		32		37		63	44.0	80.0	4
160	Girls Team Room	1296													
166	Health Rm	1020	34	28		25	15			28			22.7	60.0	3
167	Office Area	418													
168	Guidance Office	1410													
170	Science Office	217	as needed with room 171?												
171	LMC East Wing	1395													
172	Biology	1497	30	28		21	16	25	23			23	21.6	100.0	5
173	LMC Office	197													
174	Biology	1354	27	28		19	16	24	19				19.5	80.0	4
175	LMC	3873													
176	Biology	775	16	28									0.0	0.0	0
177	Biology	1362	27	28		1	30	21	25			29	21.2	100.0	5
178	Spartan Union	1369													
180	Art Display	530													
181	Choir	2789	80	80		50	18	40					36.0	60.0	3
182	Chemistry	1479	30	28		27	14	27	12				20.0	80.0	4
183	Chemistry	1278	26	28		25	17				28	27	24.3	80.0	4
184	Drama Rm	2590	52	28			16						16.0	20.0	1
185	Science Lab	1380	28	28		18	17	28	20			27	22.0	100.0	5
192	Orchestra	1592	32	32		25	16	26					22.3	60.0	3
193	Pool	7211													
194	Band Rm	2910	58	58		44	16	31					30.3	60.0	3
195	Boys Team Rm	2510													
196	Debate Office	268													
201	Tech Lab	987	20	28			16						16.0	20.0	1
202	English	711	24	28		13	16			19		26	18.5	80.0	4
203	English Office	795	as needed with room 202?												
204	English	795	27	28		15	16	30				30	22.8	80.0	4
205	English	724	24	28		10	15		14			30	17.3	80.0	4
206	English	779	26	28		30	17	25				23	23.8	80.0	4
207	English	727	24	28			17	12			30	29	22.0	80.0	4
208	English	930	31	28		17	16		30			28	22.8	80.0	4
209	English	871	29	28		11	17	25				29	20.5	80.0	4
210	English	883	29	28			16	26			28		23.3	60.0	3
211	English	445	15	28		32	16		30			25	25.8	80.0	4
212	English	1121	37	28		30	16	29	16				22.8	80.0	4
213	Math	871	29	28		19	16			10		27	18.0	80.0	4
214	Math	729	24	28			15	12			25	13	16.3	80.0	4
215	Math	729	24	28		26	17	15	29				21.8	80.0	4
216	Math	1085	36	28		15	14	30	22			14	19.0	100.0	5
217	Math	793	26	28		21	16	11				29	19.3	80.0	4
218	Math	720	24	28		21	15	23	30			23	22.4	100.0	5
219	Math	854	28	28		11	16			25		28	20.0	80.0	4
220	Math	748	25	28		15	16	23		30		25	21.8	100.0	5
221	Math	817	27	28		26		30	25			25	26.5	80.0	4
222	Social Sci	731	24	28		22	14	31	16				20.8	80.0	4
223	Math and Social Sci Office	727	as needed with room 222?												
224	Social Sci	715	24	28		29	15			29		25	24.5	80.0	4
225	Social Sci	720	24	28		29	16	30			29		26.0	80.0	4
226	Social Sci	744	25	28			18	24			30		24.0	60.0	3
227	Social Sci	920	31	28		32	16	26			27		25.3	80.0	4
228	Social Sci	736	25	28		19	16	25			30		22.5	80.0	4
229	Special Ed	448					8								
230	Social Sci	736	25	28		24	17	13				10	16.0	80.0	4
231	Special Ed	525													
232	Social Sci	736	25	28		30	16	31	31			31	27.8	100.0	5
233	Special Ed	862				2	17	2				5			
234	Social Sci	1059	35	28		29	16	28			29	24	25.2	100.0	5
235	Wrestling Balc	3331													
238	Pool Balc	2156													
AVERAGE													20.1	70.3	3.5
	Max Capacity		2084	2034	1231										
	Functional Capacity		**1667**	**1627**											
	2015-16 Enroll.	1254													
	Actual Hourly Total					1114	1037	1045	400	307	382	1011			

Note: Greyed out rows indicate that those learning spaces are not added into the calculated sums other than the Actual Hourly Total



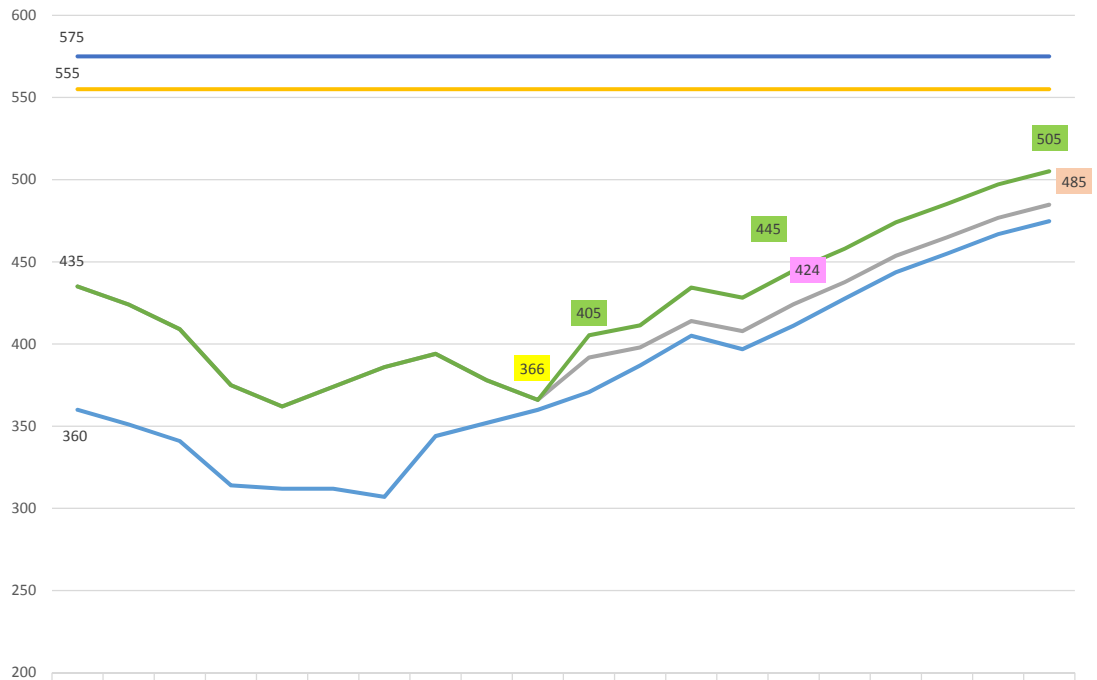
	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	24-25	25-26
Resident Enrollment	395	370	378	347	371	366	538	538	566	604	609	621	651	661	666	660	684	702	720	732
Total Enrollment	472	449	454	427	439	421	539	540	568	607	610	623	653	664	670	665	689	707	725	737
Capacity - Based on Sq Ft	617	617	617	617	617	617	617	617	617	617	617	617	617	617	617	617	617	617	617	617
Capacity - Based on Class Size	648	648	648	648	648	648	648	648	648	648	648	648	648	648	648	648	648	648	648	648

Enrollment and Capacity - Burleigh Elementary



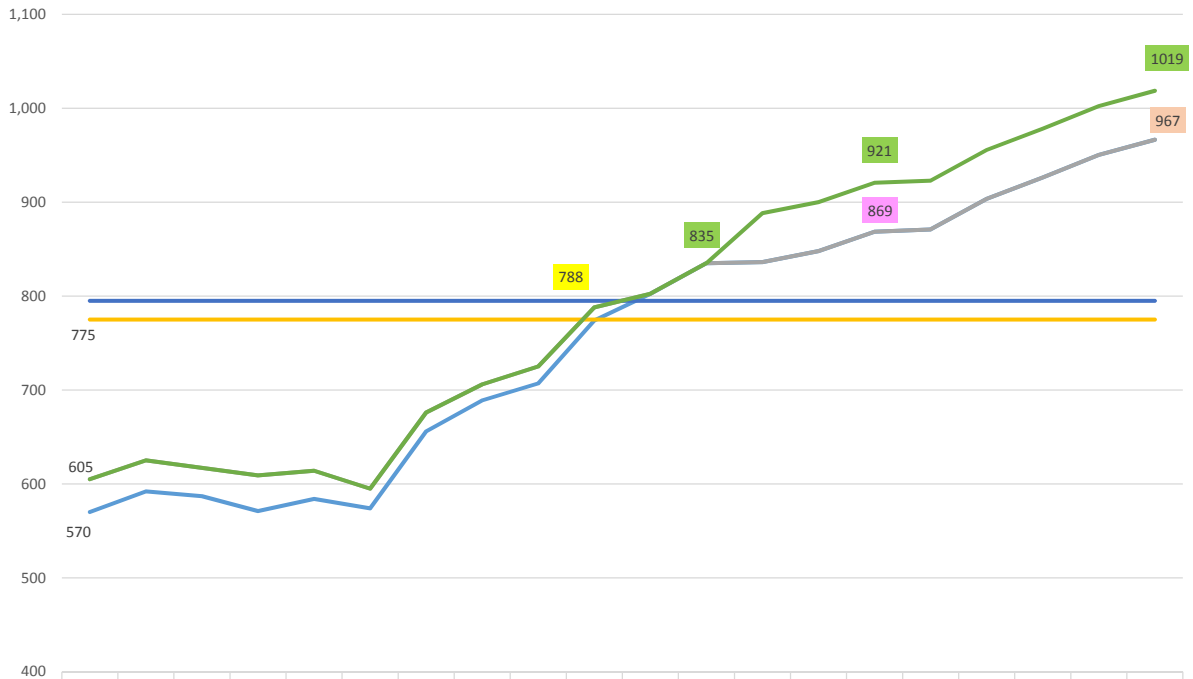
	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	24-25	25-26
Resident Enrollment	630	612	585	555	567	568	578	577	621	610	618	633	668	678	674	702	729	747	766	779
Total Enrollment (w/o New Housing)	681	670	645	609	621	611	659	632	658	632	631	640	672	682	679	707	734	752	771	784
Capacity based on Sq Ft	816	816	816	816	816	816	816	816	816	816	816	816	816	816	816	816	816	816	816	816
Capacity based on Class Size	863	863	863	863	863	863	863	863	863	863	863	863	863	863	863	863	863	863	863	863
Enrollment with New Housing (Est.)	681	670	645	609	621	611	659	632	658	632	664	673	712	722	719	747	773	792	811	824

Enrollment and Capacity - Dixon Elementary

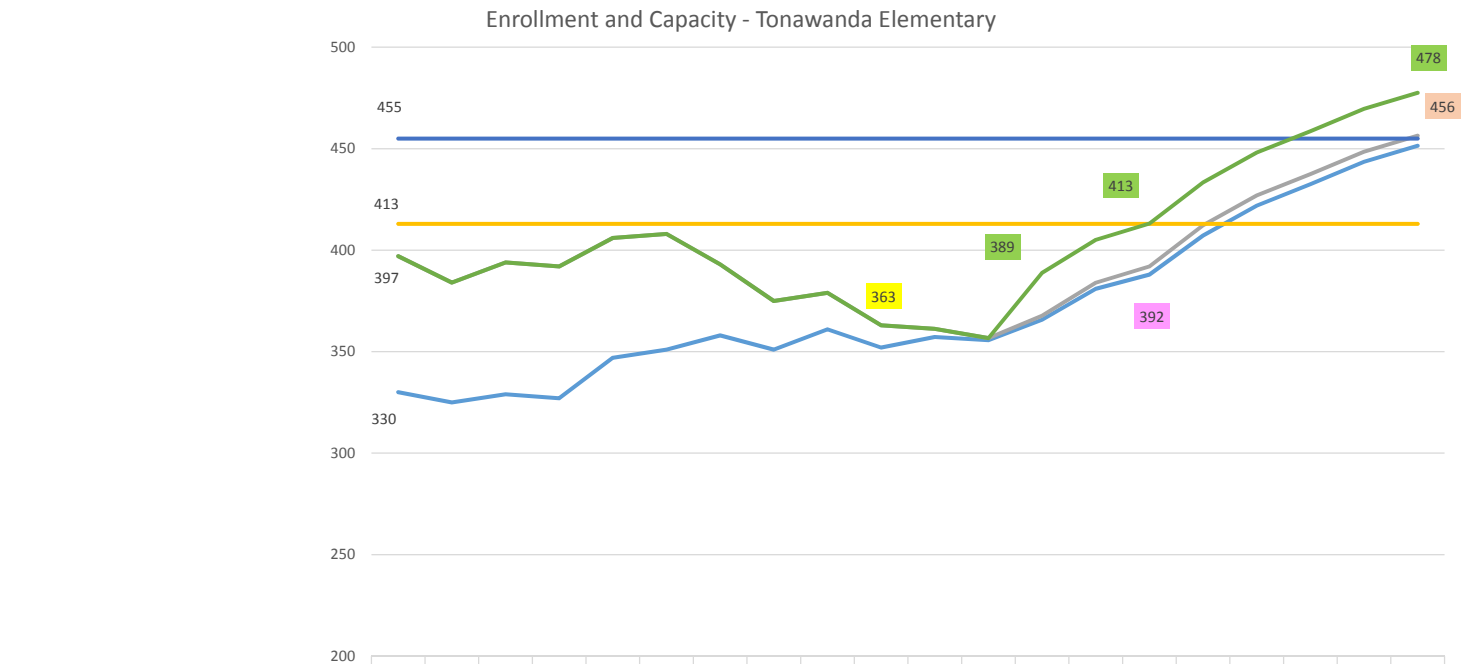


	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	24-25	25-26
Resident Enrollment	360	351	341	314	312	312	307	344	352	360	371	387	405	397	411	428	444	455	467	475
Total Enrollment	435	424	409	375	362	374	386	394	378	366	392	398	414	408	424	438	454	465	477	485
Capacity based on Sq Ft	555	555	555	555	555	555	555	555	555	555	555	555	555	555	555	555	555	555	555	555
Capacity based on Class Size	575	575	575	575	575	575	575	575	575	575	575	575	575	575	575	575	575	575	575	575
Enrollment with New Housing (est.) (Moderate)	435	424	409	375	362	374	386	394	378	366	405	411	434	428	445	458	474	485	497	505

Enrollment and Capacity - Swanson Elementary



	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	24-25	25-26
Resident Enrollment	570	592	587	571	584	574	656	689	707	774	802	835	836	848	869	871	903	926	950	967
Total Enrollment	605	625	617	609	614	595	676	706	725	788	802	835	836	848	869	871	903	926	950	967
Capacity based on Sq Ft	775	775	775	775	775	775	775	775	775	775	775	775	775	775	775	775	775	775	775	775
Capacity based on Class Size	795	795	795	795	795	795	795	795	795	795	795	795	795	795	795	795	795	795	795	795
Enrollment with New Housing Est. (Moderate)	605	625	617	609	614	595	676	706	725	788	802	835	888	900	921	923	956	978	1002	1019



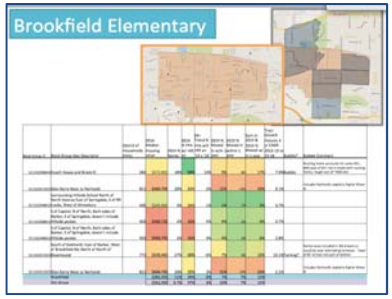
	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	24-25	25-26
Resident Enrollment	330	325	329	327	347	351	358	351	361	352	357	356	366	381	388	407	422	432	444	451
Total Enrollment	397	384	394	392	406	408	393	375	379	363	361	357	368	384	392	412	427	437	449	456
Capacity based on Sq Ft	413	413	413	413	413	413	413	413	413	413	413	413	413	413	413	413	413	413	413	413
Capacity based on Class Size	455	455	455	455	455	455	455	455	455	455	455	455	455	455	455	455	455	455	455	455
Enrollment with New Housing Est. (Moderate)	397	384	394	392	406	408	393	375	379	363	361	357	389	405	413	433	448	459	470	478

Housing Turnover Analysis

Neighborhoods with potential for hyperflip analyzed

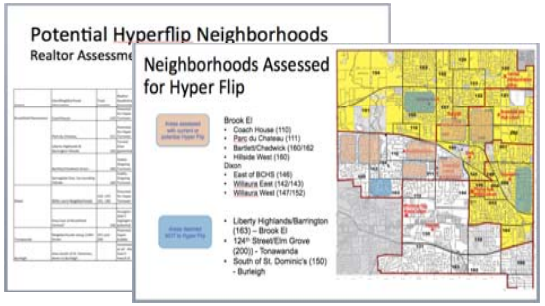
Look at geographic areas with potential for housing hyper shift from older resident to young family with school age

- % of Households with >65 yo (>35%)
- % households moved in last year (>10%), adjust for rental
- Average sales price < $300K



Review "Data Geographies" for Turnover Potential with Realtor market experience

- Neighborhoods dismissed – ongoing turnover include in GPR (grade progression ratios)
- Neighborhoods added to list for assessment



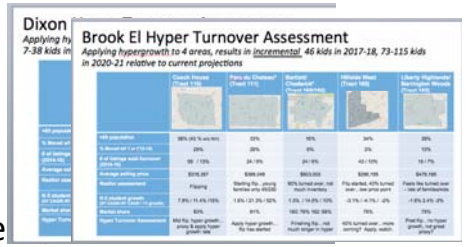
Assess geographies for housing sales growth and student growth

- 2 years housing sales
- Student growth rates
- Identify 'hyper growth' tracts for proxy student progression ratios to apply to 'potential hyperflip neighborhoods

Proxies
- Parc Du Chateau, Willaura East, Bartlett/Chadwick
- Aggressive (2Y GPR) and Conservative (2Y, 5Y GPR applied for ranges

Apply adjusted "hyper growth" GPRs to potential hyperflip neighborhoods

- 5 year and 2 year proxy GPRs 6-15% higher than tract GPRs
- Resulted scenario adding 46 kids to Brook El in 2017-18, 15 kids to Dixon
- Enrollment forecast not adjusted due unpredictability of events, data



Neighborhoods Assessed for Hyper Flip

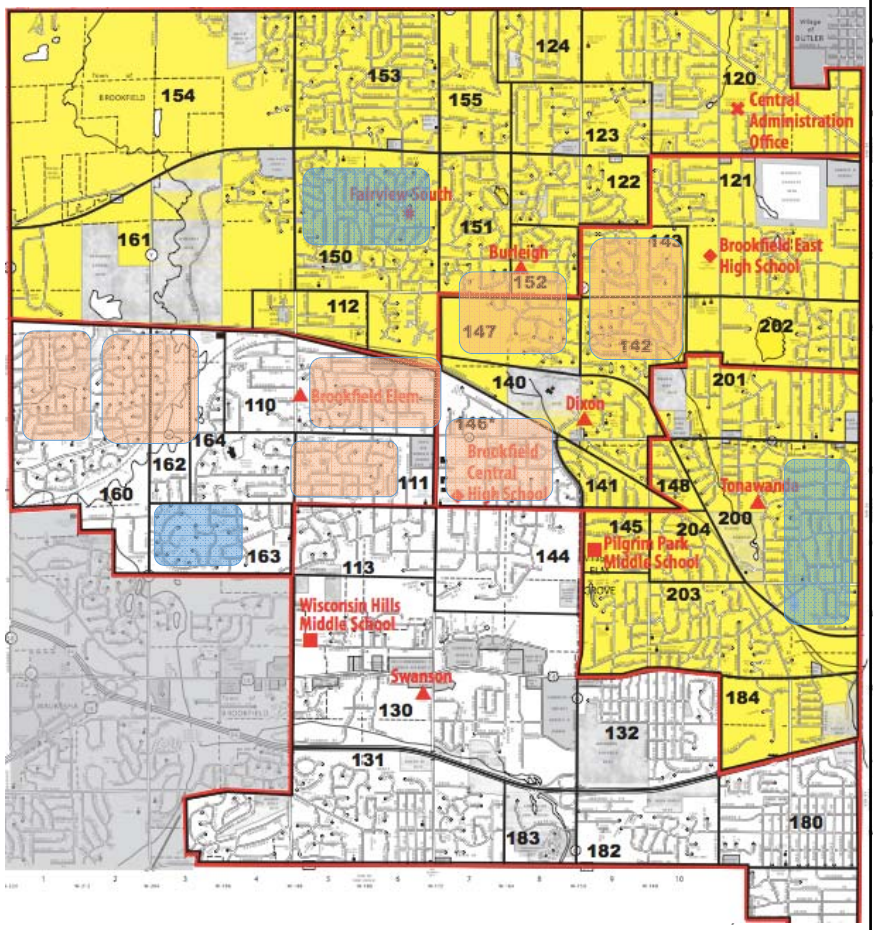
Areas assessed with current or potential Hyper Flip

Brook El
- Coach House (110)
- Parc du Chateau (111)
- Bartlett/Chadwick (160/162
- Hillside West (160)

Dixon
- East of BCHS (146)
- Willaura East (142/143)
- Willaura West (147/152)

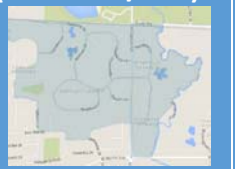
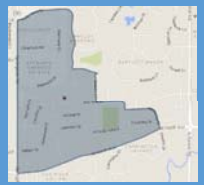
Areas deemed NOT to Hyper Flip

- Liberty Highlands/Barrington (163) – Brook El
- 124th Street/Elm Grove (200)) - Tonawanda
- South of St. Dominic's (150) - Burleigh



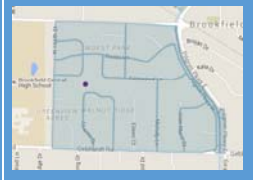
Brook El Hyper Turnover Assessment

Applying hypergrowth to 4 areas, results in incremental 46 kids in 2017-18, 73-115 kids in 2020-21 relative to current projections

	Coach House (Tract 110)	Parc du Chateau* (Tract 111)	Bartlett/ Chadwick* (Tract 160/162)	Hillside West (Tract 160)	Liberty Highlands/ Barrington Woods (Tract 163)
					
>65 population	58% (43 % w/o NH)	33%	16%	34%	39%
% Moved w/I 1 yr ('13-14)	29%	29%	6%	2%	10%
# of listings sold /turnover (2014-16)	58 / 13%	24 / 9%	24 / 6%	43 / 10%	15 / 7%
Average selling price	$318,357	$389,048	$603,003	$296,195	$479,195
Realtor assessment	Flipping	Starting flip…young families only 45/230	60% turned over, not much inventory	Flip started, 40% turned over…low price point	Feels like turned over – lots of families/kids
K-5 student growth (5Y CAGR/ #Y CAGR / 1Y growth)	7.8% / 11.4% /15%	1.6% / 21.3% / 52%	1.3% / 14.5% / 10%	-3.1% / -4.1% / -2%	-1.6% 2.4% -2%
Market share	83%	81%	160: 76% 162: 66%	76%	75%
Hyper Turnover Assessment	Mid flip, hyper growth…proxy & apply hyper growth rate	Apply hyper growth…flip has started	Finishing flip…not much longer in hyper	40% turned over…more coming? Apply, watch.	Post flip…no hyper growth, not great proxy?

Dixon Hyper Turnover Assessment

Applying hyper growth to 3 areas, results in incremental 15 kids in 2017-18, 7-38 kids in 2020-21 relative to current projections

	Willaura East* (Tract 140/142))	Willaura West (Tract 147/152)	BCHS East (Tract 146)
			
>65 population	27%	29%	46%
% Moved w/I 1 yr ('13-14)	14%	14%	2%
# of listings sold /turnover (2014-16)	54 / 17%	19 / 6%	23 / 10%
Average selling price	$312,731	$496,458	$277,219
Realtor assessment	50% turnoved over	Flipping – fast – lots of turnover next five years	Starting flip…Much more to come
K-5 student growth (5Y CAGR/ #Y CAGR / 1Y growth)	6.4% / 10.2% / 3%	6.6% / 5.5% / 20%	2.1% / 17.1% / 9%
Market share	140: 84% 142: 97%	147: 78%, 152: 75%	76%
Hyper Turnover Assessment	Mid flip, hyper growth…proxy & apply hyper growth rate	Apply hyper growth…flip has started	Early Hyper Flip

9

New SF Housing Starts in Brookfield – Initial Impact Analysis**

By 2015-16, 48 students were enrolled from 91 homes built in 2013-14

			Student Impact at Permitted Addresses				
Permit Issue Year	Approx Permits Issued (some dates in odd formats)	Unique Addresses w/ ESD Students*	2013-14	2014-15	2015-16 (some moved to next grade, some new, some no longer listed, etc.)		2015-16 Student Density per Permit Issued *(Home on Lot NOT confirmed)*
2013	35	12	0	15	18	Only 1/3 of homes permitted have students in ESD as of 2015-16 (may be < age 5, may be going to private, etc.)	0.51
2014	56	15	2	3	30	Not seeing full effect of 2014 builds yet	0.54
2015	32	2	0	2	1	Not seeing effect of these new homes yet	
2016 through June	25	1	0	0	1	Not seeing effect of these new homes yet	
Total	148		2	20	50		

*Did not count 2 that appear to be re-builds, etc.

** Not sure how long it takes for student density to "maximize" in new homes… At what point any young families who move in have multiple children in schools, for example. Many move in when children are < age 5 and continue to have siblings in additional years, so these "initial impacts" are presumed to be low relative to the longer view impact of a new home in the community.

Recent SF Development was used to Estimate New SF Impact

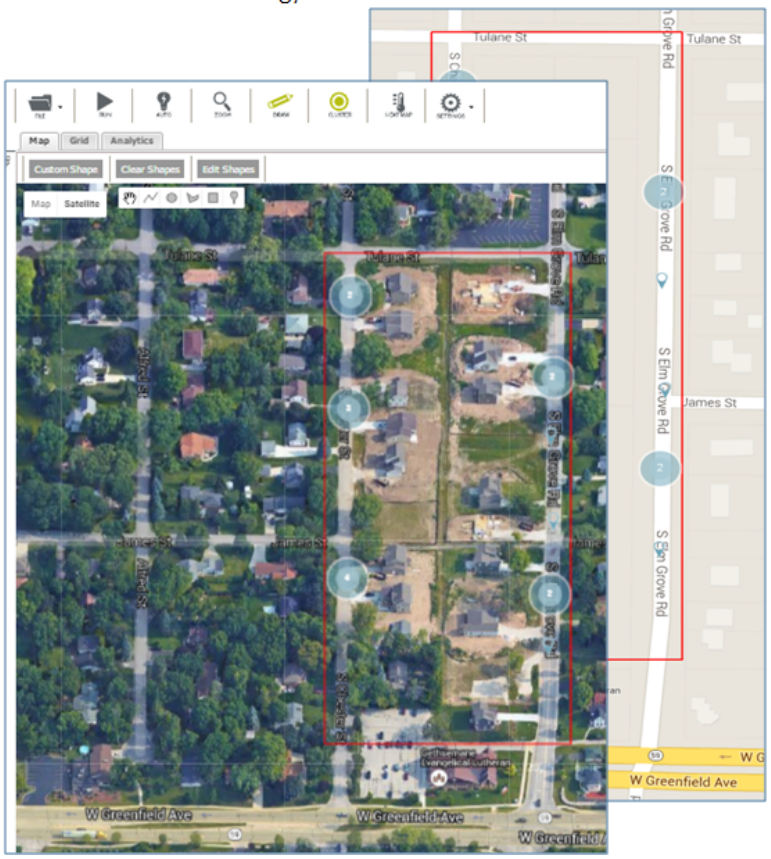
148 New SF home permits issued in City of Brookfield from 2013 to June 2016 (25 were Linfield Crossing)

- Linfield Crossing - Tract 180
- 1000-1300 blocks of Elm Grove Road and S. Chester Street, South of Tulane, N of Greenfield Ave.
- 25 newer SF homes (14 on S. Elm Grove Rd; 11 on S. Chester St.) – All building permits issued Nov 2013-Nov 2014 (All Lots Built)

- School year of first occupancy = 2014 – 15
- 1/8/16 Enrollment = 16 students from 10 homes
- Other homes may have no children, non-school-aged children (younger or older), and/or children in private schools

- Student Density = 0.64

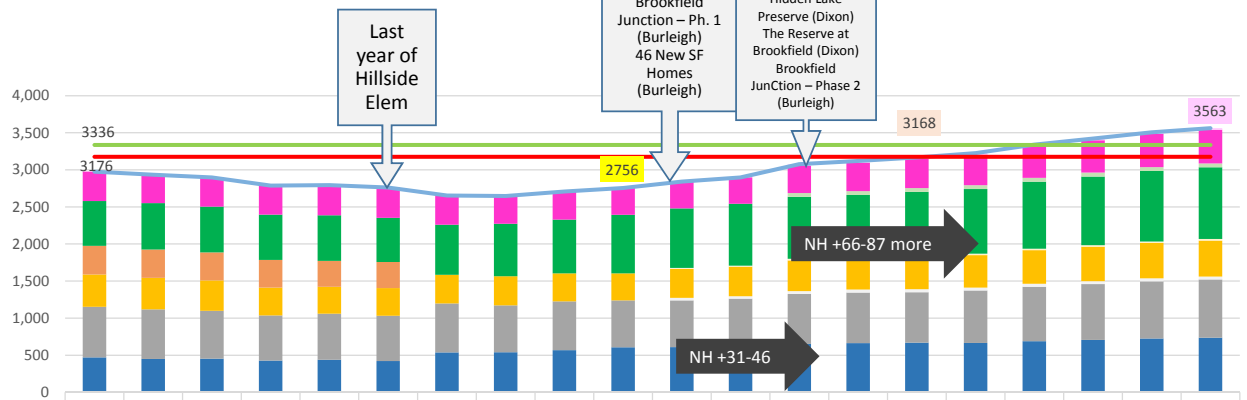
Grades	Students	Density
K-5	9	0.36
6-8	3	0.12
9-12	4	0.16
K-12	16	0.64



New Single Family and 8 new multi-family developments in process or being proposed.				**Low Impact Estimate (based on average # of students over 5 years in all 2-3 bedroom units)**				**Moderate Impact Estimate (based on density of students in 2015-16 in all 2-3 bedroom units)**			
Major Residential Development	**Tract**	**Current School**	**Units**	**K-5**	**6-8**	**9-12**	**Total**	**K-5**	**6-8**	**9-12**	**Total**
2016-17 First Year of Occupancy 1 Single Family Development 3 Multi-family Developments	121, 161, 112, 120	Dixon and Burleigh	46 111 (2-3 bedroom)	31	15	20	65	46	21	31	98
2017-18 First Year of Occupancy No incremental units				0	0	0	0	0	0	0	0
2018-19 First Year of Occupancy 5 Multi-family Developments	184, 183, 130, 202, 112	Tonawanda, Swanson, Dixon, Burleigh	330 (2-3 bedroom)	66	30	34	131	87	32	45	164
Total Multi-family 2-3 bedroom units			441	89	40	46	175	116	43	60	219
Student density in 2-3 bedroom multi-family units (Based on proxies)				.20	.09	.10	.40	.26	.10	.14	.50
Total Single Family units			46	8	5	8	21	17	10	16	43
Student density in Single Family Units (Based on current district density)				.18	.11	.18	.47	.37	.22	.35	.93
Projected impact of 8 new housing developments				97	45	54	196	133	53	76	262

Projected Elementary School Enrollment

With 9 new developments (742 MF units + 46 SF homes) … *Updated on 7/29/16*

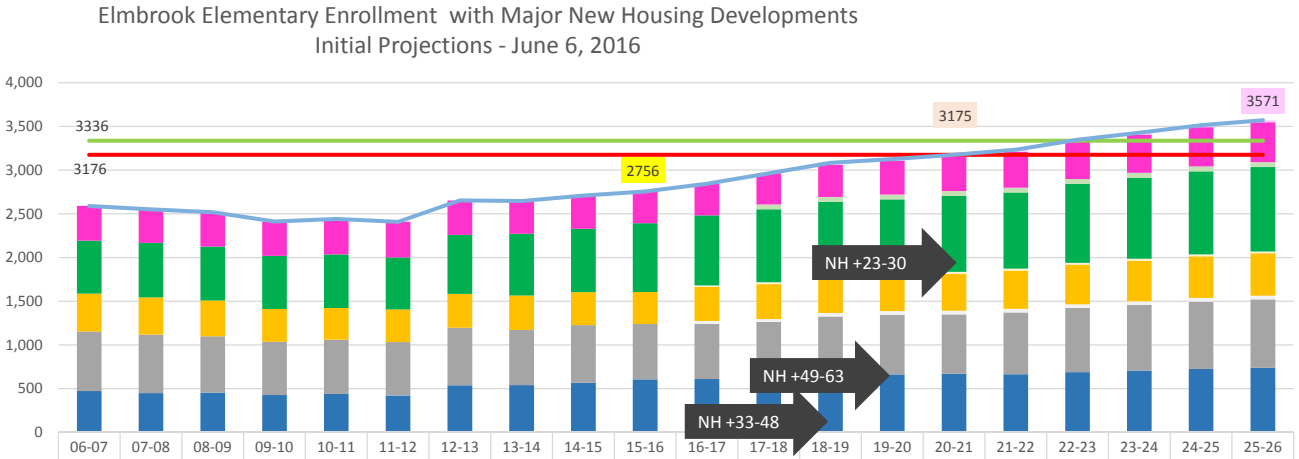


	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	24-25	25-26
Tonawanda Elem - Additional New Housing Est.	0	0	0	0	0	0	0	0	0	0	0	0	21	21	21	21	21	21	21	21
Tonawanda Elem - Total Enrollment	397	384	394	392	406	408	393	375	379	363	361	357	368	384	392	412	427	437	449	456
Swanson Elem - Additional New Housing Est.	0	0	0	0	0	0	0	0	0	0	0	0	52	52	52	52	52	52	52	52
Swanson Elem - Total Enrollment	605	625	617	609	614	595	676	706	725	788	802	835	836	848	869	871	903	926	950	967
Hillside Elem - Total Enrollment	386	383	379	375	351	352	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dixon Elem - Additional New Housing Est.	0	0	0	0	0	0	0	0	0	0	13	13	20	20	20	20	20	20	20	20
Dixon Elem - Total Enrollment	435	424	409	375	362	374	386	394	378	366	392	398	414	408	424	438	454	465	477	485
Burleigh Elem - Additional New Housing Est.	0	0	0	0	0	0	0	0	0	0	33	33	40	40	40	40	40	40	40	40
Burleigh Elem - Total Enrollment	681	670	645	609	621	611	659	632	658	632	631	640	672	682	679	707	734	752	771	784
Brookfield Elem - Additional New Housing Estimate	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Brookfield Elem - Total Enrollment (Res & Non Res)	472	449	454	427	439	421	539	540	568	607	610	623	653	664	670	665	689	707	725	737
Total Elementary w/ New Housing Projection	2976	2935	2898	2787	2793	2761	2653	2647	2708	2756	2842	2898	3076	3119	3168	3226	3341	3421	3506	3563
Capacity based on Sq Ft	3176	3176	3176	3176	3176	3176	3176	3176	3176	3176	3176	3176	3176	3176	3176	3176	3176	3176	3176	3176
Capacity based on Class Size	3336	3336	3336	3336	3336	3336	3336	3336	3336	3336	3336	3336	3336	3336	3336	3336	3336	3336	3336	3336

Total Elem Enrollment (w/o Major New Housing)	2976	2935	2898	2787	2793	2761	2653	2647	2708	2756	2796	2853	2943	2986	3034	3093	3207	3288	3372	3430
Total Elem - Additional New Housing Estimate	0	0	0	0	0	0	0	0	0	0	46	46	133	133	133	133	133	133	133	133

Historic & Projected Elementary School Enrollment

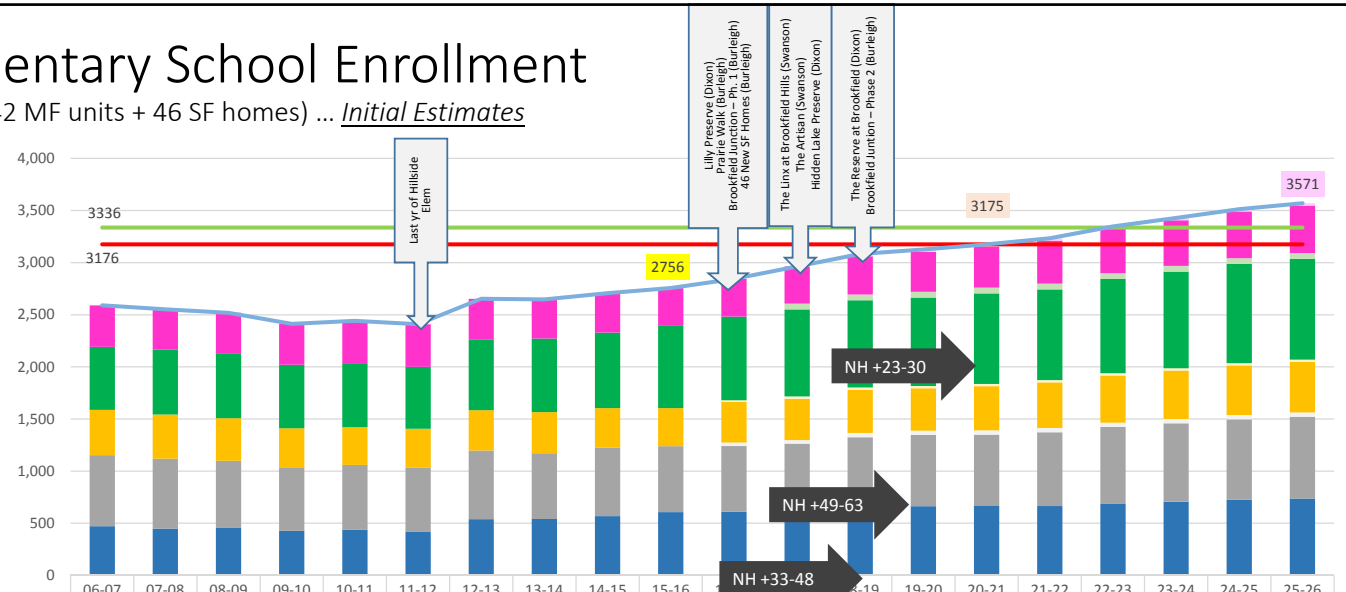
With 8 new developments (742 MF units + 46 SF homes) … Initial Estimates… Still fine tuning



	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	24-25	25-26
Tonawanda Elem - New Housing Projection	0	0	0	0	0	0	0	0	0	0	0	0	23	23	23	23	23	23	23	23
Tonawanda Elem - Total Enrollment	397	384	394	392	406	408	393	375	379	363	361	357	368	384	392	412	427	437	449	456
Swanson Elem - New Housing Projection	0	0	0	0	0	0	0	0	0	0	0	55	55	55	55	55	55	55	55	55
Swanson Elem - Total Enrollment	605	625	617	609	614	595	676	706	725	788	802	835	836	848	869	871	903	926	950	967
Dixon Elem - New Housing Projection	0	0	0	0	0	0	0	0	0	0	14	22	22	22	22	22	22	22	22	22
Dixon Elem - Total Enrollment	435	424	409	375	362	374	386	394	378	366	392	398	414	408	424	438	454	465	477	485
Burleigh Elem - New Housing Projection	0	0	0	0	0	0	0	0	0	0	34	34	41	41	41	41	41	41	41	41
Burleigh Elem - Total Enrollment	681	670	645	609	621	611	659	632	658	632	631	640	672	682	679	707	734	752	771	784
Brookfield Elem - New Housing Projection	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Brookfield Elem - Total Enrollment (Res & Non Res)	472	449	454	427	439	421	539	540	568	607	610	623	653	664	670	665	689	707	725	737
Capacity - Low (90% of SF Capacity)	3176	3176	3176	3176	3176	3176	3176	3176	3176	3176	3176	3176	3176	3176	3176	3176	3176	3176	3176	3176
Capacity - High (90% of Board Class Size Cap.)	3336	3336	3336	3336	3336	3336	3336	3336	3336	3336	3336	3336	3336	3336	3336	3336	3336	3336	3336	3336
Total Elementary w/ New Housing Projection	2590	2552	2519	2412	2442	2409	2653	2647	2708	2756	2844	2964	3084	3127	3175	3234	3348	3429	3513	3571

Projected Elementary School Enrollment

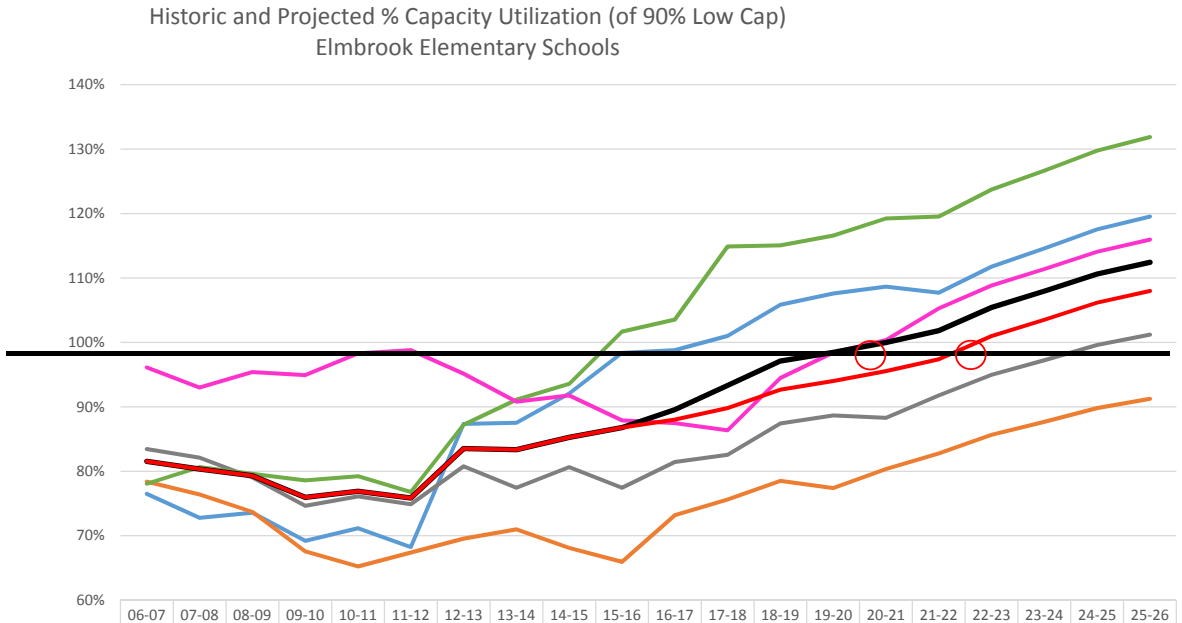
With 8 new developments (742 MF units + 46 SF homes) … *Initial Estimates*



	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	24-25	25-26
Tonawanda Elem - New Housing Projection	0	0	0	0	0	0	0	0	0	0	0	0	23	23	23	23	23	23	23	23
Tonawanda Elem - Total Enrollment	397	384	394	392	406	408	393	375	379	363	361	357	368	384	392	412	427	437	449	456
Swanson Elem - New Housing Projection	0	0	0	0	0	0	0	0	0	0	0	55	55	55	55	55	55	55	55	55
Swanson Elem - Total Enrollment	605	625	617	609	614	595	676	706	725	788	802	835	836	848	869	871	903	926	950	967
Dixon Elem - New Housing Projection	0	0	0	0	0	0	0	0	0	0	14	22	22	22	22	22	22	22	22	22
Dixon Elem - Total Enrollment	435	424	409	375	362	374	386	394	378	366	392	398	414	408	424	438	454	465	477	485
Burleigh Elem - New Housing Projection	0	0	0	0	0	0	0	0	0	0	34	34	41	41	41	41	41	41	41	41
Burleigh Elem - Total Enrollment	681	670	645	609	621	611	659	632	658	632	631	640	672	682	679	707	734	752	771	784
Brookfield Elem - New Housing Projection	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Brookfield Elem - Total Enrollment (Res & Non Res)	472	449	454	427	439	421	539	540	568	607	610	623	653	664	670	665	689	707	725	737
Capacity - Low (90% of SF Capacity)	3176	3176	3176	3176	3176	3176	3176	3176	3176	3176	3176	3176	3176	3176	3176	3176	3176	3176	3176	3176
Capacity - High (90% of Board Class Size Cap.)	3336	3336	3336	3336	3336	3336	3336	3336	3336	3336	3336	3336	3336	3336	3336	3336	3336	3336	3336	3336
Total Elementary w/ New Housing Projection	2590	2552	2519	2412	2442	2409	2653	2647	2708	2756	2844	2964	3084	3127	3175	3234	3348	3429	3513	3571

Historic & Projected Elementary School % Capacity Utilization

With 8 new developments (742 MF units + 46 SF homes) … Initial Estimates… Still fine tuning

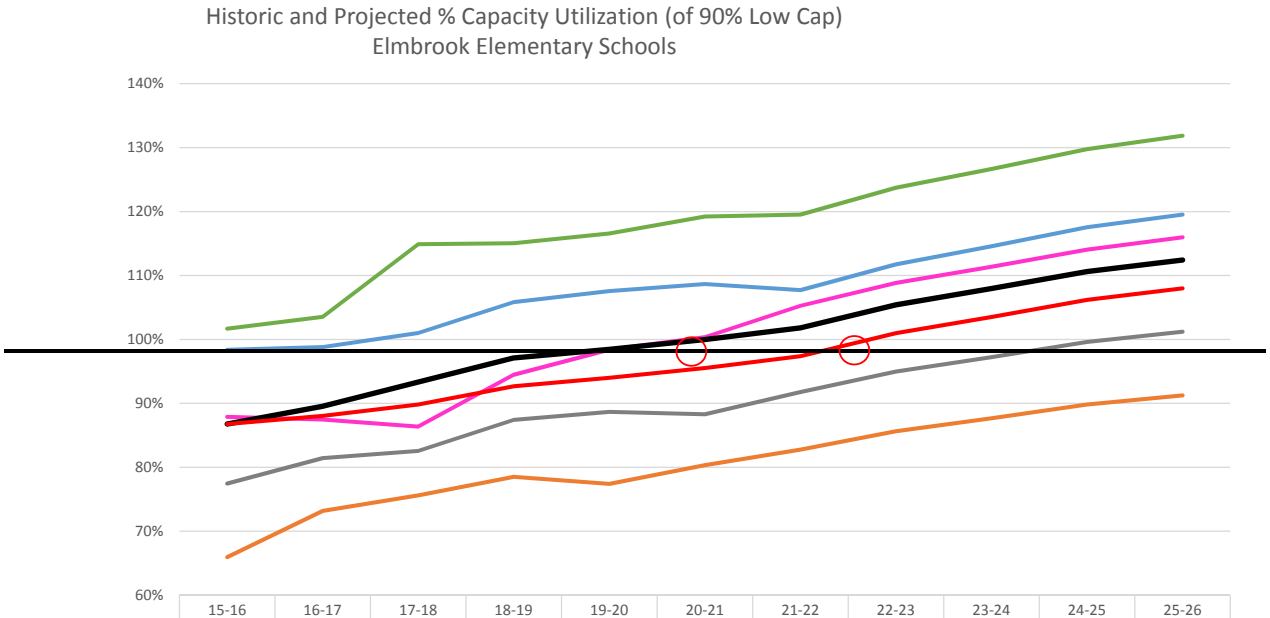


Note: Capacity Utilization across All Elem Schools (Red & Black Lines) would be lower from 2006-07 to 2011-12 if the capacity at Hillside were added in those years.

	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	24-25	25-26
Brookfield Elem w/ New Housing Projection	76%	73%	74%	69%	71%	68%	87%	88%	92%	98%	99%	101%	106%	108%	109%	108%	112%	115%	118%	120%
Burleigh Elem w/ New Housing Projection	83%	82%	79%	75%	76%	75%	81%	77%	81%	77%	81%	83%	87%	89%	88%	92%	95%	97%	100%	101%
Dixon Elem w/ New Housing Projection	78%	76%	74%	68%	65%	67%	70%	71%	68%	66%	73%	76%	79%	77%	80%	83%	86%	88%	90%	91%
Swanson Elem w/ New Housing Projection	78%	81%	80%	79%	79%	77%	87%	91%	94%	102%	104%	115%	115%	117%	119%	120%	124%	127%	130%	132%
Tonawanda Elem w/ New Housing Projection	96%	93%	95%	95%	98%	99%	95%	91%	92%	88%	87%	86%	94%	98%	100%	105%	109%	111%	114%	116%
Total Elem w/ New Housing Projection	82%	80%	79%	76%	77%	76%	84%	83%	85%	87%	90%	93%	97%	98%	100%	102%	105%	108%	111%	112%
Total Elem WITHOUT New Housing Projection	82%	80%	79%	76%	77%	76%	84%	83%	85%	87%	88%	90%	93%	94%	96%	97%	101%	104%	106%	108%

Historic & Projected Elementary School % Capacity Utilization

With 8 new developments (742 MF units + 46 SF homes) … Initial Estimates… Still fine tuning

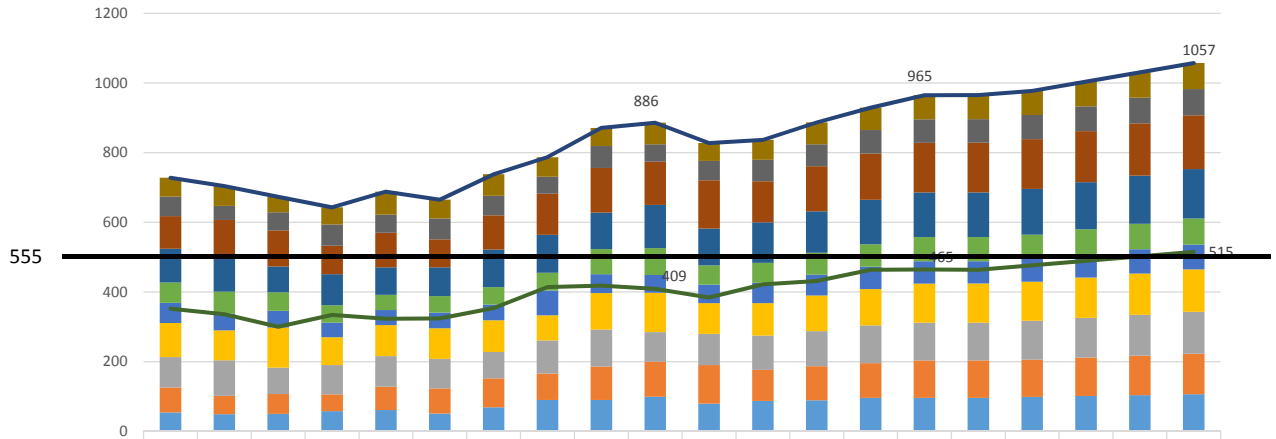


	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	24-25	25-26
Brookfield Elem w/ New Housing Projection	98%	99%	101%	106%	108%	109%	108%	112%	115%	118%	120%
Burleigh Elem w/ New Housing Projection	77%	81%	83%	87%	89%	88%	92%	95%	97%	100%	101%
Dixon Elem w/ New Housing Projection	66%	73%	76%	79%	77%	80%	83%	86%	88%	90%	91%
Swanson Elem w/ New Housing Projection	102%	104%	115%	115%	117%	119%	120%	124%	127%	130%	132%
Tonawanda Elem w/ New Housing Projection	88%	87%	86%	94%	98%	100%	105%	109%	111%	114%	116%
Total Elem w/ New Housing Projection	87%	90%	93%	97%	98%	100%	102%	105%	108%	111%	112%
Total Elem WITHOUT New Housing Projection	87%	88%	90%	93%	94%	96%	97%	101%	104%	106%	108%

Scenario: Dixon as a District-wide K-1 School

Pulled from Pivot	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
Non Resident K	22	1	1	2	2
Non Resident 1st grade	31	21	7	7	2

Elmbrook K and 1st Grade RESIDENT Enrollment (Non-Res is negligible)
Historic & Projected

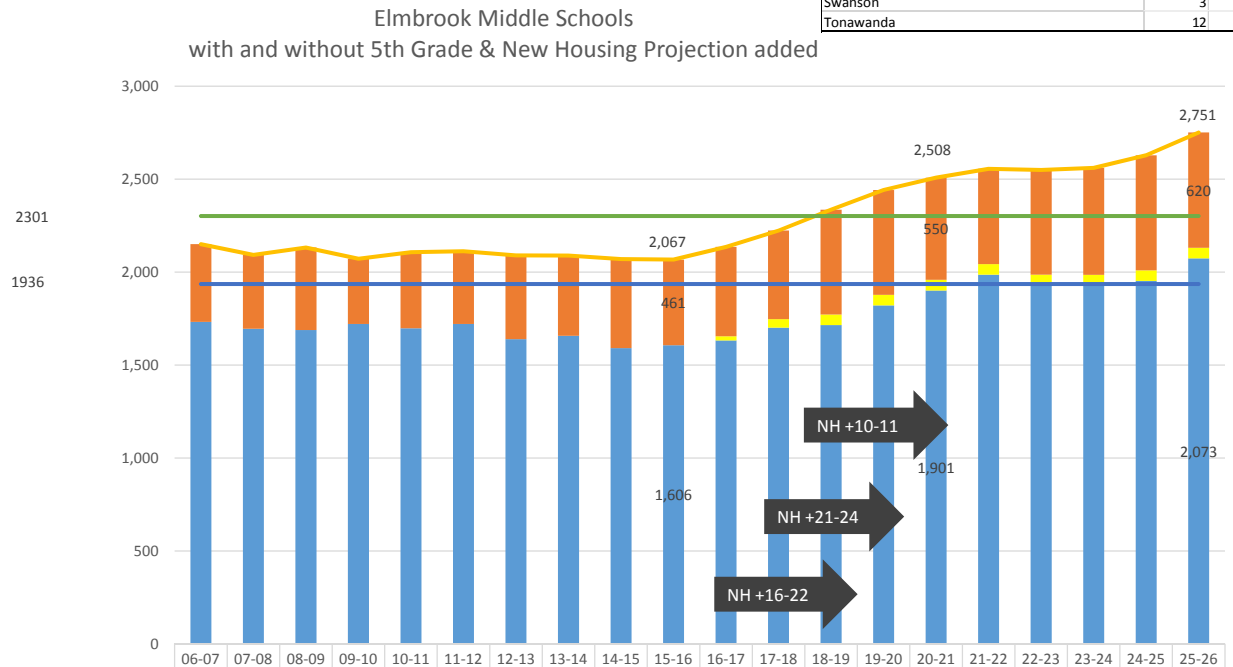


	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	24-25	25-26
Tonawanda Elem - 1st Enrollment	54	57	44	49	66	54	62	56	52	62	51	57	63	64	69	69	69	71	73	75
Tonawanda Elem - K Enrollment	56	40	52	61	52	60	56	49	63	50	56	62	63	68	68	68	69	71	73	75
Swanson Elem - 1st Enrollment	94	109	104	82	99	80	98	118	128	124	138	118	130	133	142	143	143	146	150	154
Swanson Elem - K Enrollment	97	97	74	89	79	83	108	109	105	124	106	116	119	128	128	128	131	135	138	142
Dixon Elem - 1st Enrollment	58	63	53	50	44	47	50	51	72	77	55	57	63	64	69	69	69	71	73	75
Dixon Elem - K Enrollment	58	48	48	42	43	45	45	71	54	51	53	58	60	64	64	64	66	68	70	71
Burleigh Elem - 1st Enrollment	98	86	115	80	89	88	91	72	105	113	88	93	102	104	112	113	112	115	119	122
Burleigh Elem - K Enrollment	87	102	76	84	88	85	76	95	106	85	90	98	101	108	108	108	111	114	117	120
Brookfield Elem -1st Enrollment	72	53	57	48	67	72	83	76	96	101	111	89	98	100	107	108	107	110	113	116
Brookfield Elem -K Enrollment (Res Only)	54	49	50	58	61	51	69	90	90	99	80	87	89	96	96	96	99	101	104	107
Total K & 1st Enrollment (Resident Only)	728	704	673	643	688	665	738	787	871	886	828	837	887	929	965	965	977	1004	1031	1057
Total K Enrollment	352	336	300	334	323	324	354	414	418	409	384	422	432	464	465	464	477	490	502	515

Checking on this projection

Scenario: 5th Grade to Middle Schools

Pulled from Pivot	11-12	12-13	13-14	14-15	15-16
5th Grade Enrollment (Non-resident)	62	60	54	47	24
Brookfield Elem	16	1			2
Burleigh Elem	10	22	19	12	10
Dixon	7	22	23	21	2
Swanson	3	4	4	7	4
Tonawanda	12	10	7	7	6



	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	24-25	25-26
Total 5th Grade Enrollment (Res Only)	418	397	444	351	409	391	451	432	479	461	481	477	563	564	550	513	563	576	619	620
Total MS New Housing Projection	0	0	0	0	0	0	0	0	0	0	22	46	57	57	57	57	57	57	57	57
Total MS Enrollment (6-8th) (Res & Non Res)	1,732	1,695	1,688	1,721	1,698	1,721	1,639	1,657	1,591	1,606	1,632	1,701	1,715	1,820	1,901	1,986	1,929	1,928	1,952	2,073
Total MS Enrollment w/ 5th Grade & New Housing	2,150	2,092	2,132	2,072	2,107	2,112	2,090	2,089	2,070	2,067	2,136	2,223	2,335	2,442	2,508	2,556	2,549	2,561	2,628	2,751
Total MS Capacity - Low	1936	1936	1936	1936	1936	1936	1936	1936	1936	1936	1936	1936	1936	1936	1936	1936	1936	1936	1936	1936
Total MS Capacity - High	2301	2301	2301	2301	2301	2301	2301	2301	2301	2301	2301	2301	2301	2301	2301	2301	2301	2301	2301	2301

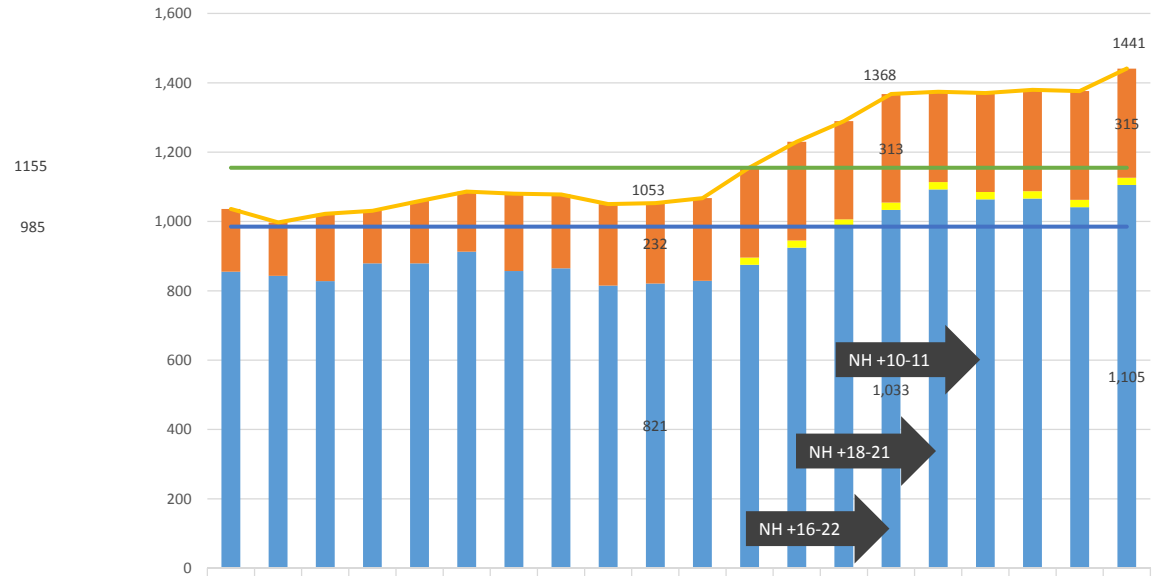
Shifting all 5th grade students to the Middle Schools would have exceeded Low Capacity for the past 10 years

With 5th Grade and New Housing projections, we expect to approach HIGH Capacity by 2017-18

Scenario: 5th Grade to Middle Schools

Pulled from Pivot	11-12	12-13	13-14	14-15	15-16
5th Grade Enrollment (Non-resident)	62	60	54	47	24
Brookfield Elem	16	1			2
Burleigh Elem	10	22	19	12	10
Dixon	7	22	23	21	2
Swanson	3	4	4	7	4
Tonawanda	12	10	7	7	6

WHMS Historic and Projected Enrollment
with and without 5th grade & New Housing Projection added



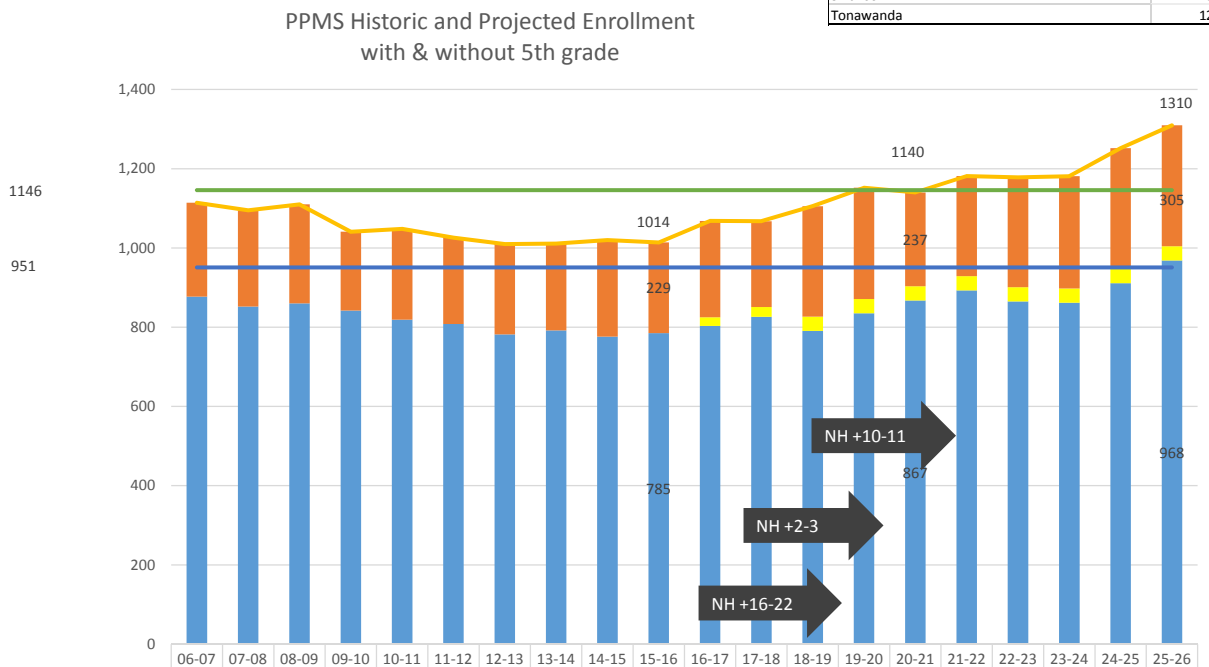
	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	24-25	25-26
5th Grade feeding WHMS (Brook, Swans - Res Only)	181	154	194	152	180	173	223	213	235	232	238	260	285	283	313	260	286	292	314	315
WHMS New Housing Projection	0	0	0	0	0	0	0	0	0	0	0	21	21	21	21	21	21	21	21	21
WHMS Enrollment (6-8th) (Res & Non Res)	855	843	828	879	879	913	857	865	815	821	829	875	924	985	1,033	1,093	1,064	1,066	1,041	1,105
WHMS with 5th Grade & New Housing	1036	997	1022	1031	1059	1086	1080	1078	1050	1053	1067	1156	1230	1289	1368	1374	1371	1380	1376	1441
WHMS Low Capacity	985	985	985	985	985	985	985	985	985	985	985	985	985	985	985	985	985	985	985	985
WHMS High Capacity	1155	1155	1155	1155	1155	1155	1155	1155	1155	1155	1155	1155	1155	1155	1155	1155	1155	1155	1155	1155

WHMS is projected to exceed Low Capacity by 2019-20 with new housing and without shift of 5th grade up

5th grade students would cause WHMS to have exceeded Low Capacity anytime in the past 10 years

Scenario: 5th Grade to Middle Schools

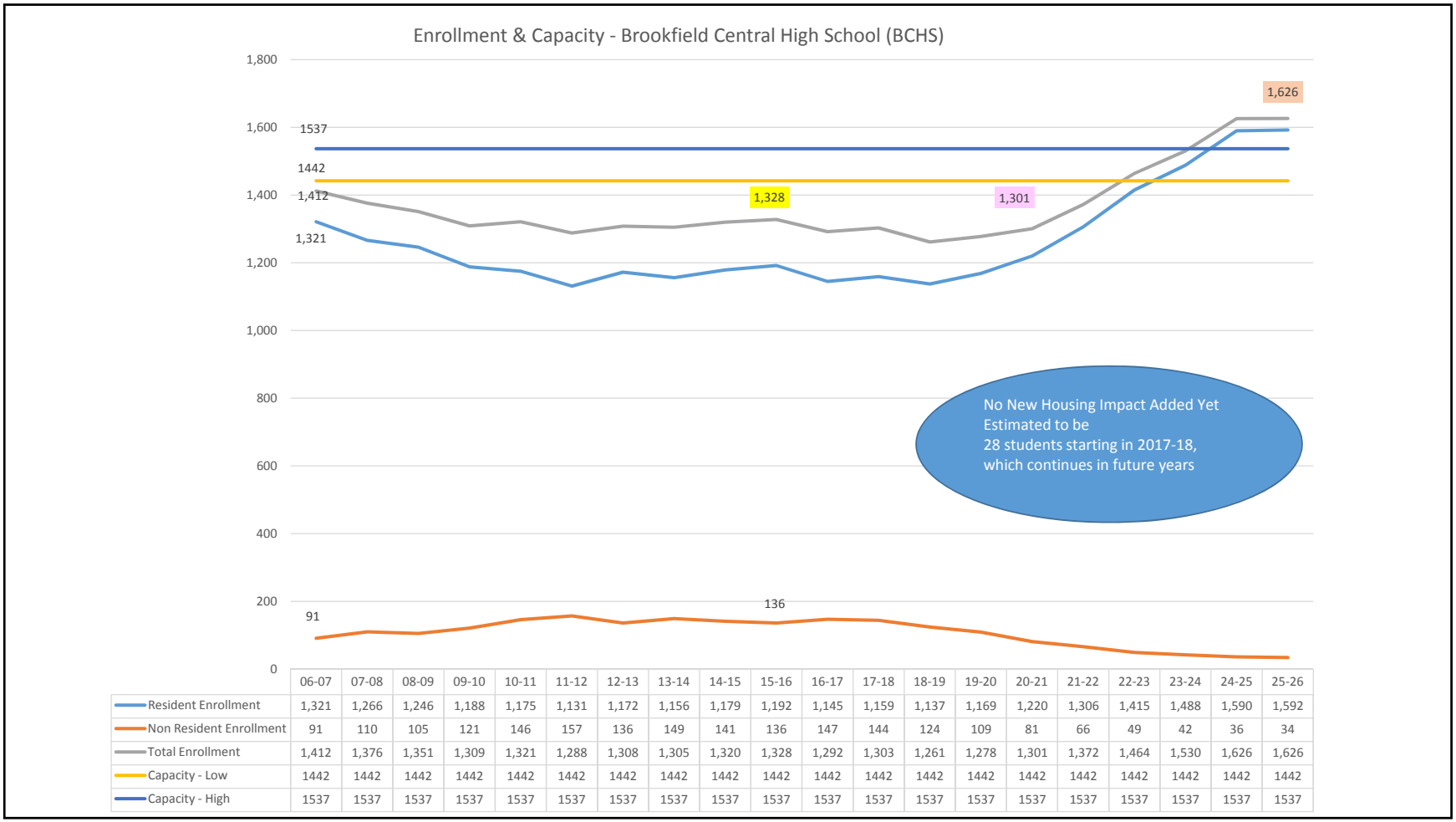
Pulled from Pivot	11-12	12-13	13-14	14-15	15-16
5th Grade Enrollment (Non-resident)	62	60	54	47	24
Brookfield Elem	16	1			2
Burleigh Elem	10	22	19	12	10
Dixon	7	22	23	21	2
Swanson	3	4	4	7	4
Tonawanda	12	10	7	7	6



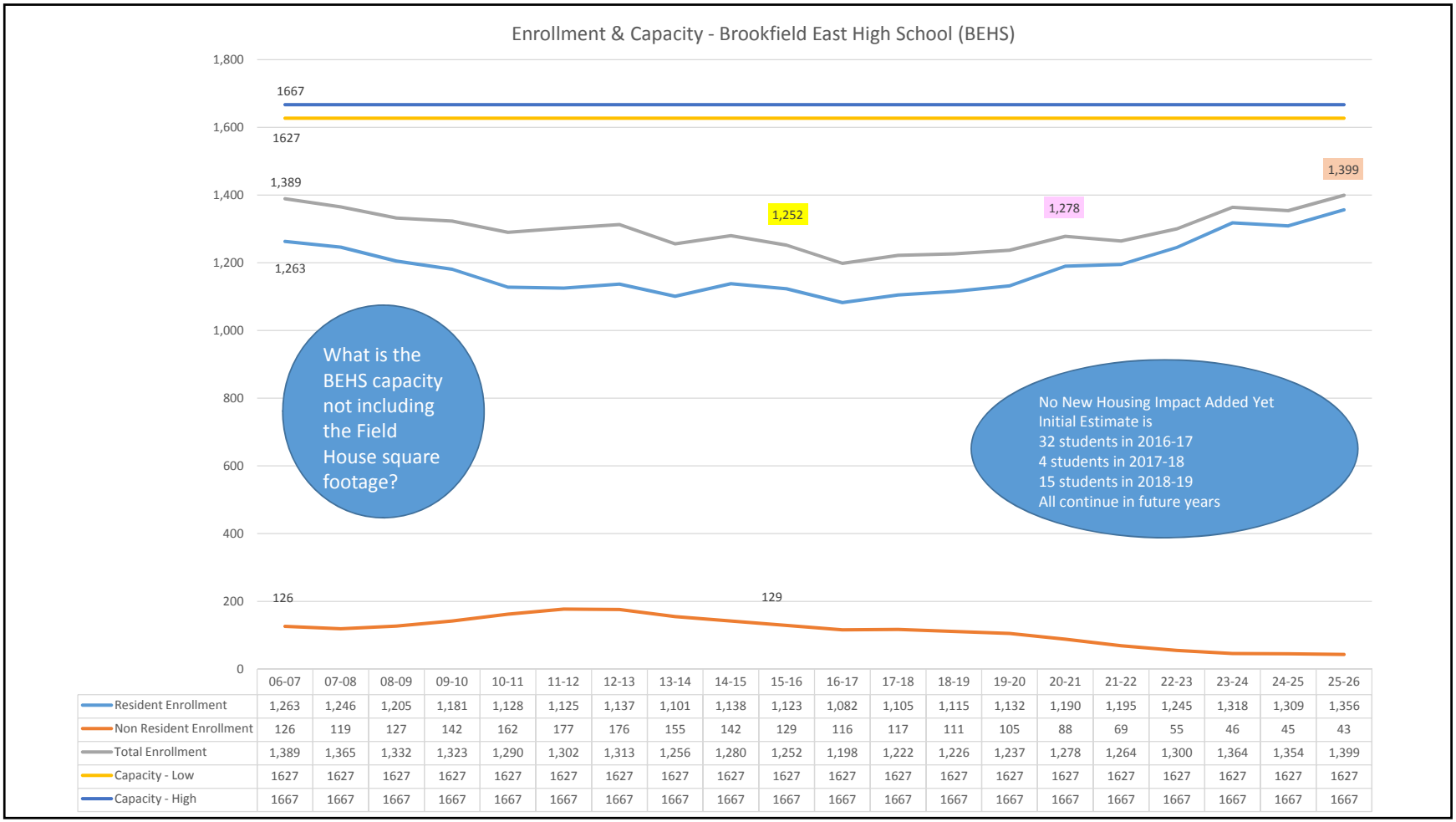
	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	24-25	25-26
5th Grade feeding PPMS (Bur, Dix, Ton - Res Only)	237	243	250	199	229	218	228	219	244	229	243	217	279	281	237	253	277	284	305	305
PPMS New Housing Projection	0	0	0	0	0	0	0	0	0	0	22	25	36	36	36	36	36	36	36	36
PPMS Enrollment (6-8th) (Res & Non Res)	877	852	860	842	819	808	782	792	776	785	803	826	791	835	867	893	865	862	911	968
PPMS with 5th Grade & New Housing	1114	1095	1110	1041	1048	1026	1010	1011	1020	1014	1068	1068	1106	1152	1140	1182	1178	1181	1252	1310
PPMS Low Capacity	951	951	951	951	951	951	951	951	951	951	951	951	951	951	951	951	951	951	951	951
PPMS High Capacity	1146	1146	1146	1146	1146	1146	1146	1146	1146	1146	1146	1146	1146	1146	1146	1146	1146	1146	1146	1146

PPMS is projected to approach Low Capacity by 2024-25 <u>with New Housing</u> and <u>without shift of 5th grade up</u>

5th grade students would cause PPMS to have exceeded Low Capacity anytime in the past 10 years



	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	24-25	25-26
Resident Enrollment	1,321	1,266	1,246	1,188	1,175	1,131	1,172	1,156	1,179	1,192	1,145	1,159	1,137	1,169	1,220	1,306	1,415	1,488	1,590	1,592
Non Resident Enrollment	91	110	105	121	146	157	136	149	141	136	147	144	124	109	81	66	49	42	36	34
Total Enrollment	1,412	1,376	1,351	1,309	1,321	1,288	1,308	1,305	1,320	1,328	1,292	1,303	1,261	1,278	1,301	1,372	1,464	1,530	1,626	1,626
Capacity - Low	1442	1442	1442	1442	1442	1442	1442	1442	1442	1442	1442	1442	1442	1442	1442	1442	1442	1442	1442	1442
Capacity - High	1537	1537	1537	1537	1537	1537	1537	1537	1537	1537	1537	1537	1537	1537	1537	1537	1537	1537	1537	1537



	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	24-25	25-26
Resident Enrollment	1,263	1,246	1,205	1,181	1,128	1,125	1,137	1,101	1,138	1,123	1,082	1,105	1,115	1,132	1,190	1,195	1,245	1,318	1,309	1,356
Non Resident Enrollment	126	119	127	142	162	177	176	155	142	129	116	117	111	105	88	69	55	46	45	43
Total Enrollment	1,389	1,365	1,332	1,323	1,290	1,302	1,313	1,256	1,280	1,252	1,198	1,222	1,226	1,237	1,278	1,264	1,300	1,364	1,354	1,399
Capacity - Low	1627	1627	1627	1627	1627	1627	1627	1627	1627	1627	1627	1627	1627	1627	1627	1627	1627	1627	1627	1627
Capacity - High	1667	1667	1667	1667	1667	1667	1667	1667	1667	1667	1667	1667	1667	1667	1667	1667	1667	1667	1667	1667

Ideas → Scenarios → Solutions → Recommendations

Add Capacity & Reallocate

01 Build a New School:
1. Cost of $14-$16 million
2. Increased capacity of 500 to 700
3. Operational Costs to be defined

02 Re-Open Hillside:
1. Cost of $4 million in 2016-17
2. Increased capacity of 400
3. Operational Costs to be defined

03 Add on to Existing Schools:
1. Cost of $250,000 to $500,000
2. Increased capacity of 25 per room
3. Operational Costs to be defined

04 Modular Spaces:
1. $75,000 per year lease
2. Increased capacity of 50
3. Operational Costs to be defined

Use Existing Capacity Differently

05 Dixon as Kindergarten Hub:
1. House all K or K-1 at Dixon
2. Capacity Needs to be analyzed for any option
3. Operational Costs to be defined

06 Restructure Grade Models:
1. K-2, 3-5, K-8, 5th to Middle School & Multi-Age Classrooms
2. Capacity Needs to be analyzed for any option
3. Operational Costs to be defined

Reallocate Enrollment Without Adding Capacity

07 Dixon as a Swing School:
1. Currently is projected to have 100 – 150 seats
2. No cost
3. Operational Costs to be defined
4. Maintains Secondary Pathways

08 East/West Shift:
1. Currently has 200-250 seats at Dixon & Burleigh
2. No cost
3. Operational Costs to be defined
4. Shifts Secondary Pathways

Rate each scenario by the categories below on a scale of 1 to 5 *(1 is the lowest and 5 is the highest)*

	90% Capacity	Impact fewest families	Balance Enrollment
01			
02			
03			
04			
05			
06			
07			
08			

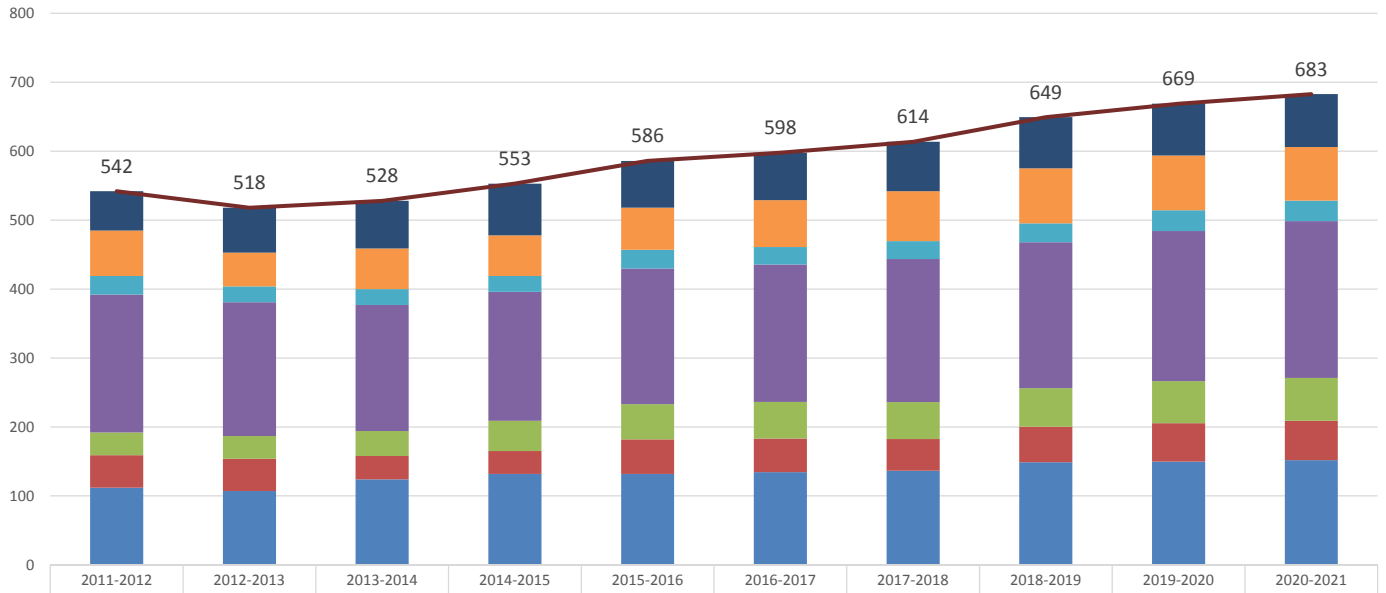
Scenario Evaluation

Enrollment Balancing Task Force

ELMBROOK SCHOOLS
School District of Elmbrook

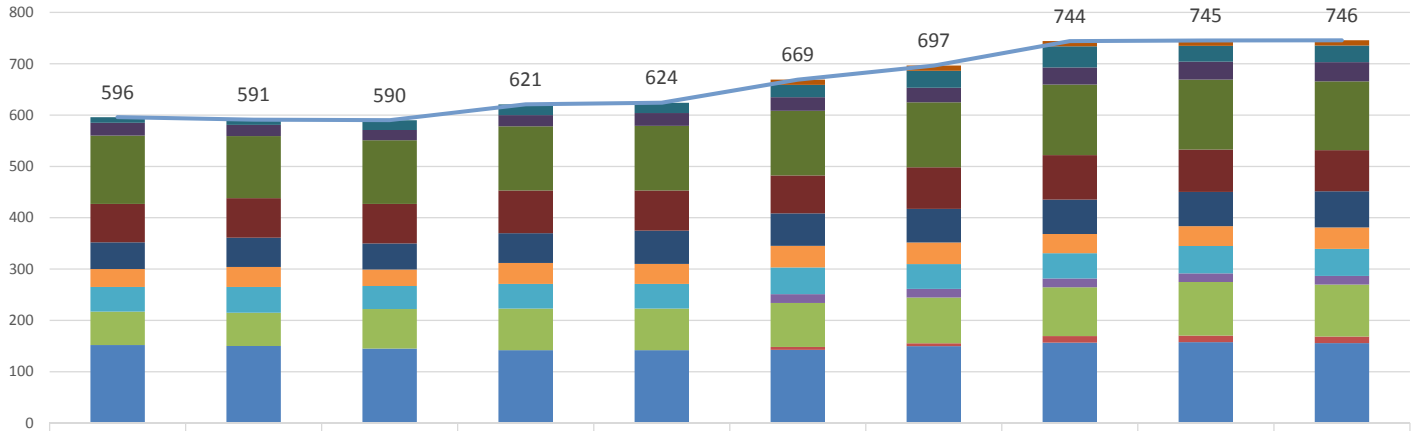
Tracts Assigned to Brookfield Elementary

No Major New Housing Impact Projected through 2020-21



	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021
Tract 164	57	65	69	75	68	69	72	74	75	77
Tract 163	66	49	59	59	61	68	72	80	79	78
Tract 162	27	23	23	23	27	25	26	27	30	30
Tract 160	200	194	183	187	197	199	207	212	218	227
Tract 111E	33	33	36	44	51	53	54	56	61	62
Tract 111W	47	47	34	33	50	49	46	51	56	57
Tract 110	112	107	124	132	132	134	137	149	150	152
Total w/ No New Housing	542	518	528	553	586	598	614	649	669	683

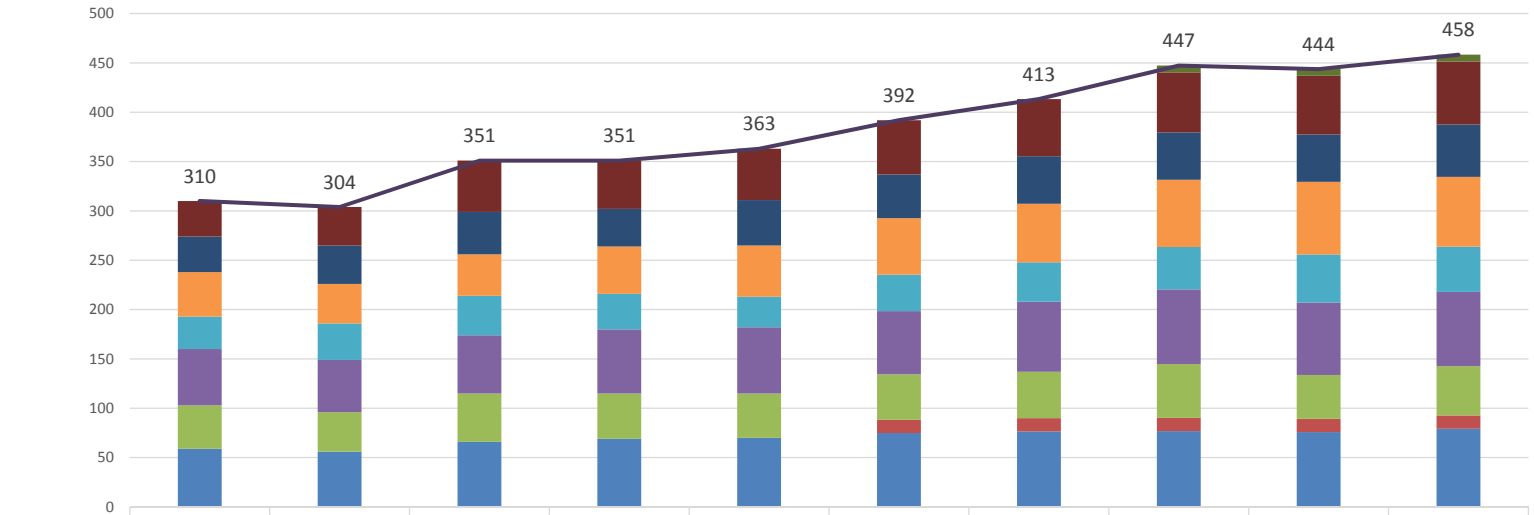
Tracts Assigned to Burleigh Elementary
with Incremental New Housing through 2020-21



	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021
Trct 161 NH	0	0	0	0	0	10	10	10	10	10
Tract 161	11	10	19	21	20	24	33	41	31	32
Tract 154	25	22	20	22	25	26	28	33	35	37
Tract 153	133	121	124	125	126	126	126	137	136	134
Tracts 151 & 152	75	77	77	83	78	74	81	87	82	80
Tracts 124 & 155	52	57	51	58	65	63	65	67	67	70
Tract 123	35	39	32	41	39	42	42	38	39	42
Tract 122	48	50	45	48	48	52	48	49	53	52
Tract 120 NH	0	0	0	0	0	17	17	17	17	17
Tract 120	65	65	77	81	81	86	89	95	104	101
Tracts 112 & 151 NH	0	0	0	0	0	6	6	13	13	13
Tracts 112 & 150	152	150	145	142	142	143	150	157	157	156
Total w/ New Hsg	596	591	590	621	624	669	697	744	745	746

Tracts Assigned to Dixon Elementary

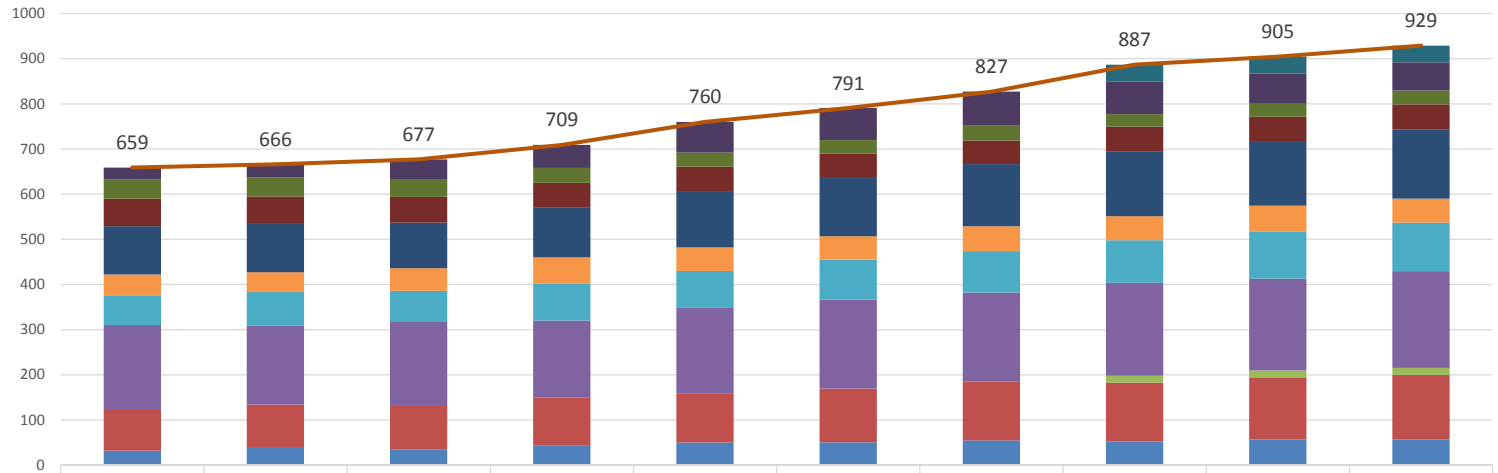
with Incremental New Housing through 2020-21



	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021
Dixon Elem	0	0	0	0	0	0	0	7	7	7
Dixon Elem	36	39	52	49	52	55	58	61	59	64
Dixon Elem	36	39	43	38	46	44	48	48	48	53
Dixon Elem	45	40	42	48	52	57	59	68	74	71
Dixon Elem	33	37	40	36	31	37	40	43	49	46
Dixon Elem	57	53	59	65	67	64	71	76	74	75
Dixon Elem	44	40	49	46	45	46	47	54	44	50
Dixon Elem	0	0	0	0	0	13	13	13	13	13
Dixon Elem	59	56	66	69	70	75	77	77	76	79
Dixon Elem	310	304	351	351	363	392	413	447	444	458

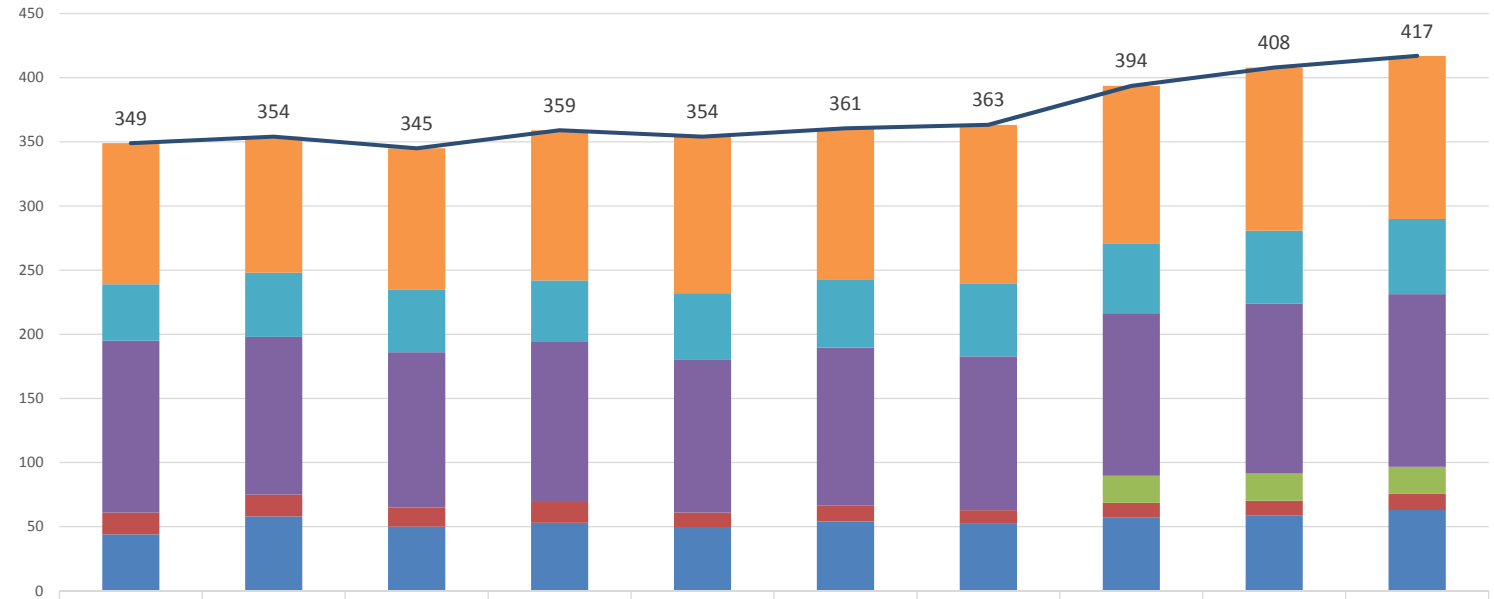
Tracts Assigned to Swanson Elementary

with Incremental New Housing through 2020-21



	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021
Swanson Elem	0	0	0	0	0	0	0	37	37	37
Swanson Elem	26	29	45	51	68	71	75	73	68	62
Swanson Elem	43	42	38	33	31	30	33	28	29	31
Swanson Elem	61	61	57	55	56	52	52	56	54	55
Swanson Elem	107	107	101	110	123	131	138	143	143	154
Swanson Elem	46	44	50	58	52	52	55	53	58	53
Swanson Elem	66	74	69	82	82	88	92	94	104	107
Swanson Elem	186	175	184	170	189	197	197	206	203	215
Swanson Elem	0	0	0	0	0	0	0	15	15	15
Swanson Elem	92	94	99	106	109	119	130	131	138	144
Swanson Elem	32	40	34	44	50	50	55	52	57	56
Swanson Elem	659	666	677	709	760	791	827	887	905	929

Tracts Assigned to Tonawanda Elementary
with Incremental New Housing through 2020-21



	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021
Tonawanda Elem	110	106	110	117	122	118	124	123	127	127
Tonawanda Elem	44	50	49	48	52	53	57	55	57	59
Tonawanda Elem	134	123	121	124	119	123	120	127	133	135
Tonawanda Elem	0	0	0	0	0	0	0	21	21	21
Tonawanda Elem	17	17	15	17	12	12	10	12	11	13
Tonawanda Elem	44	58	50	53	49	54	53	57	59	63
Tonawanda Elem	349	354	345	359	354	361	363	394	408	417

			Elementary School Capacity										
			2017-18				2020-21			Disruption of CURRENT ESD Elementary Students Only			
Scenario	Description	School	# of Students Current Alignment	# of Students Proposed Alignment	Sq Feet Capacity	Class Size Capacity	# of Students	Sq Feet Capacity	Class Size Capacity	# of Students w/o GF	# of Families w/o GF	# Students disrupted with 4-5 GF	# disrupted with grades 4-5 & Families Disrupted
Proposed Recommendation	Scenario 111E, 113, 144 to Dixon - Evaluate capacity in 20-21.	Brook El	614	560	91%	86%	621	101%	96%	105	69	50	66
		Burleigh	697	697	85%	81%	746	91%	86%				
		Dixon	413	577	93%	89%	630	102%	97%				
		Swanson	827	718	93%	90%	819	106%	103%				
		Tonawanda	363	363	88%	80%	417	101%	92%				
		Total Elementary	2,935	2,935	91%	86%	3,259	101%	96%				
A	Scenario 132 & 111 East to Dixon Alignment Shift feeders for 132 only	Brook El	614	560	91%	86%	621	101%	96%	91	65	53	44
		Burleigh	697	697	85%	81%	746	91%	86%				
		Dixon	413	559	91%	86%	628	102%	97%				
		Swanson	827	735	95%	93%	822	106%	103%				
		Tonawanda	363	363	88%	80%	417	101%	92%				
		Total Elementary	2,935	2,935	91%	86%	3,259	101%	96%				
A-1	Scenario 132 to Dixon Alignment (no feeder shift), Add Capacity to Brook El '20-21	Brook El	614	614	99%	95%	683	96%	91%	58	50	34	29
		Burleigh	697	697	85%	81%	746	91%	86%				
		Dixon	413	505	82%	78%	566	92%	87%				
		Swanson	827	735	95%	93%	822	106%	103%				
		Tonawanda	363	363	88%	80%	417	101%	92%				
		Total Elementary	2,935	2,935	91%	86%	3,259	98%	93%				
B	Scenario 113 and 144 to Dixon Swing Alignment - Elementary (keep mid/high feeder paths)	Brook El	614	614	99%	95%	683	111%	105%	72	54	36	24
		Burleigh	697	697	85%	81%	746	91%	86%				
		Dixon	413	523	85%	81%	568	92%	88%				
		Swanson	827	718	93%	90%	819	106%	103%				
		Tonawanda	363	363	88%	80%	417	101%	92%				
		Total Elementary	2,935	2,935	91%	86%	3,259	101%	96%				

			Elementary School Capacity										
			2017-18				2020-21			Disruption of CURRENT ESD Elementary Students Only			
Scenario	Description	School	# of Students Current Alignment	# of Students Proposed Alignment	Sq Feet Capacity	Class Size Capacity	# of Students	Sq Feet Capacity	Class Size Capacity	# of Students w/o GF	# of Families w/o GF	# Students disrupted with 4-5 GF	# disrupted with grades 4-5 & Families Disrupted
B-1	Scenario 113/144 to Dixon Alignment, add capacity to Brook El '20-21	Brook El	614	614	99%	95%	683	96%	91%	72	54	36	24
		Burleigh	697	697	85%	81%	746	91%	86%				
		Dixon	413	523	85%	81%	568	92%	88%				
		Swanson	827	718	93%	90%	819	106%	103%				
		Tonawanda	363	363	88%	80%	417	101%	92%				
		Total Elementary	2,935	2,935	91%	86%	3,259	98%	93%				
B-2	Scenario 144 and 111E to Dixon, 183 to Burleigh, keep feeder paths	Brook El	614	560	91%	86%	621	101%	96%	120	87	61	45
		Burleigh	697	772	95%	89%	845	104%	98%				
		Dixon	413	522	85%	81%	574	93%	89%				
		Swanson	827	697	90%	88%	777	100%	98%				
		Tonawanda	363	363	88%	80%	417	101%	92%				
		Total Elementary	2,935	2,935	91%	86%	3,259	99%	96%				
B-3	163, 111E, 144 Dixon, 143 Burleigh, 184 Swanson	Brook El	614	488	79%	75%	543	88%	84%	136	98	70	51
		Burleigh	697	736	90%	85%	792	97%	92%				
		Dixon	413	692	112%	107%	759	123%	117%				
		Swanson	827	645	83%	81%	756	98%	95%				
		Tonawanda	363	353	86%	78%	383	93%	84%				
		Total Elementary	2,935	2,935	91%	86%	3,259	101%	96%				
Revised C	Scenario 180, 181 to Dixon, Don't Shift feeders for 180, 181, Add Brook El & Dixon Capacity 20-21	Brook El	614	614	99%	95%	683	96%	91%	147	121	56	45
		Burleigh	697	697	85%	81%	746	91%	86%				
		Dixon	413	603	98%	93%	667	93%	89%				
		Swanson	827	637	82%	80%	720	93%	91%				
		Tonawanda	363	363	88%	80%	417	101%	92%				
		Total Elementary	2,935	2,935	91%	86%	3,259	95%	90%				

			Elementary School Capacity										
			2017-18				2020-21			Disruption of CURRENT ESD Elementary Students Only			
Scenario	Description	School	# of Students Current Alignment	# of Students Proposed Alignment	Sq Feet Capacity	Class Size Capacity	# of Students	Sq Feet Capacity	Class Size Capacity	# of Students w/o GF	# of Families w/o GF	# Students disrupted with 4-5 GF	# disrupted with grades 4-5 & Families Disrupted
D	Scenario 132/182/111 East to Dixon Alignment, 143 to Burleigh Dixon Swing,	Brook El	614	560	91%	86%	621	101%	96%	135	101	71	58
		Burleigh	697	736	90%	85%	792	97%	92%				
		Dixon	413	552	89%	85%	613	99%	95%				
		Swanson	827	703	91%	88%	791	102%	100%				
		Tonawanda	363	363	88%	80%	417	101%	92%				
		Total Elementary	2,935	2,935	91%	86%	3,259	101%	96%				
D-1	Scenario 183, 181 111 East to Dixon Alignment, 143 to Burleigh Dixon Swing,	Brook El	614	560	91%	86%	621	101%	96%	141	106	70	55
		Burleigh	697	736	90%	85%	792	97%	92%				
		Dixon	413	555	90%	86%	629	102%	97%				
		Swanson	827	699	90%	88%	774	100%	97%				
		Tonawanda	363	363	88%	80%	417	101%	92%				
		Total Elementary	2,935	2,935	91%	86%	3,259	101%	96%				
E	Scenario 183/182/111 East to Dixon Alignment, 143 to Burleigh Dixon Swing,	Brook El	614	560	91%	86%	621	101%	96%	130	98	62	49
		Burleigh	697	736	90%	85%	792	97%	92%				
		Dixon	413	535	87%	83%	605	98%	93%				
		Swanson	827	719	93%	90%	799	103%	101%				
		Tonawanda	363	363	88%	80%	417	101%	92%				
		Total Elementary	2,935	2,935	91%	86%	3,259	101%	96%				
E-1	182, 183 to Dixon Add capacity at Brook El	Brook El	614	614	99%	95%	683	96%	91%	76	66	32	25
		Burleigh	697	697	85%	81%	746	91%	86%				
		Dixon	413	522	85%	80%	588	95%	91%				
		Swanson	827	719	93%	90%	799	103%	101%				
		Tonawanda	363	363	88%	80%	417	101%	92%				
		Total Elementary	2,935	2,935	91%	86%	3,259	98%	93%				

Current Elementary School Alignment

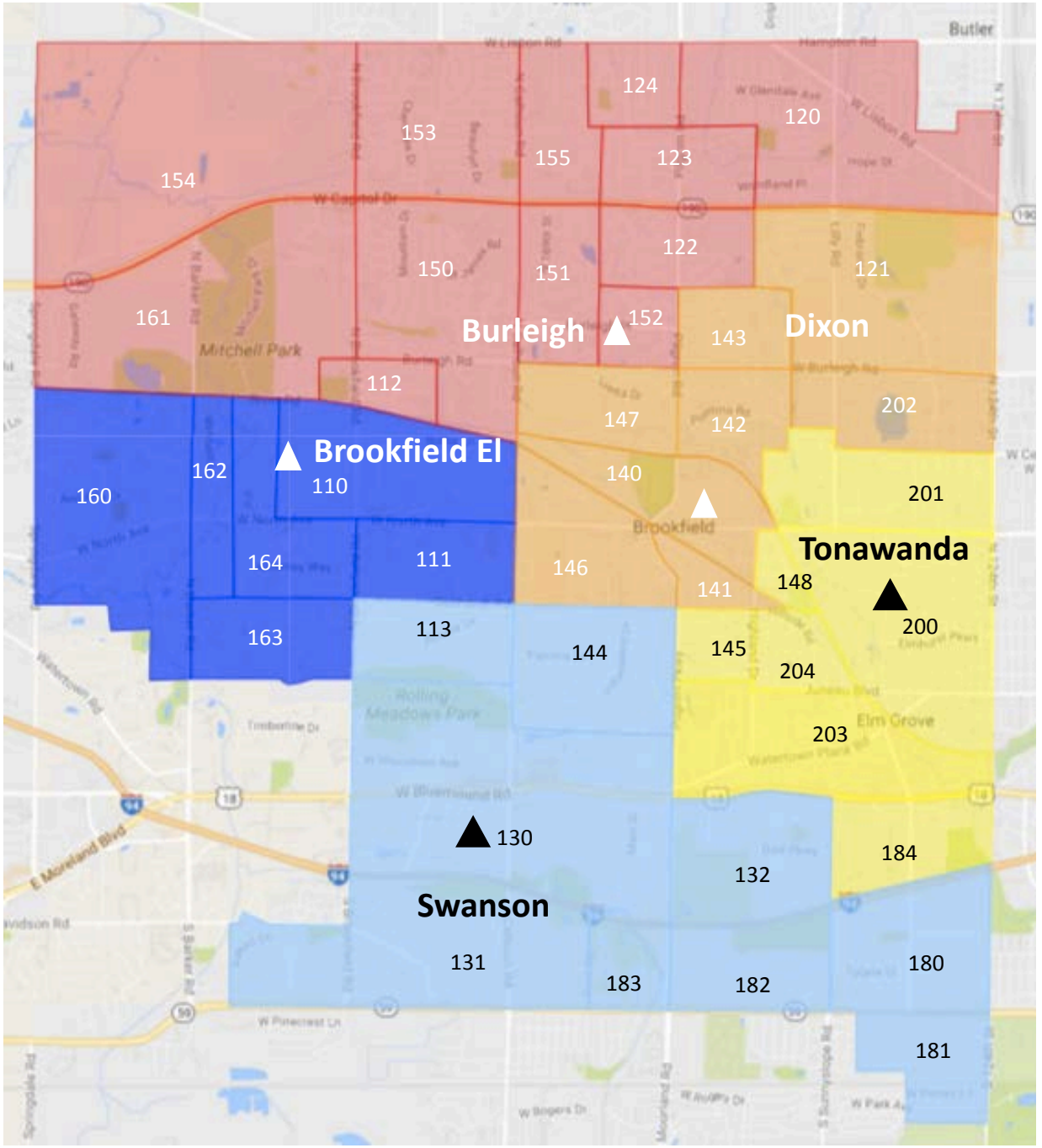
<u>Brookfield Elementary:</u>
110, 111, 160, 162, 163, 164

<u>Burleigh:</u>
112, 120, 122, 123, 124, 150, 151,152, 153, 154, 155, 161

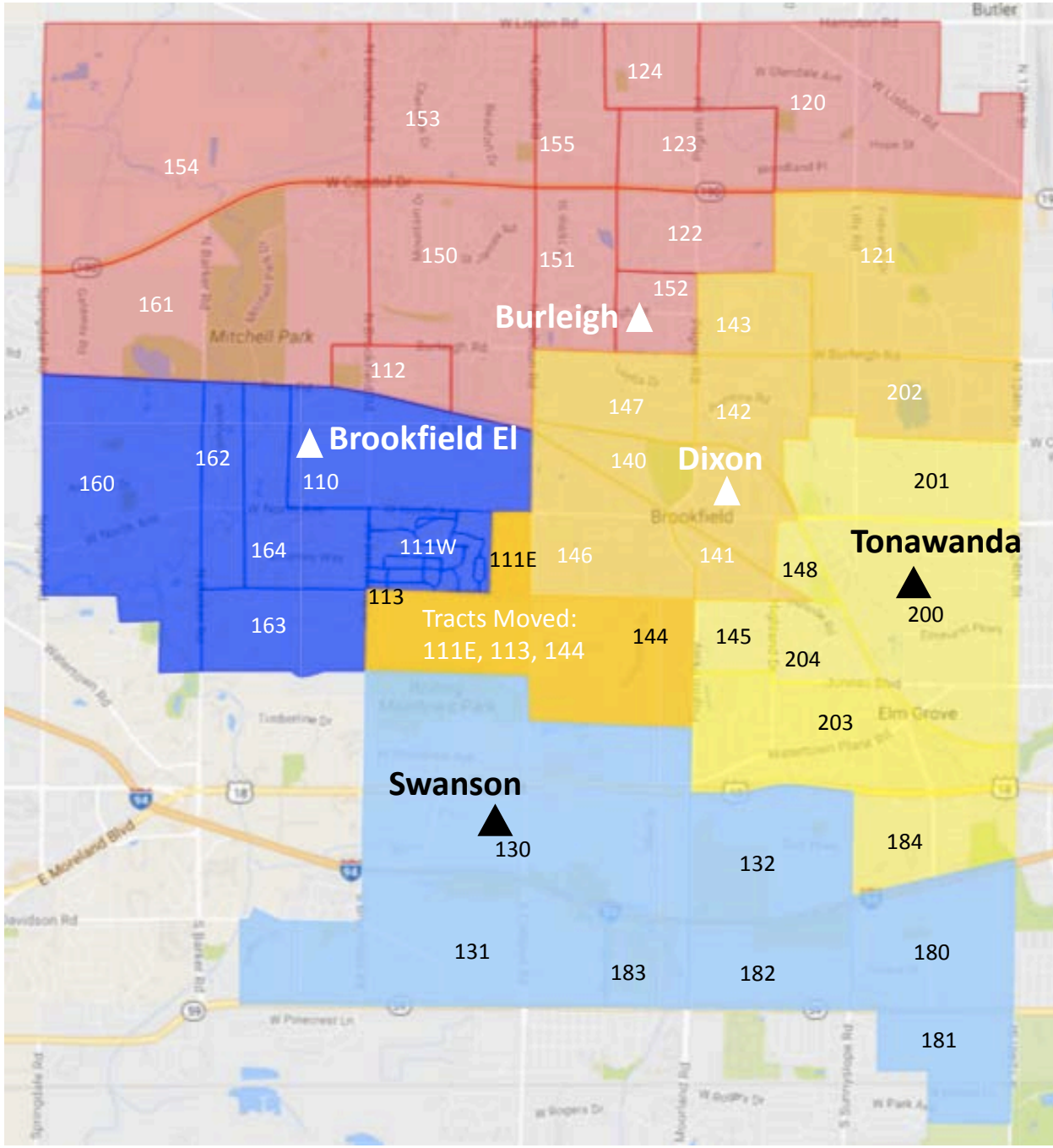
<u>Dixon:</u>
121, 140, 141, 142, 143, 146*, 147, 202

<u>Swanson:</u>
113, 130, 131, 132, 144, 180, 181, 182, 183

<u>Tonawanda:</u>
145, 148, 184, 200, 201, 203, 204



Recommended Elementary School Alignment



Brookfield Elementary:
110, 111W, 160, 162, 163, 164

Burleigh:
112, 120, 122, 123, 124, 150, 151,152, 153, 154, 155, 161

Dixon:
111E, 113, 121, 140, 141, 142, 143, 144, 146*, 147, 202

Swanson:
130, 131, 132, 180, 181, 182, 183

Tonawanda:
145, 148, 184, 200, 201, 203, 204