



August 17, 2011

200 Hillvue Lane Pittsburgh, PA 15237-5391 412.366.2100

North Allegheny School District

Demographic Analysis and Feasibility Study August 17, 2011



Dr. Gualtieri, Superintendent of Schools, introduced the report with these remarks:

During the 2010-11 school year, the North Allegheny School Board requested that outside consultants complete a Demographics Analysis and Feasibility Study to generate comprehensive data and evaluation of the appropriate criteria for informed decision-making within the North Allegheny School District.

The attached document reflects the findings being recommended to the School Board and the administrative team for further study. It is meant to help the District prepare for the future impact on school buildings, while maintaining the NA high level of quality educational programming and simultaneously dealing with the financial constraints of the day.

The receipt of this document is the first step in a two-year process. Should the School Board decide to close an elementary school, that decision would be made before June 30, 2012, for implementation in September of 2013.

It should be noted that the fine-tuning of the middle school attendance boundaries could be considered by the School Board for implementation in September of 2012. This change would involve approximately 70 families.



North Allegheny School District Mr. Rob Gaertner, P.E. Director of Facilities

Demographic Analysis and Feasibility Study Agenda



Introduction

- **Demographics and Projected Enrollment Analysis**
- **Building Capacity Analysis**
 - Review of Existing Space Utilization
- **Physical Conditions Analysis**
 - Bradford Woods Elementary School
 - Marshall Elementary School
 - Marshall Middle School
- **Options for Facility Utilization**
- Feasibility Study Project Final Phase
- **Questions and Comments**



North Allegheny Steering Committee

Dr. Brian Miller Assistant Superintendent for Secondary Education and Curriculum Dr. William Stropkaj Assistant Superintendent for Elementary Education and Curriculum Dr. Arleen Wheat Assistant Superintendent of Special Education and Pupil Services Roger Botti Director of Assets, Transportation and Technology Rob Gaertner, P.E. Director of Facilities Robert Wagner Routing and Operations Supervisor

Architectural Innovations

Jan Brimmeier, AIA, NCARB – President / Owner Mark Follen, AIA – Business Development / Project Manager Gregory Walker– Senior Project Manager

Tower Engineering

Jim Kosinski, P.E., Mechanical / Plumbing – President / Owner John West, P.E., Electrical – Electrical Engineer Doug Cogley, Technology – Technology Specialist

DeJONG-RICHTER

Scott Leopold – GIS (Geographic Information System) Analyst / IT Administrator



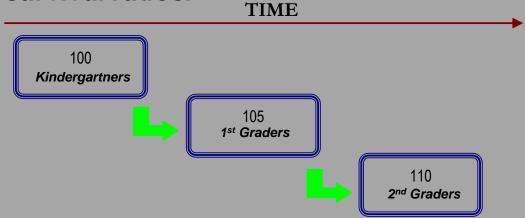
DeJONG-RICHTER Mr. Scott Leopold

Demographics



Projection Methodology

Historical Enrollment is tabulated to develop survival ratios.



- Survival ratios are then analyzed to determine projection ratios.
- Several factors are taken into consideration:
 - Past boundary adjustments.
 - Planned, but not built housing.
 - Housing turnover.
 - Programming changes.





Projection Methodology

from	to	birth -> K	K->1	1->2	2->3	3->4	4->5
2001	2002	14.4%	114.0%	106.9%	102.6%	102.7%	94.9%
2002	2003	13.1%	106.9%	101.8%	104.8%	102.5%	103.9%
2003	2004	11.7%	110.4%	103.9%	103.4%	103.1%	106.2%
2004	2005	14.0%	108.2%	104.1%	97.5%	105.0%	101.5%
2005	2006	9.5%	114.1%	93.9%	100.0%	102.6%	100.0%
2006	2007	13.0%	103.9%	100.0%	111.3%	103.9%	98.8%
2007	2008	10.8%	106.2%	98.1%	101.1%	98.6%	98.8%
2008	2009	11.0%	115.5%	102.9%	109.6%	103.3%	101.5%
2009	2010	12.9%	113.2%	101.5%	101.4%	105.3%	98.9%
	average	12.26%	110.277%	101.45%	103.5%	102.99%	100.5%
	standard						
	deviation	1.514%	3.907%	3.563%	4.203%	1.837%	3.094%

High, moderate and low retention rates are determined by a standard deviation analysis. Previously mentioned factors are also taken into account.





	Historical Enrollment by Grade Level													
Grade	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11				
K-5	3484	3408	3403	3494	3431	3448	3490	3477	3500	3526				
6-8	2006	2018	2001	1930	1890	1854	1884	1925	1935	2005				
9-12	2827	2797	2803	2769	2719	2736	2680	2679	2629	2595				
Total	8317	8223	8207	8193	8040	8038	8054	8081	8064	8126				

	Projected Enrollment by Grade Level												
Grade	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21			
K-5	3563	3553	3518	3516	3468	3426	3410	3389	3428	3414			
6-8	1973	2030	2039	2072	2096	2136	2121	2057	1949	1939			
9-12	2668	2672	2693	2691	2654	2631	2604	2650	2638	2548			
Total	8204	8255	8250	8279	8218	8193	8135	8096	8015	7901			





Architectural Innovations, LLC Mr. Mark Follen, AIA



North Allegheny School District:

- Elementary Capacity
 - K-5 = 25 Students per Classroom
- Middle School Capacity
 - 25 Students per Homeroom
- NAI and NASH Capacity
 - 25 Students per Typical Classroom
 - 20 Students Art and Science Labs

Pennsylvania Department of Education:

- Elementary Capacity
 - 25 Students per Classroom
- Middle School Capacity
 - 25 Students per Classroom
 - 20 or 25 Students per Other Instructional Spaces
- NAI and NASH Capacity
 - 25 Students per Classroom
 - 20 or 25 Students per Other Instructional Spaces

Building Capacity Analysis

Building Name	NASD Capacity
Bradford Woods Elementary School	500
Franklin Elementary School	525
Hosack Elementary School	500
Ingomar Elementary School	525
Marshall Elementary School	850
McKnight Elementary School	850
Peebles Elementary School	475
Elementary School Total	4225
Carson Middle School	750
Ingomar Middle School	650
Marshall Middle School	775
Middle School Total	2175
Intermediate High School	1505
Senior High School	1725
High School Total	3230



Building Capacity Analysis

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Duilding Space		NASD	,		PDE		Duilding Cases		NASD			PDE	
Building Space	Qty	Capacity Units	Program Capacity	Qty	Capacity Units	PDE Capacity	Building Space	Qty	Capacity Units	Program Capacity	Qty	Capacity Units	PDE Capacity
Library	1			1			Special Education Classroom				2		
Half-Time Kindergarten	2	50	100	2	50	100	Autistic Support						
Full-Time Kindergarten							CAS / Reading						
Regular Classroom				16	25	400	Sized @ .75 CR	1					
Reg Class. (Grades 1-2)	7	25	175				Elem. Student Assist (ESAP)						
Reg Class. (Grades 3-5)	9	25	225				Sized @ .25 CR	1					
Science Classroom		25	0				Emotional Support						
G.O.A.L. (Gifted)				1			English 2nd Language (ESL)						
Sized @ .75 CR	1						Hearing Impaired						
Math/Reading Lab/PSSA							Instructional Assistant						
Small Group Seminar							Sized @ .5 CR	1			1		
Centrum Room							Learning Support	2					
Large Group Instruction	1			1			Life Skills						
Small Classroom < 660 SF							Sized @ .75 CR	1					
Computer Room	1			1			Occup. Phys. Therapy (OT/PT)						
Art Room	1			1			Sensory (with OT/PT)						
Music Room	1			1			Sized @ .5 CR	1					
Band Room							Speech Classroom						
Orchestra Room							Sized @ .25 CR	1					
Choral Room							Special Education Resource				4		
Music Practice Room	3			3			Other Spaces						
Multi-Purpose Room	1			1			A.V. Production						
Stage/Platform	1			1			D.A.R.T.	1			1		
Gymnasium							Inclusion Facilitator Office						
Locker Room	2			2			Social Worker Office						
Kitchen	1			1			Other Office						
Cafeteria							Parent Faculty Assoc.(PFA)				1		
Faculty Dining Room							Sized @ .25 CR	1					
Faculty Room	1			1			YMCA						
Health Suite	1			1			Space Needed for Sensory				1		
Building Administration	1			1			, , , , , , , , , , , , , , , , , , , ,						
Guidance Office	1			1									
Instructional Planning Center							Total NASD Program Capacity			500			
	· · · · · ·			-			Total PDE Capacity						500

This chart was developed for all school buildings.

Physical Conditions Analysis





Bradford Woods Elementary School Renovated in 1992



Marshall Elementary School Opened in 1993



Marshall Middle School Opened in 1992

Physical Conditions Analysis



- Due to the age of these buildings the following upgrades are required for continued use and code compliance.
- Technology Upgrades
 - Data Cabling
 - Sound and Video Systems
 - Voice Amplification
 - Telephone
 - Projectors
 - Wireless Access Points
- Energy Efficiency Upgrades
- Heating and Cooling Upgrades
- Electrical and Lighting Upgrades
- ADA Upgrades
- Roofing
- Doors and Windows
- Plumbing System Upgrades
- Parking and Site Upgrades
- Interior Finishes
 - Floors
 - Walls
 - Ceilings

Physical Conditions Analysis – Estimated Costs



Bradford Woods Elementary School

Total Hard Cost	\$ 9,898,015
Furnishing Costs	\$ 173,215
Technology Costs	\$ 791,841
Construction Soft Costs	\$ 2,009,668
Total Project Cost	\$12,872,739
Potential Additional Costs to Obtain LEED Silver	\$ 1,167,274
Total Project Cost with LEED Silver	\$ 14,040,013
Marshall Elementary School	
Total Hard Cost	\$13,087,171
Furnishing Costs	\$ 229,025
Technology Costs	\$ 1,046,974
 Construction Soft Costs 	\$ 2,657,186
Total Project Cost	\$17,020,357
Potential Additional Costs to Obtain LEED Silver	\$ 1,582,035
Total Project Cost with LEED Silver	\$18,602,392
Marshall Middle School	
Total Hard Cost	\$19,059,279
Furnishing Costs	\$ 333,537
Technology Costs	\$ 1,524,742
Construction Soft Costs	\$ 3,869,748
Total Project Cost	\$24,787,307
Potential Additional Costs to Obtain LEED Silver	\$ 2,358,730
Total Project Cost with LEED Silver	\$27,146,037

Overview of Existing Conditions for Facility Utilization



2010 / 2011 Facility Utilization

7 Elementary Schools and 3 Middle Schools

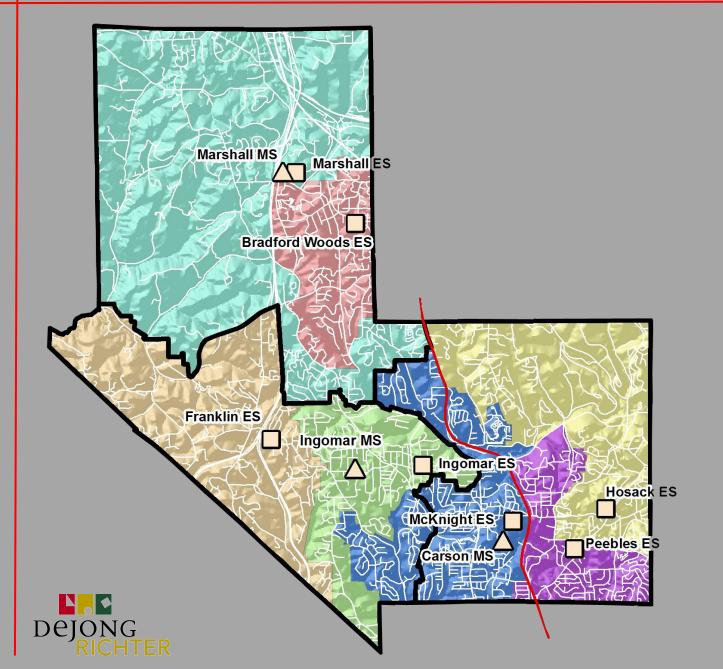
Baseline with Current Enrollment

2010 / 2011 Facility Utilization with Peak Enrollment

7 Elementary Schools and 3 Middle Schools

Baseline with 10 Year Peak Enrollment

2010 / 2011 Facility Utilization





2010 / 2011 Facility Utilization - 2010 / 2011 "3rd Day" Enrollments



ELEMENTARY SCHOOLS	3rd Day Enrollment 2010-2011	NA Current Capacity	NA Current Excess Capacity	Current Utilization
Bradford Woods	408	500	92	81.6%
Franklin	493	525	32	93.9%
Hosack	356	500	144	71.2%
Ingomar	456	525	69	86.9%
Marshall	678	850	172	79.8%
McKnight	780	850	70	91.8%
Peebles	355	475	120	74.7%
Elementary School Totals	3526	4225	699	82.8%
SECONDARY SCHOOLS	3rd Day	NA Current	NA Current	
SECONDARY SCHOOLS	Enrollment 2010-2011	Capacity	Excess Capacity	Planned Utilization
Carson Middle				
	2010-2011	Capacity	Capacity	Utilization
Carson Middle	2010-2011 727	Capacity 750	Capacity 23	Utilization 96.9%
Carson Middle Ingomar Middle	2010-2011 727 635	Capacity 750 650	Capacity 23 15	Utilization 96.9% 97.7%
Carson Middle Ingomar Middle Marshall Middle Middle School Totals	2010-2011 727 635 643 2005	Capacity 750 650 775 2175	Capacity 23 15 132 170	Utilization 96.9% 97.7% 83.0% 92.5%
Carson Middle Ingomar Middle Marshall Middle	2010-2011 727 635 643	Capacity 750 650 775	Capacity 23 15 132	Utilization 96.9% 97.7% 83.0%

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- Current school buildings with 2010 / 2011 "3rd Day" enrollments.
- The elementary schools have excess capacity of 699 seats.
- Middle school enrollment is not balanced.
- Facility improvements would be needed at Bradford Woods Elementary School, Marshall Elementary School and Marshall Middle School.

2010 / 2011 Facility Utilization - With 10 Year Peak Enrollment



ELEMENTARY SCHOOLS	3rd Day Enrollment 2010-2011	Peak Enrollment	NA Current Capacity	NA Current Excess Capacity	Planned Utilization	Final Excess Capacity
Bradford Woods	408	399	500	101	79.8%	101
Franklin	493	538	525	-13	102.5%	-13
Hosack	356	376	500	124	75.2%	124
Ingomar	456	448	525	77	85.3%	77
Marshall	678	712	850	138	83.8%	138
McKnight	780	787	850	63	92.6%	63
Peebles	355	360	475	115	75.8%	115
Elementary School Totals	3526	3620	4225	605	85.0%	605
SECONDARY SCHOOLS	3rd Day	Peak	NA Current	NA Current	Planned	Final Excess
CLOCKDART CONCOLD	Enrollment 2010-2011	Enrollment	Capacity	Excess Capacity	Utilization	Capacity
Carson Middle						
	2010-2011	Enrollment	Capacity	Capacity	Utilization	Capacity
Carson Middle	2010-2011 727	Enrollment 744	Capacity 750	Capacity 6	Utilization 99.2%	Capacity 6
Carson Middle Ingomar Middle	2010-2011 727 635	Enrollment 744 764	Capacity 750 650	Capacity 6 -114	Utilization 99.2% 117.5%	Capacity 6 -114
Carson Middle Ingomar Middle Marshall Middle	2010-2011 727 635 643	Enrollment 744 764 658	Capacity 750 650 775	Capacity 6 -114 117	Utilization 99.2% 117.5% 84.9%	Capacity 6 -114 117
Carson Middle Ingomar Middle Marshall Middle Middle School Totals	2010-2011 727 635 643 2005	Enrollment 744 764 658 2166	Capacity 750 650 775 2175	Capacity 6 -114 117 9	Utilization 99.2% 117.5% 84.9% 100.5%	Capacity 6 -114 117 9



- Maintains existing school buildings and programs and reflects the anticipated "Peak Enrollments" over the next ten years.
- The elementary schools have excess capacity of 605 seats.
- Middle school enrollment is not balanced.
- Facility improvements would be needed at Bradford Woods Elementary School, Marshall Elementary School and Marshall Middle School.

Options for Facility Utilization

Option 1

- 7 Elementary Schools and 3 Middle Schools.
- Redistribute middle school assignments.
- Facility improvements would be needed at Bradford Woods Elementary, Marshall Elementary School and Marshall Middle School.

Option 2

- 6 Elementary Schools and 3 Middle Schools.
- Redistribute elementary and middle school assignments.
- Closes Bradford Woods Elementary School.
- Facility improvements would be needed at Marshall Elementary School and Marshall Middle School.
- Renovations would be required at McKnight Elementary School.

Option 3

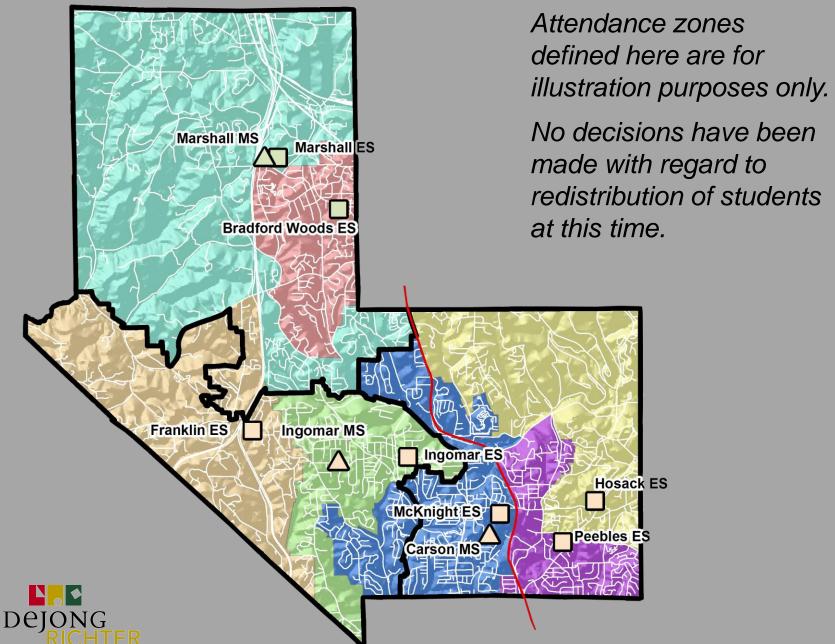
- 5 Elementary Schools and 3 Middle Schools.
- Redistribute elementary and middle school assignments.
- Closes Bradford Woods and Peebles Elementary Schools.
- Facility improvements would be needed at Marshall Elementary School and Marshall Middle School.
- Renovations would be required at McKnight Elementary School.
- An addition would be required at Franklin Elementary School.



- Maintains existing school buildings and programs.
- Addresses the anticipated capacity problem at Ingomar Middle School by modifying the attendance zone.
- Facility improvements would be needed at Bradford Woods Elementary School, Marshall Elementary School and Marshall Middle School.
 - Bradford Woods Elementary School: \$14,040,013
 - Marshall Elementary School: \$18,602,392
 - Marshall Middle School: \$27,146,037
- Does not address the excess capacity issues at the elementary schools.

Option 1 - Facility Utilization





Option 1 - Facility Utilization



ELEMENTARY SCHOOLS	3rd Day Enrollment 2010-2011	Planned Enrollment 2012-13	NA Current Capacity	NA Current Excess Capacity	2012-2013 Planned Utilization	2012-2013 Final Excess Capacity
Bradford Woods	408	399	500	101	79.8%	101
Franklin	493	538	525	-13	102.5%	-13
Hosack	356	376	500	124	75.2%	124
Ingomar	456	448	525	77	85.3%	77
Marshall	678	712	850	138	83.8%	138
McKnight	780	787	850	63	92.6%	63
Peebles	355	360	475	115	75.8%	115
Elementary School Totals	3526	3620	4225	605	85.0%	605
SECONDARY SCHOOLS	3rd Day Enrollment 2010-2011	Planned Enrollment 2012-13	NA Current Capacity	NA Current Excess Capacity	2012-2013 Planned Utilization	2012-2013 Final Excess Capacity
Carson Middle	727	694	750	56	92.5%	56
Ingomar Middle	635	625	650	25	96.2%	25
Marshall Middle	643	712	775	63	91.9%	63
Middle School Totals	2005	2031	2175	144	93.5%	144
NAI	1298	1387	1505	118	92.2%	118
NASH High School Totals	1297 2595	1285 2672	1725 3230	440 558	74.5% 83.3%	440 558

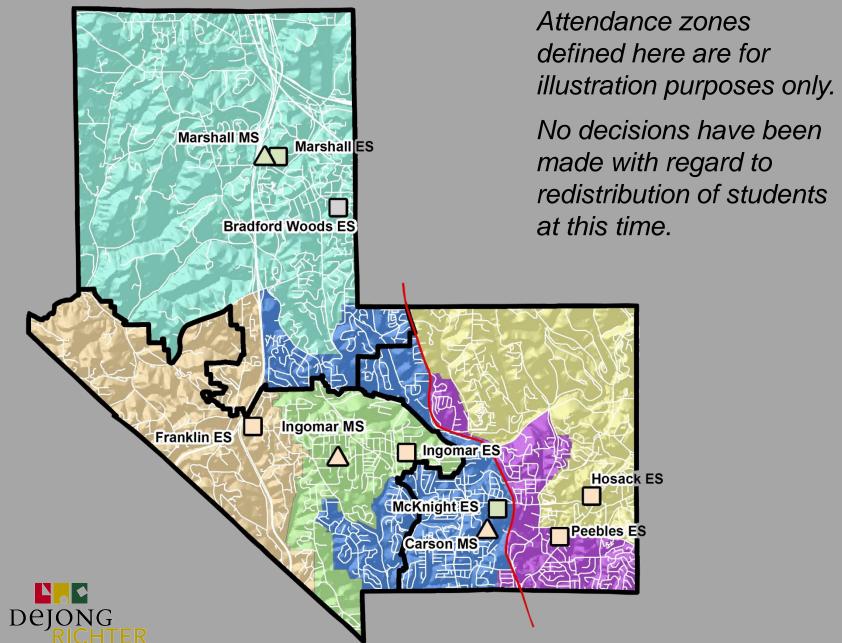
Option 2 - Facility Utilization

A.

- Maintains 6 existing elementary school buildings and programs.
- Addresses the anticipated capacity problem at Ingomar Middle School by modifying the attendance zone.
- Retires Bradford Woods Elementary School, providing the District with an opportunity to reduce operation costs by increasing elementary targeted utilization. This eliminates the need for renovations to Bradford Woods Elementary School, saving \$14,040,013.
- Assumes a limited renovation to McKnight Elementary School to convert the former Pupil Services space into four (4) additional classrooms to increase the building capacity by 100.
- Improves capacity utilization of Hosack Elementary School and Peebles Elementary School, accommodating the attendance of all elementary students residing east of McKnight Road.
- Facility improvements would be needed at Marshall Elementary School and Marshall Middle School.
 - Marshall Elementary School: \$18,602,392
 - Marshall Middle School: \$27,146,037
 - Reduces excess capacity issues at the elementary schools.

Option 2 - Facility Utilization





Option 2 - Facility Utilization



ELEMENTARY SCHOOLS	3rd Day Enrollment 2010-2011	Planned Enrollment 2012-13	NA Current Capacity	NA Current Excess Capacity	Additions Planned	Planned Capacity	2012-2013 Planned Utilization	2012-2013 Final Excess Capacity
Bradford Woods	408	0	500	500	0	-	-	-
Franklin	493	528	525	-3	0	525	100.6%	-3
Hosack	356	421	500	79	0	500	84.2%	79
Ingomar	456	439	525	86	0	525	83.6%	86
Marshall	678	852	850	-2	0	850	100.2%	-2
McKnight	780	905	850	-55	100	950	95.3%	45
Peebles	355	408	475	67	0	475	85.9%	67
Elementary School Totals	3526	3553	4225	672	100	3825	91.6%	272
SECONDARY SCHOOLS	3rd Day Enrollment 2010-2011	Planned Enrollment 2012-13	NA Current Capacity	NA Current Excess Capacity	Additions Planned	Planned Capacity	2012-2013 Planned Utilization	2012-2013 Final Excess Capacity
Carson Middle	727	694	750	56	0	750	92.5%	56
Carson Middle Ingomar Middle	727 635	694 625	750 650	56 25	0 0	750 650	92.5% 96.2%	56 25
Ingomar Middle	635	625	650	25	0	650	96.2%	25
Ingomar Middle Marshall Middle	635 643	625 712	650 775	25 63	0 0	650 775	96.2% 91.9%	25 63
Ingomar Middle Marshall Middle Middle School Totals	635 643 2005	625 712 2031	650 775 2175	25 63 144	0 0 0	650 775 2175	96.2% 91.9% 93.5%	25 63 144

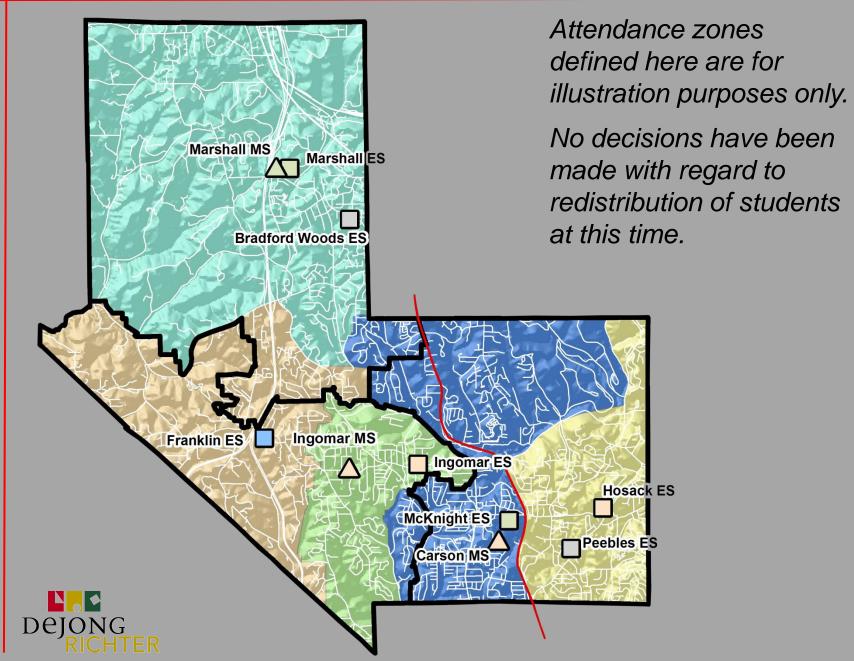
Option 3 - Facility Utilization



- Maintains 5 existing elementary school buildings and programs.
- Addresses the anticipated capacity problem at Ingomar Middle School by modifying the attendance zone.
- Retires Bradford Woods Elementary School and Peebles Elementary School, providing the District with an opportunity to reduce operation costs by increasing elementary targeted utilization. This eliminates the need for renovations to Bradford Woods Elementary School, saving \$14,040,013.
- Requires a limited renovation to McKnight Elementary School to convert the former Pupil Services space into four (4) additional classrooms to increase the building capacity by 100.
- Requires an addition to Franklin Elementary School to increase the capacity to 850 to accommodate potential future residential development and reassignment of elementary students.
- Facility improvements would be needed at Marshall Elementary School and Marshall Middle School.
 - Marshall Elementary School: \$18,602,392
 - Marshall Middle School: \$27,146,037
- Reduces excess capacity issues at the elementary schools.

Option 3 - Facility Utilization





Option 3 - Facility Utilization



ELEMENTARY SCHOOLS	3rd Day Enrollment 2010-2011	Planned Enrollment 2012-13	NA Current Capacity	NA Current Excess Capacity	Additions Planned	Planned Capacity	2012-2013 Planned Utilization	2012-2013 Final Excess Capacity
Bradford Woods	408	0	500	500	0	-	-	-
Franklin	493	716	525	-191	325	850	84.2%	134
Hosack	356	566	500	-66	0	500	113.2%	-66
Ingomar	456	554	525	-29	0	525	105.5%	-29
Marshall	678	848	850	2	0	850	99.8%	2
McKnight	780	869	850	-19	100	950	91.5%	81
Peebles	355	0	475	475	0	-	-	-
Elementary School Totals	3526	3553	4225	672	425	3675	98.8%	122
SECONDARY SCHOOLS	3rd Day Enrollment 2010-2011	Planned Enrollment 2012-13	NA Current Capacity	NA Current Excess Capacity	Additions Planned	Planned Capacity	2012-2013 Planned Utilization	2012-2013 Final Excess Capacity
Carson	727	694	750	56	0	750	92.5%	56
Ingomar	635	625	650	25	0	650	96.2%	25
Marshall	643	712	775	63	0	775	91.9%	63
Middle School Totals	2005	2031	2175	144	0	2175	93.5%	144
NAI	1298	1387	1505	118	0	1505	92.2%	118
NASH (High School)	1297	1285	1725	440	0	1725	74.5%	440
High School Totals	2595	2672	3230	558	0	3230	83.3%	558



North Allegheny School District Mr. Roger Botti

Director of Assets, Transportation and Technology

Project Final Phase

Administration Responsibilities

- Maintain current educational program.
- Review potential operational cost savings.
- Review potential staffing realignments.
- Review of middle school attendance zones.

Consultant Responsibilities

- Develop schematic designs and estimates for potential renovations or additions at Franklin and McKnight Elementary Schools.
- Prepare final report.

Combined Responsibilities

- Review financial impacts of options proposed.
- Present final recommendations for consideration / action to the School Board in February of 2012.



Questions or Comments?