

# Troy School District

## Facilities Study Team Report

February 14, 2012

# Introduction

---

# Presentation Objectives

- Study Team Backgrounds
- Facilities Study Team Process
- What We Learned About the District
- Facilities Study Team Recommendations
- Summary

# Facilities Study Team

Rahmat Awan	Lynda Keough
Gregory Bryen	Bernard Lourim
David Cole	John Mayernik
Scott Courtney	Denise Murray
Adeyinka Dawodu	Heather Plastow
Jamie Douglas	Kim Rosseter
Waqar Hashim	Nehal Shah
Laurie Huber	Pete van der Harst
Dale Jerome	Pete Ziegenfelder

# Facilities Study Team Experience

## Professional Consultants

- Finance Consultant
- Certified Management Accountant
- Productivity Analyst
- Real Estate Planning Developer
- Energy Consultants
- Occupational Safety
- Attorney

## Engineering / Manufacturing

- Electrical Engineer
- Mechanical Engineer
- Architects
- Database Administrator
- Web Developer

## Education / Career Management

- Director of Athletics
- Program Coordinator

## Business Owners

- Architectural Firm
- Business Consulting
- Event Planning Design and Execution

## Business Executive

- Director of Marketing and Business Development
- Controller / Director of Operations

---

# Facilities Study Team Dedication

## **15 regularly scheduled team meetings**

- 61 meeting hours
- 922 meeting man hours

## **625 hours outside meeting activities to include**

- Data Analysis
- Research
- Spreadsheet creation
- Administrative activities
- Additional task group meetings

# Facilities Study Team

## Roles & Responsibilities

- Develop a recommendation and time line for maximizing the use of the District's facilities (elementary, middle & high schools, and district buildings) with an emphasis on maintaining a quality education and financial efficiency for consideration by the Board of Education
- Identify specific criteria to use in the evaluation of the District's facilities

# Scope of Facility Study Team

## Parameters

- Maintain the Quality of the education provided to insure equity among schools
- Maintain current building configuration related to IB, Elementary Schools (K-5), Middle Schools (6-8) and High Schools (9-12)
- The team is not responsible for recommending staffing, program assignment or class size
- District vacant properties are being continually monitored for sale by the board and should not be considered by the team



---

# Facilities Study Team Process

## Step 1: Organized & Structured Team

- Practiced and applied appropriate consensus-building, collaboration and communication skills
- Selected team leadership
- Created team ground rules

# Facilities Study Team Leadership

## Team Leadership

### FST Co-Chairs

- Gregory Bryen and Waqar Hashim

### FST Co-recorders

- Laurie Huber and Denise Murray

### Elementary Task Team

- Lynda Keough – Chair
- Heather Plastow – Recorder

### Financial Efficiencies Task Team

- Pete van der Harst – Chair
- Bernie Lourim – Recorder

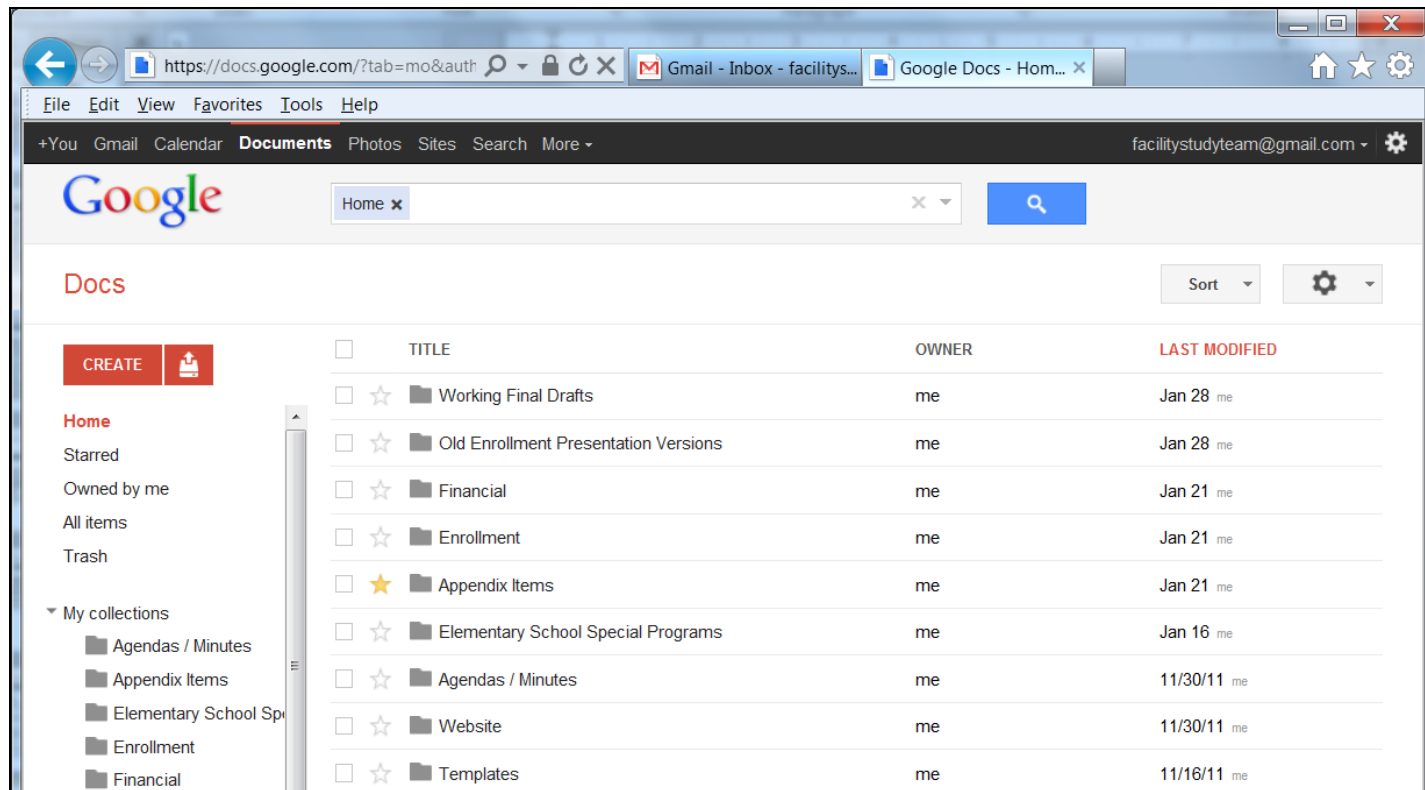
# Facilities Study Team

## Team Ground Rules

- Stay focused on our “charge”
- Be a committed and active participant by:
  - Coming prepared
  - Being punctual
  - Completing assigned task on project timeline or asking for help
- Value ideas, resources and expertise
- Engage and respect others with open and honest discussions using appropriate language and objectivity
- Actively listen

# Facilities Study Communication Format

## Google Mail document sharing



# Facilities Study Team Process

## Step 2: Gathered Information

- District finance resources, revenue, and expenditures
- Anticipated operational cost savings
- Student enrollment history and projections
- Building information and infrastructure ratings
- Elementary and secondary program information
- Building capacity and current functional use
- Elementary school building tours
- Proximity to other schools
- Standard and special room needs

# What We Learned About The District

Based upon the projected student enrollment and the need to investigate financial efficiencies, a decision was made to establish two task teams to focus on

- **Elementary Schools**

Previous Facility Study Teams/Districts have used 90% building capacity as a guideline for elementary schools

- **Financial Efficiencies**

Closer look at budget, facility needs (i.e., deferred/preventative and major maintenance planning)

---

# Enrollment & Projections






## **Dr. Fredrick R. Ignatovich, Ph.D., population study presentation**

- Middle school and high school student enrollment is anticipated to be steady and grow slightly
- Middle school and high school building capacity use is projected to be above the 90% capacity for the years under consideration

**Therefore . . .**

**Task team was charged to look into elementary schools in more detail.**

# Projected Enrollment

School Year	Elementary Schools	Middle Schools	High Schools	All Enrollment	
2011/12	5,234	2,825	4,077	12,136	
2012/13	5,340	2,758	4,138	12,236	
2013/14	5,395	2,763	4,167	12,325	
2014/15	5,389	2,792	4,203	12,384	
2015/16	5,328	2,911	4,165	12,404	
2016/17	5,185	3,057	4,131	12,373	

\* Based on Dr. Ignatovich's formula.



# What We Learned About Finances

- **District Financial Report & Budgets**
- **Meetings with**
  - Dr. Barbara Fowler, Superintendent
  - Mark Ratjer, Assistant Superintendent for Business
  - Monica Papasian, Director of Finance
  - Ken Miller, Director of Buildings and Grounds
- **Brainstorm/Investigate**
  - Cost Savings & Paybacks
  - Revenues

# What We Learned - Funding

## Fund Surplus

- 2010/2011 Audit indicates that current General Fund Balance is within (slightly above) suggested targets
- 2011/2012 balance is forecasted at similar 14% plus of anticipated expenditures
- Without further cost reductions or service consolidation the District's fund balance may degrade as a result of reduced revenue which is a result of SEV and State Funding

# Facilities Study Team Process

## Step 3: Develop Recommendations

- **Elementary Schools Student Enrollment Task Team Charge**  
Evaluate and rank all elementary schools for possible closure by the Board of Education should the need arise
- **Financial Efficiencies Task Team Charge**  
Provide a list of options to increase operating efficiency in all District school facilities for consideration by the Board of Education

---

# Population Enrollment Study

# Elementary Schools Student Enrollment Task Team

Rahmat Awan	John Mayernik
David Cole	Heather Plastow
Scott Courtney	Nehal Shah
Lynda Keough	Pete Ziegenfelder
Denise Murray	

# Enrollment Team Objectives

- Discuss the current population for 2011 – 2012 school year
- Determine the projected population for each of the next five years
- Rank all elementary schools physical conditions and characteristics
- Make conclusions and recommendations on school closures based on available data
- Considered full day kindergarten in determining available classrooms and classroom occupancy

# Dr. Ignatovich's Student Enrollment Presentation

- Fredrick R. Ignatovich, Ph.D., of Standfred Consultants presented his population study on November 2, 2011 to the Facilities Study Team

---

# The National, State, & Local Population is Falling

- From 2007 to 2011, national births unexpectedly declined 3.98%, most likely due to economic pressures
- Neighboring schools districts, such as Utica Community Schools, Detroit Public Schools, and Royal Oak Schools, have closed buildings due to dramatic declining enrollment



# Oakland County Births are Falling

Oakland County births are expected to decline 9.98%.

Year	Oakland County Births	
2006	14,387	
2007	14,104	↓
2008	13,844	↓
2009	13,406	↓
2010	13,193*	↓
2011	12,950*	↓

\* Estimated






# District's Current Enrollment

In the 2011-2012 school year, 5,234 elementary students filled approximately 218 classrooms in 12 elementary schools



**Does not include 34-DK and 6-ECP Students who utilize additional classrooms**  
(October count day data indicates 5,253)

# Projected Enrollment

School Year	Elementary Schools	Middle Schools	High Schools	All Enrollment	
2011/12	5,234	2,825	4,077	12,136	
2012/13	5,340	2,758	4,138	12,236	
2013/14	5,395	2,763	4,167	12,325	
2014/15	5,389	2,792	4,203	12,384	
2015/16	5,328	2,911	4,165	12,404	
2016/17	5,185	3,057	4,131	12,373	

\* Based on Dr. Ignatovich's formula.

# Review Future Enrollment

- In general:
  - look at a broad percentage loss or gain based on Dr. Ignatovich's research
- In detail:
  - look at actual Oakland County births in the last five years and predict how many of those children end up in the District

---

# Based on Predictions, We Will . . .

- Determine if it is possible to close a school based on current and future enrollment
- Define the student loss necessary to consider closing a school
- Recommend which school or schools to close, if necessary
- Look at ways to increase enrollment
- Recommend what to do with the building or buildings, if it is necessary to close

## Dr. Ignatovich Recommended

- That Troy's elementary school-aged population will be in the range of -7.0% to +2.8% in the next five years
- Based on birth rates, the value of our education, housing prices, new construction permits, and past experience among other variables
- Recommended that the population will settle between -2.1% "Most Likely" and +2.8% per a special formula

Low	Most Likely	Per Formula	High
-7.0%	-2.1%	??	+2.8%

# Recommended Formula for Enrollment Projection

- Dr. Ignatovich advised us to use this formula:

*Two times the “Most Likely” plus the High divided by three.*

$$\frac{(2 \times ML) + H}{3}$$

# Elementary Five Year Population Estimate

School Year	Low - 7.0%	Most Likely -2.1%	High +2.8%	Per Formula
<b>2011 - 2012</b>			<b>ACTUAL</b>	5,253*
2012 - 2013	5,262	5,326	5,391	5,348
2013 - 2014	5,241	5,368	5,493	5,410
2014 - 2015	5,166	5,348	5,527	5,408
2015 - 2016	5,052	5,277	5,499	5,351
2016 - 2017	4,868	5,126	5,381	5,211
<b>Projected 5-Year Population Change</b>	<b>385 student LOSS</b>	<b>127 student LOSS</b>	<b>128 student GAIN</b>	<b>42 student LOSS</b>

\*Based on Actual October '11 counts



---

# We Reviewed Actual Birth Rates

- Utilized Dr. Ignatovich's Oakland County births statistics
- With past trends, Dr. Ignatovich determined the ratio of those children who end up in a Troy District kindergarten class.
- We have a low, most likely, high, and per formula ratios.

# Dr. Ignatovich Retention Ratios Per Formula

- 5.71 percent of all Oakland County children will end up in the Troy School District as kindergarteners
- For children born in 2007 in Oakland County, we can expect somewhere around 804 kindergarteners next year

Year	Oakland County Births
2006	14,387
2007	14,104
2008	13,844
2009	13,406
2010	13,193*
2011	12,950*

\* Estimated

# Dr. Ignatovich Retention Ratios Per Formula

- More children enter first grade than kindergarten for a myriad of reasons, including:
  - Day care issues
  - Not required to attend kindergarten
  - People move in / schools of choice
- First grade is 106.43% of kindergarten
  - For every 100 kindergarteners there will be about 106 first graders the next year

# Dr. Ignatovich Retention Ratios Per Formula

- Second grade is 103.48% of first grade
- Third grade is 103.19% of second grade
- Fourth grade is 102.83% of third grade
- Fifth grade is 102.33% of fourth grade

# Based on the Retention Ratios

- Enrollment increases 2 - 3 percent a year
- We can look at past years, and see the pattern
- For those born in 2001 . . .

K 2006 /07	1 2007/08	2 2008/09	3 2009/10	4 2010/11	5 2011/12
785	813	835	829	831	854
	+28	+22	-6	+2	+23

# Based on the Retention Ratios

- We see a similar pattern year over year, grade after grade
- Dr. Ignatovich averaged these year by year ratios
- Using the formula that adds (two times the most likely ratios) plus (the high ratio) then divide by three
- We get the “per formula” ratios

## Projected Elementary Enrollment Based on the “Per Formula” Retention Ratios

School Year	Birth Year	K	1 <sup>st</sup> Grade	2 <sup>nd</sup> Grade	3 <sup>rd</sup> Grade	4 <sup>th</sup> Grade	5 <sup>th</sup> Grade	
		5.71% Of County Births	106.43% of K	103.48% of 1 <sup>st</sup> Grade	103.19% of 2 <sup>nd</sup> Grade	102.83% of 3 <sup>rd</sup> Grade	102.33% of 4 <sup>th</sup> Grade	Total
2011/12	2006	814	919	892	883	872	854	5,234
2012/13	2007	804	866	951	920	907	892	5,340
2013/14	2008	790	855	895	980	946	928	5,395
2014/15	2009	765	840	885	924	1,008	967	5,389
2015/16	2010	753	813	869	913	949	1,031	5,328
2016/17	2011	739	800	841	896	938	971	5,185

\* The ratios are the statistical means of the each school year.

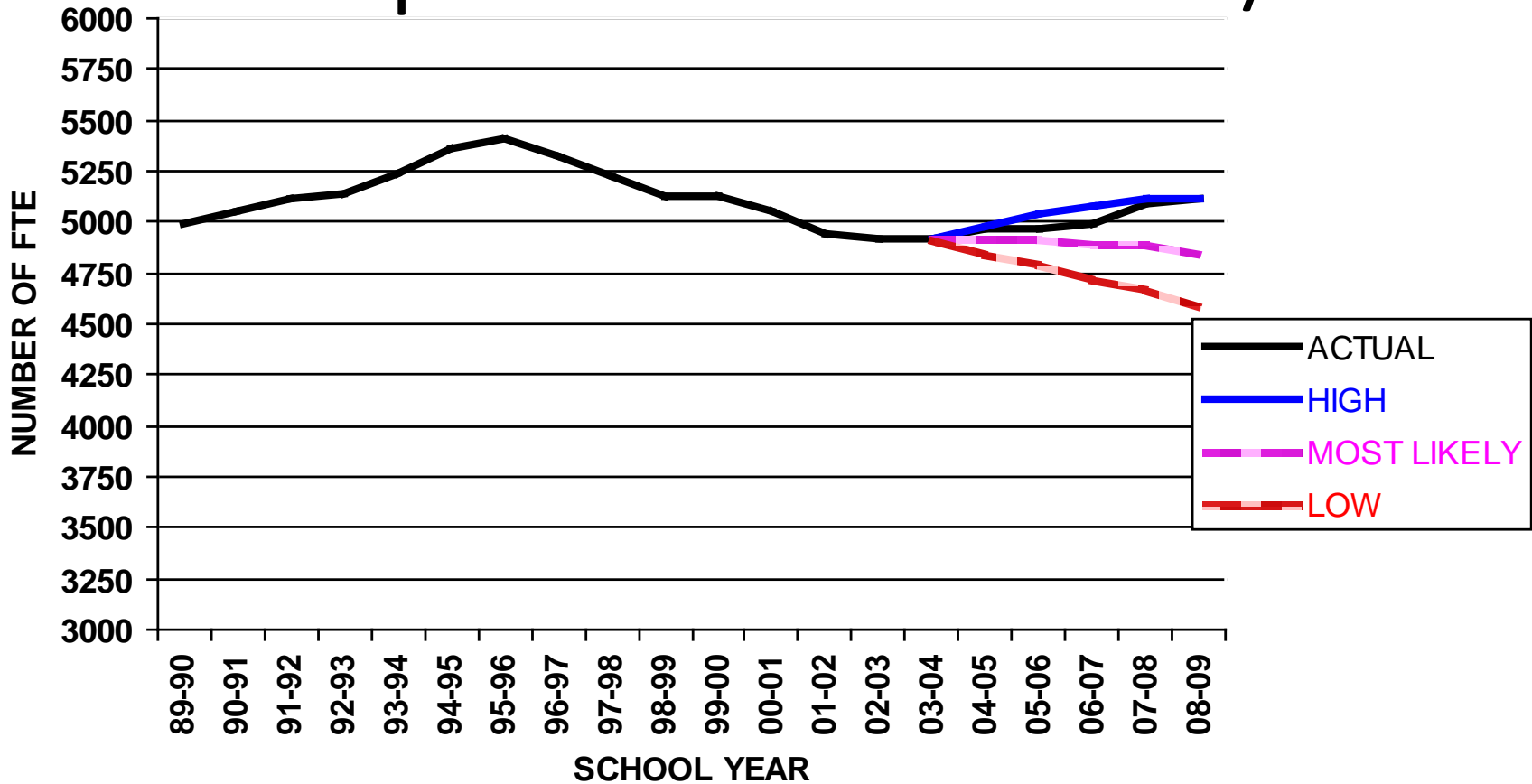
# The Detailed Year-by-Year Analysis

- A decrease of 49 students
- Enrollment loss of .93% in five years

Year	Total
2011/12	5,234
2012/13	5,340
2013/14	5,395
2014/15	5,389
2015/16	5,328
2016/17	5,185



# Projection Accuracy K – 5 Completed in Winter 2002/03



---

# Summary

- Oakland County enrollment is expected to drop nearly 10% in the next five years
- Dr. Ignatovich predicts a Troy enrollment loss of less than 1%

# Why is The District Different than the County?

- Troy students are among the top performers on state and national standardized tests
- Troy is the safest city in Michigan for its size
- The Troy School District has been named one of the 25 best places in America for families who are seeking to relocate to a new community
- The Troy community was also named Michigan's best small city and the nation's 22<sup>nd</sup> best for its quality of schools, parks, and other municipal services
- Lower housing prices
- New construction

# Elementary School Population Conclusions

- The loss of 40 - 60 students using the Formula, which is not a significant reduction over five years
- Since population decrease is negligible, the current 2011 – 2012 population can be used to determine if any schools can be closed
- If a school can be closed in the future with just about the same population, we should hypothetically be able to close that school today

## Can We Hypothetically Close a School with Today's Enrollment?

- Based on information gathered by the Facilities Study Team and the District, we will analyze the possibility of closing one of three schools
- We will simulate closing each of these three schools and determine the potential enrollment impact on their adjacent schools and district in general
- Determine if we can close a school with this year's enrollment numbers
- Enrollment is ideal at an 85% occupancy rate, with a maximum of 90% occupancy rate, according to the District

# Simulated School Closure Selection Criteria

- **Group Ratings**

The Study Team visited all elementary schools and rated them with a number value based on accessibility, floor plan, conditions, and office space.

- **District Ratings**

The District rated each school based on the electrical, plumbing, and general maintenance of the buildings and grounds (Infrastructure Assessment).

- **Utility Costs Ratings**

The District provided utility costs for each school.

- **Current Usage**

We know the current population and classroom usage of each school.

- **Tie Breakers**

Such as property size, location, and accessibility

# Choosing a School Does Not Reflect Poorly on...

- Students or student test scores
- Teachers
- Administrators
- Support staff and volunteers
- PTO and parents

# The Rankings\*

	Group Score	District Assessment	Population	Utility Cost	Tie-Breaker Number	Tie Breaker Comments	Total
<b>Bemis</b>	<b>2</b>	<b>5</b>	<b>1</b>	<b>4</b>	<b>0</b>		<b>12</b>
<b>Hamilton</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>1</b>	<b>0</b>		<b>16</b>
<b>Barnard</b>	<b>3</b>	<b>5</b>	<b>2</b>	<b>7</b>	<b>0</b>		<b>17</b>



# Simulate Closing One Elementary School

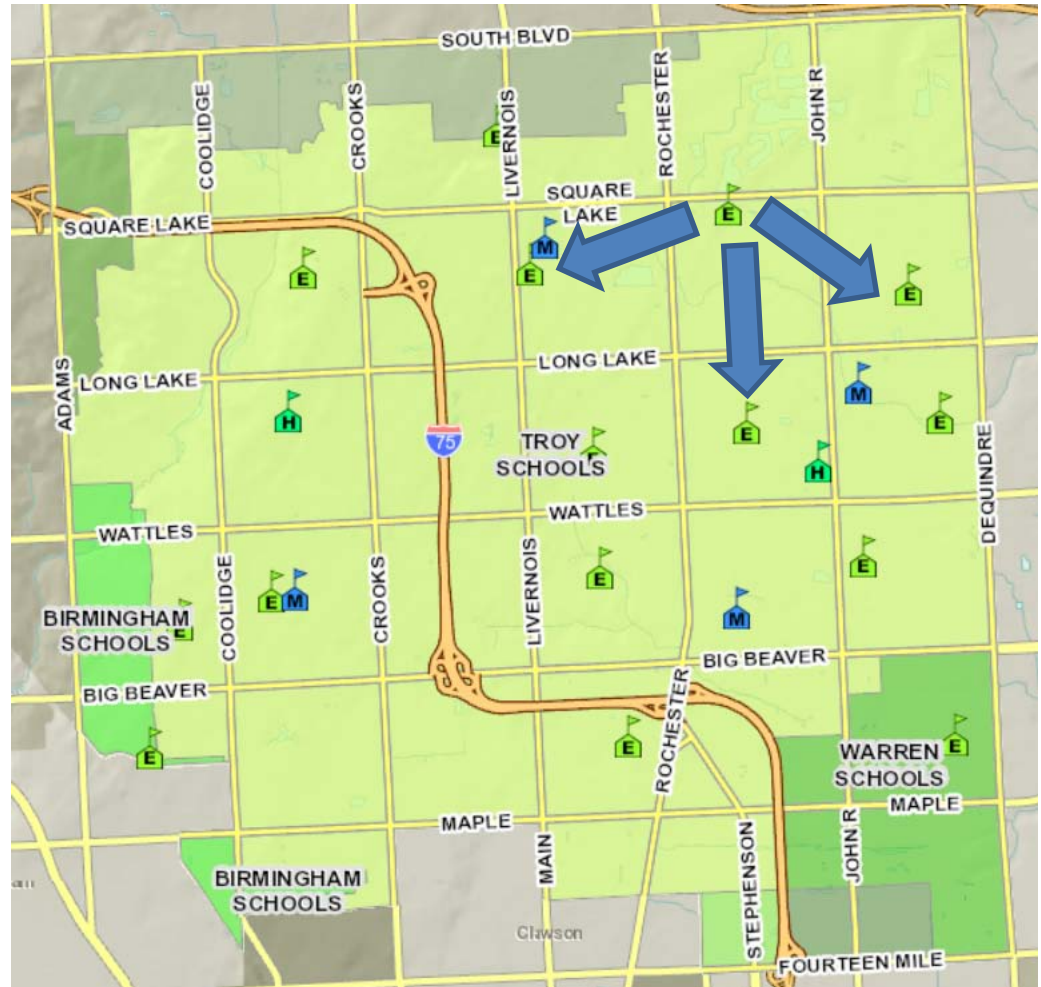
## Simulation

- The simulation will look at closing Troy Union, Wattles, or Hill
- Transfer the students from each school into their neighboring schools
- Show the impact of closing each school

## Minimum Parameters

- Provide for an art room, a music room, and special education in each school
- Include room accommodation for all-day kindergarten in each school

Simulated  
closure of Troy  
Union  
Transfer 536  
students to adjacent  
Costello, Martell, and  
Wass.



# The Impact of Closing Troy Union

## Students who cannot be accommodated in the three Adjacent Schools

K	1	2	3	4	5	Total
12	33	18	21	34	30	148

- The transfer of students from Troy Union, to three adjacent schools, will fill all classrooms and still leave 148 students without a teacher or a desk

**Conclusion: Not enough available space in adjacent schools**

Based on Actual October '11 counts

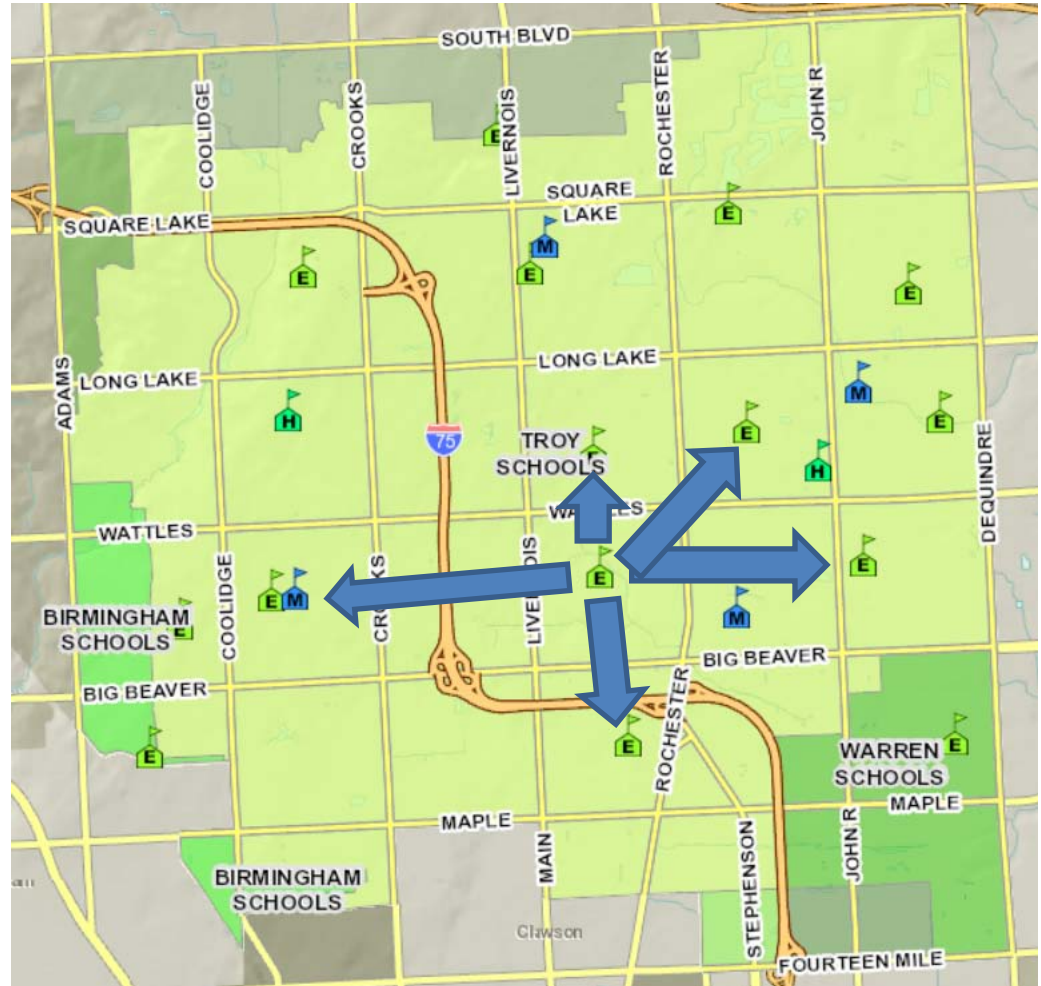
# The Impact of Closing Troy Union

<b>District-Wide Occupancy Rate</b>				
<b>2012-13</b>	<b>2013-14</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>
95.4%	96.3%	96.2%	95.1%	92.6%

When closing Troy Union, the average District occupancy rate is 95.1% for all schools compared to the 85.6% rate today

# Simulated Closure of Wattles

Transfer 533 students to adjacent Leonard, Barnard, Bemis, Costello, and Morse



# The Impact of Closing Wattles

## Students who cannot be accommodated in the five Adjacent Schools

K	1	2	3	4	5	Total
34	30	13	38	7	27	149

- Largest kindergarten class in the district
- The transfer of students from Wattles, to the five adjacent schools, will fill all classrooms and still leave 149 students without a teacher or a desk

**Conclusion: Not enough available space in adjacent schools**

Based on Actual October '11 counts

# The Impact of Closing Wattles

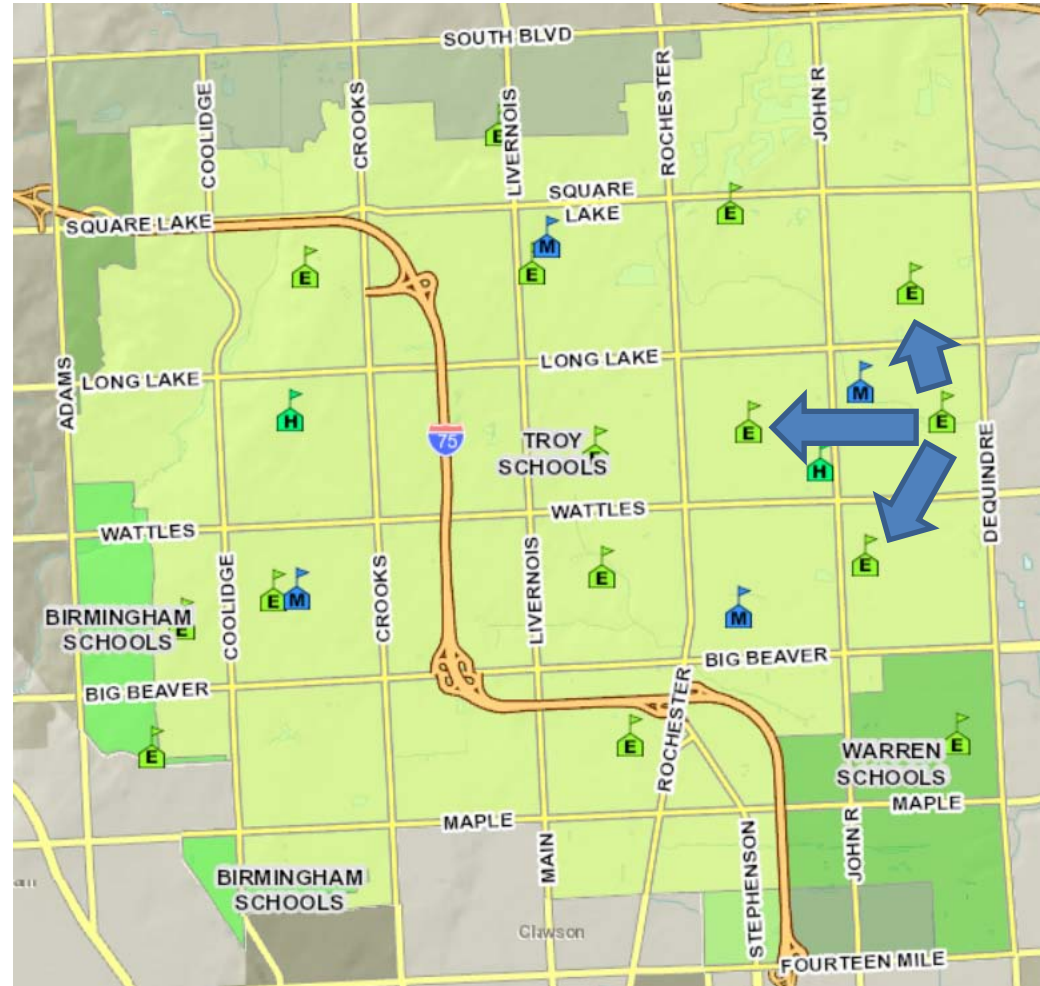
District-Wide Occupancy Rate				
2012-13	2013-14	2014-15	2015-16	2016-17
95.3%	96.3%	96.2%	95.1%	92.5%

When closing Wattles, the average District occupancy rate is again 95.1% for all schools compared to the 85.6% rate today



# Simulated Closure of Hill

Transfer 395  
students to adjacent  
Costello, Barnard,  
and Wass





# The Impact of Closing Hill

## Students who cannot be accommodated in the three Adjacent Schools

K	1	2	3	4	5	Total
0	0	0	21	7	23	51

- The transfer of students from Hill, to three adjacent schools, will fill all classrooms and still leave 51 students without a teacher or a desk

Conclusion: Not enough available space in adjacent schools, but . . .

Unlike the other simulations, it is possible to find space for the 51 students . . . *if* . . . some special education rooms are relocated or portables are utilized

# The Impact of Closing Hill

District-Wide Occupancy Rate				
2012-13	2013-14	2014-15	2015-16	2016-17
93.0%	94.0%	93.9%	92.8%	90.3%

When closing Hill, the average District occupancy rate is again 92.8% for all schools compared to the 85.6% rate today

---

# Three Conclusions

- Based on the population numbers and occupancy rates, we have three conclusions

# Conclusions

- Based upon current and projected elementary student enrollment, we do not recommend closing an elementary school
- If the population declines 7% or more in the out years, we recommend closing one elementary school
- Since moving students to adjacent schools does not seem to work, we recommend redistricting

# Recommendations if student enrollment drops by 7%

# Impact of Simulated Closing

Assumes a 7% Decline in Total Student Enrollment Over 5 Years and Redistribution of Students to Adjacent Schools Only

	2012-13	2013-14	2014-15	2015-16	2016-17
<b>Occupancy Rate BEFORE Simulated Closing</b>					
Projected Enrollment	5,179	5,107	5,035	4,965	4,895
District Occupancy Rate Before Closing	84.4%	83.2%	82.1%	80.9%	79.8%

# Closure Considerations if Enrollment Drops 7%

## **Redistricting the Entire Elementary Student population is necessary.**

- If the District closes either Hill, Troy Union, or Wattles and chooses to redistrict the remaining elementary schools, the average occupancy rate would be at 88 – 89% capacity after five years
- All schools should provide for specials (e.g., art, music, etc.) and special education
- There is a potential relocation of some of the Special Education Programs

---

# Consequences of Closing a School



# Benefits of Closing a School

- Operational cost savings (Utilities, maintenance, and insurance)
- Reduction in personnel expense (Primarily support staff with some teacher efficiency based on class loading)
- Maximizes class room utilization
- Reduction in School of Choice enrollment

# Negative Impact of a School Closure

- Increase in bus traffic and complication of route planning
- Increases traffic congestion on drop off and pick up at schools
- Reassignment of displaced students could cause students in same neighborhood to attend different schools
- Reduced available space for special programs, e.g., language, music, and art
- Potential crowded classrooms create a more stressful environment for teachers and students
- Potential overcrowding jeopardizes quality of education

# Benefits of Not Closing a School

- Maintain the current quality of education
- Maintain reputation of schools to community and neighbors
- Reduce Troy students potentially exiting from the District to private or charter schools because of overcrowding
- Students will live closer (in most cases) to their schools
- Busing remains at current level
- Students stay together throughout their school experience
- Maintain special-use rooms such as art and music and at least one special education room per school

## Options for a Closed Building\*

- Sell the building and property
- Keeping a building for future use
- Rent or lease the building
- Mothball the building
- Demolish the building and sell the land

\*Playground equipment must be removed in ALL cases (salvage value)

# Recommendation #3

## **Options to Consider in Response to Elementary Enrollment Decline of up to 7%**

- Option 1: Increase Schools of Choice Student Population
- Option 2: Expand Special Education Programs Within the District

## Option 1: Increase Elementary Schools of Choice Student Population

- Current Elementary Enrollment is 5,253 or 85.6% of 6,136 Current Contractual Classroom Capacity
- Maximum Elementary Enrollment should not exceed 90% of Contractual Classroom Capacity
- Currently, the District has 446 SOC Students in Grades K-5
- Elementary Student Population is projected to decline by less than 1% over the next 5 years
- Is not affected by All-day Kindergarten as currently empty rooms are not included in this scenario

**Elementary  
Seats  
Available if  
Enrollment is  
raised to 90%  
of Contractual  
Capacity  
("Capacity")**

100% Capacity Grades K-2	3,091
100% Capacity Grades 3-4	2,059
100% Capacity Grade 5	986
<b>Total Capacity Grades K-5</b>	<b>6,136</b>

Total Seats at 90% Capacity Grades K-2	2,782
Total Seats at 90% Capacity Grades 3-4	1,853
Total Seats at 90% Capacity Grade 5	887
<b>Total Seats at 90% Capacity Grades K-5</b>	<b>5,522</b>

Actual Enrollment Grades K-2	2,604
Actual Enrollment Grades 3-4	1,785
Actual Enrollment Grade 5	864
<b>Total Actual Enrollment Grades K-5</b>	<b>*5,253</b>

\*Includes 446  
SOC Students

# SOC Revenue if Current Elementary Enrollment is increased to 90% of Capacity of Grades K-5

<b>Current SOC Students</b>	<b>446</b>	←
Additional Available SOC Seats at 90% Occupancy Grades K-2	178	
Additional Available SOC Seats at 90% Occupancy Grades 3-4	68	
Additional Available SOC Seats at 90% Occupancy Grades 5	23	
<b>Total Additional Available SOC Seats at 90% Occupancy Grades K-5</b>	<b>269</b>	←
<b>Grand Total Available SOC Seats at 90% Occupancy Grades K-5</b>	<b>715</b>	

→	<b>\$3,545,700</b>	<b>Current Revenue from SOC (446 @ \$7,950 Funding per student)</b>
	\$1,415,100	Potential Additional Revenue at 90% Capacity with SOC open to K-2
	\$540,600	Potential Revenue at 90% Capacity with SOC open to 3-4
	\$182,850	Potential Revenue at 90% Capacity with SOC open to Grade 5
→	<b>\$2,138,550</b>	<b>Total Additional Revenue Generated by SOC to fill Classrooms to 90% Capacity</b>
	<b>\$5,684,250</b>	<b>Grand Total Revenue Generated by SOC to fill Classrooms to 90% Capacity</b>



# 7% Drop in Current Elementary Enrollment and Maintain 90% Capacity

A	B (A x 0.9)	C	D (C – 7%)	E (B – D)	F (E * \$7,950)
<b>Classroom Capacity</b> based on Contractual Student/Teacher Ratio <i>in Classrooms already in use</i> <b>**No Additional Staff Required</b>	90% Maximum Capacity Target	Current Elementary Enrollment 2011-2012 (Includes 446 Current SOC Students)	Current Elementary Enrollment <u>including current SOC</u> Students, less 7% (assumes no loss of SOC enrollment)	Total SOC seats available if 7% Drop in Current Elementary Enrollment and Classroom Occupancy is Maximized 5,253 – 4,895	<b>Additional Potential Revenue for SOC</b> based on 7% Drop in Current Elementary Enrollment & 90% Capacity SOC Offering
<b>6,136 Seats at Capacity</b>	<b>5,522 Seats at 90% of Capacity</b>	<b>5,253 Current Students</b>	<b>4,895 Students w/ 7% Drop</b>	<b>358 Additional SOC Spots</b>	<b>\$2,846,100 Additional SOC Revenue</b>

# Advantages of Increasing Elementary SOC Student Population

- Increased SOC Revenue
- Flexibility of SOC based on real time district enrollment
- Maintains diversity of student population
- Attracts new residents to the community due to convenience/commitment to school district

# Disadvantages of Increasing Elementary SOC Student Population

- SOC parents may not be as invested in community and potentially less available for volunteer initiatives
- Assimilating students into a potentially more academically challenging school district
- Increased traffic for city roads and schools
- Cost of sustaining SOC enrollment may exceed benefit to the District

***At what point is it more advantageous to close a school rather than increase SOC?***

## Option 2: Expand Special Education Services Within the District

- The District currently sends 40 students (age 6-17) out of the District each year to attend Special Education Centers
- The tuition for each child varies according to the program they attend and ranges from \$30,000 to \$53,000 per year per student
- Troy offers several programs within the district, but does not house a “Center” at this time

# 2011-2012 Oakland County Center Program Guide – Centers Provided by District

School District Hosting Center	ASD – Autism Spectrum Disorder	HI – Hearing Impaired	MoCI – Moderate ly Cognitively Impaired	POHI – Physical or Other Health Impaired	SCI – Severely Cognitively Impaired	SEI – Severely Emotionally Impaired (Day Treatment)	SXI – Severely Multiply Impaired
Birmingham	8						
Bloomfield Hills		5			4		2
Clawson	5						
Farmington			1	1			5
Hazel Park						1	1
Holly			1				
Lamphere			1				
Troy							
Waterford					1	1	4
West Bloomfield	4					1	

# Example – Autism Spectrum Disorder

## A Growing Special Needs Group

- Fastest growing disability category need in Michigan
- Autism Spectrum Disorder Programs have the highest tuition rate to send out of the District (\$53,000 per Student)
- The District currently sends 10 ASD students (age 6-17) to out of District Centers
- The District is currently exploring the feasibility of expanding Special Education Programs within the district

# TSD Elementary Special Needs Students\*

ASD	HI	MoCI	POHI	MiCI	EI	Total
Autism Spectrum Disorder	Hearing Impaired	Moderately Cognitively Impaired	Physical or Other Health Impaired	Mildly Cognitively Impaired	Emotionally Impaired	
17		5		32	3	57

\*Does not include Troy students who attend programs in other districts.

**Includes low-incidence Special Needs Categories Only.**

# Advantages of Establishing an Expanded Special Education Program within TSD

- Save cost of sending students out of district for services
- Increased revenue from out of district students
- Serving our students within their own district
- Potential to attract families to the District and potentially new residents to Troy
- Increased funding for special needs programs



## Disadvantages of Establishing an Expanded Special Education Program within the District

- Cost of added staff and facility modification
- Uncertainty in program elementary enrollment from year to year and planning accordingly
- Meet rigid state requirements

# Enrollment Task Team Overall Conclusions

- Population is stable
- The District does not close a school until the population drops 7%
- If a school is closed, the enrollment needs to be redistributed throughout the district
- Increasing schools of choice is an option
- Expanding special education services is an option

---

# Financial Efficiencies Task Team

# Elementary Schools Student Financial Task Team

Rahmat Awan	Dale Jerome
Adeyinka Dawodu	Bernard Lourim
Jamie Douglas	Kim Rosseter
Laurie Huber	Pete van der Harst

# Financial Efficiencies

## Objective Task Team Charge

- identify facility-related means to reduce costs or increase revenue other than by closing a school

## Methods

- Establish evaluation criteria for efficiencies, revenue, and savings
- Develop appropriate templates to summarize data
- Research and document potential reliable data sources
- Develop recommendations for the Troy School Board

# Financial Efficiencies Task Team Summary Findings

1. Very difficult to identify items with a short-term (0-3 years) payback
2. Identified areas for longer term financial efficiencies (3+ years)
3. Found a need for long term maintenance
  - Aging facilities require repair and maintenance
  - Cost cuts have reduced repair and maintenance

---

# Financial Efficiencies Task Team Summary Findings

## Conclusion

The District should develop a long-term financing plan to fund facility improvements and efficiencies

# Search for Short Term Efficiencies & Savings

In conducting our review, we brainstormed and considered everything possible

## **From the radical**

- Hybrid buses
- Wind turbines

## **To the simple:**

- Incentives for PTO to assume landscaping
- Free alternatives to Moodle



# Difficulties in Finding Savings – Minimal Facility-Related Costs to Cut

- Due to revenue shortfalls, the District has been forced to make significant budget cuts
- As a source of pride, the District has done its best to limit these budget cuts to non-instructional areas (e.g., facility-related expenses)
  - The District, with the cooperation of the administration and the unions, has reduced personnel costs as well
- Following the 2004 Bond, facility-related efforts have been focused on capital improvements permitted under the Bond, but these funds have been exhausted
- Our charge, facility-related expense, makes up only 3.4% of the entire 2011-2012 Budget

# District Budget and Cost Summary

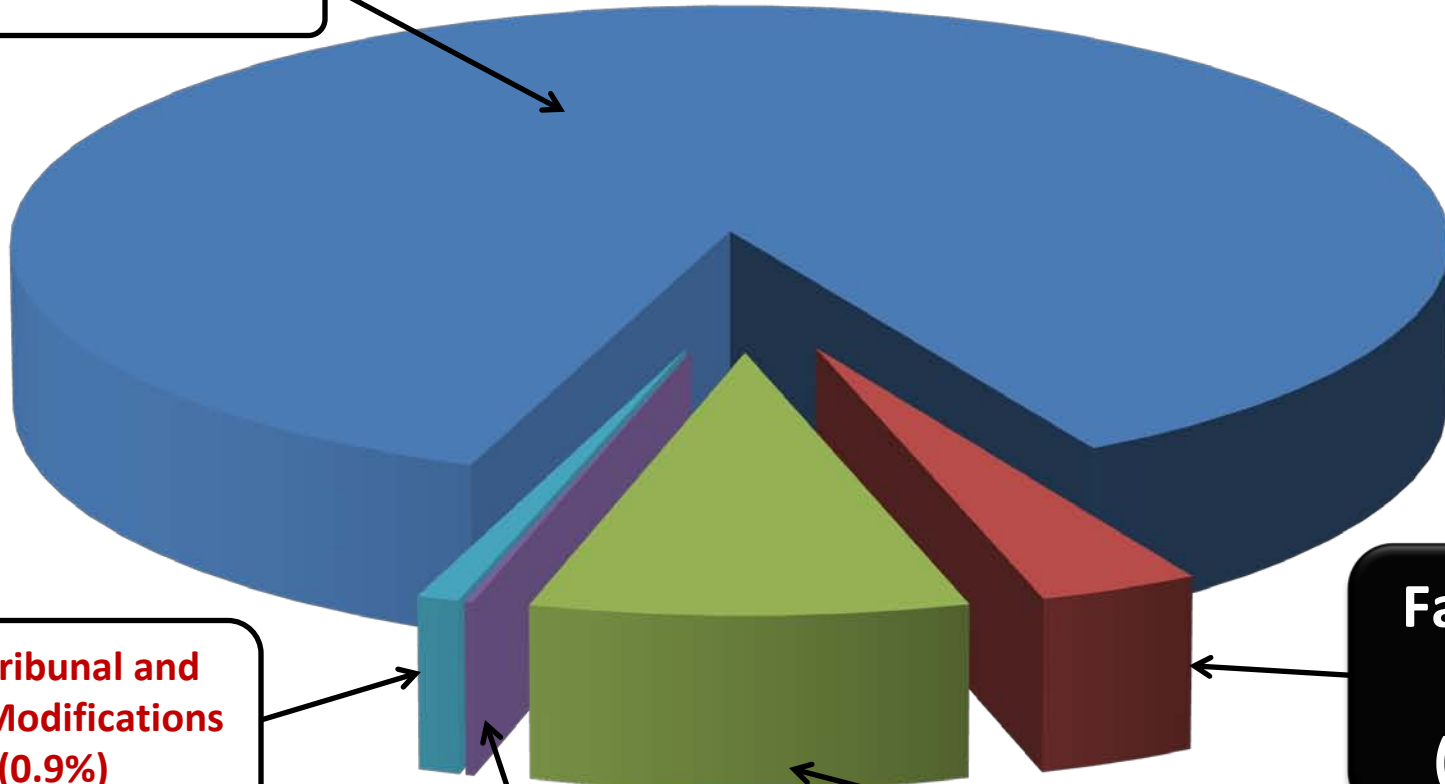
Description	Total per 2011/2012 Budget		Facility Related-Excluding Personnel
	Amount	%	Amount
<b>Personnel Costs:</b> Including professional staff, contracted professional staff, Benefits, and privatized staff related to primarily Cafeteria, Custodial and Transportation	\$115,215,460	89.8%	
<b>Other key operating costs aggregating greater than \$100,000 by type:</b> Including primarily utilities, books and supplies, tuition and expenses paid to other districts, maintenance of facilities and equipment insurance, equipment rents	\$11,741,306	9.1%	\$4,306,935
<b>Operating costs aggregating less than \$100,000 by type</b>	\$248,069	0.2%	\$15,000
<b>Other Costs:</b> Primarily including Tax Tribunal and Fund Modifications	\$1,140,379	0.9%	
<b>Total Spending</b>	\$128,345,214	100.0%	
<b>Total Spending Related to Facilities-Excluding personnel</b>			\$4,321,935

Facility Spending as % of Total Spending

**3.4%**

# District Budget and Cost Summary

**Personnel Cost (89.8%)**



**Facilities Cost (3.4%)**

**Tax Tribunal and Fund Modifications (0.9%)**

**Operating Cost less than \$100,000 (0.2%)**

**Operating Cost more than \$100,000 (9.1%)**

# What We Learned about the District – Personnel Costs

Personnel costs, including benefits have been frozen or reduced via employee participation	2010/11 From	2011/12 To	Save
Wages reduced with positions eliminated, attrition and wage freeze	\$71,096,898	\$68,652,429	\$2,444,469
Benefits reduced with attrition, negotiated caps and employee participation	\$36,645,840	\$34,755,457	\$1,890,383
	<b>\$107,742,738</b>	<b>\$103,407,886</b>	<b>\$4,334,852</b>

*Reduction as a % of Prior Year Cost (of 7.22% total reduction year over year)*

**4.02%**

## Difficulties in Proposing Efficiencies – Requires Funding to Implement

- Aside from cutting costs through reductions, we investigated facility-related changes that would operate more efficiently and, therefore, at less expense
- An additional benefit to such changes could be an improvement to health, safety, and the environment
- The challenge is that such initiatives may produce unreasonable payback periods -- i.e., it takes longer for the annual operational savings to exceed the initial capital outlay

# Short Term Efficiency Example

## Reduce Facility Temperatures by 2°

Reduce temperature in all facilities by two degrees.

Current Annual Cost (District-wide for Natural Gas & Electric)	Cost to Implement	Annual Savings	Simple Payback
\$1,018,710	Indeterminate cost related to potential administrative issues	\$35,000 - \$200,000	Unknown due to potential administrative issues

# Longer Term Financial Efficiencies

- We did not limit our investigation to short term paybacks, though, because over time these initiatives may become more viable
  - Technological advances may reduce the cost or increase the efficiency
  - Funding may become available
  - The change may become necessary so that the initial investment is only the difference between the cost of the efficient item and the standard replacement item
- Following are summaries of data for the key investigations undertaken by the team

# Longer Term Efficiencies

Install high efficiency boilers.

## Average cost to implement at a typical elementary school

Current Annual Cost (natural gas)	Cost to Implement	Projected Annual Savings	Simple Payback
\$23,000	\$125,000	\$9,200	14 years

## District-Wide Totals (12 Elementary, 3 MS, 2 HS)

Current Annual Cost (natural gas)	Cost to Implement	Projected Annual Savings	Simple Payback
\$835,000	\$4,225,000	\$334,000	13 years



# Longer Term Efficiencies

Convert 3 middle schools and 2 high school buildings to Geothermal Energy.

## Example of Cost to Implement at Boulan (or Larson) Middle School

Current Annual Cost (Gas/Electrical)	Cost to Implement Geothermal	Cost of Boiler/Chillers	Net Incremental Cost	Estimated Annual Savings (Gas/Electrical)	Simple Payback
<b>\$171,031</b>	<b>\$1,014,986</b>	<b>\$425,000</b>	<b>\$589,986</b>	<b>\$85,516</b>	<b>7 years</b>

## TOTAL Cost for 3 Middle Schools and 2 High Schools

Current Annual Cost (Gas/Electrical)	Cost to Implement Geothermal	Cost of Boiler/Chillers	Net Incremental Cost	Estimated Annual Savings (Gas/Electrical)	Simple Payback
<b>\$1,468,391</b>	<b>\$14,876,970</b>	<b>\$3,425,000</b>	<b>\$11,451,970</b>	<b>\$734,196</b>	<b>16 years</b>

# Longer Term Efficiencies

Additional foam insulation (greater than R30 staggered-layer) to reduce heat loss, and white, EPDM roofs to avoid heat build up.

Building Level	Current Annual Cost (Natural Gas)	Cost to Implement High Efficiency Roof/Insul.	Cost to Install Standard Roof/Insul.	Incremental Cost	Project Annual Savings (Natural Gas)	Simple Payback
Elementary (12)	\$276,000	\$3,600,000	\$2,520,000	\$1,080,000	\$41,400	26 years
Middle Schools (3)	\$183,000	\$1,650,000	1,155,000	\$495,000	\$27,450	18 years
High Schools (2)	\$376,000	\$1,750,000	\$1,225,000	\$2,100,000	\$56,400	9 years
District-Wide Total	\$835,000	\$7,000,000	\$4,900,000	\$2,100,000	\$125,250	17 years

# Longer term Efficiencies

Install Low flow plumbing fixtures.

## Example of cost to implement at Barnard Elementary

Current Annual Cost (water costs)	Cost to Implement	Projected Annual Savings	Simple Payback
\$3,902	\$50,500	\$1,561	32 years

## District-Wide Total

Current Annual Cost (water costs)	Cost to Implement	Projected Annual Savings	Simple Payback
\$161,814	\$1,312,261	\$61,186	21 years

# Longer Term Efficiencies

New lighting fixtures - LED parking lot lights at Athens and Troy High sites

Total for Both Sites			
Current Annual Cost (electricity)	Cost to Implement	Projected Annual Savings (electricity)	Simple Payback
\$12,698	\$145,800	\$6,352	23 years

# Longer Term Efficiencies

New lighting fixtures -T8/T5-HO Fluorescent lighting  
in gym and pool areas

## Example – Implement at Athens High School Pool & Main Gym Areas

Current Annual Cost (electricity)	Cost to Implement	Project Annual Savings (electricity)	Simple Payback
\$6,918	\$110,000	\$2,835	38 years

# Longer Term Efficiencies

New high efficiency windows/doors

District-Wide Totals (12 Elementary, 3 MS, 2 HS)			
Current Annual Cost (natural gas)	Cost to Implement (District-Wide)	Projected Annual Savings (natural gas)	Simple Payback
\$835,000	\$9,856,000	\$125,250	79 years

# Need for Long Term Maintenance

- Naturally, aging facilities require continuous preventative and situational repair and maintenance
- The Troy School District facilities are in need of additional maintenance
  - District's internal evaluation describes a number of areas in need
  - The team's visits confirmed this evaluation
  - As an example, boiler condition is the largest area of concern, with the greatest cost to update, repair or add efficiency
- Budget cuts have impacted the ability to carry out such a plan

# Conclusion - Long Term Maintenance

- The maintenance plan should be coordinated with the decisions regarding the long term efficiency changes
- The District facilities administration is best suited to propose this maintenance plan in line with their internal procedures
- The District should develop and implement a long term financing plan to fund facility improvements and efficiencies



# Potential Funding Sources

- Bond (recognizing the political difficulties, especially given that the current bond is still outstanding)
- Bond re-financing
- Sinking Fund (devoted to repairs)
- Special programs/ grants, including those for energy efficiency or sustainable initiatives
- Advertising at athletic venues, school signs, and website (Board has considered)
- Renting space
- Previously mentioned ideas for schools of choice expansion and related options

# Facilities Study Team

## Summary

February 14, 2012

# Scope of Facility Study Team

## Formation

- The Facility Study Team was formed with the approval of the Troy School Board and its Administration
- The Team was given a set of roles, responsibilities and parameters within which to operate

# Scope of Facility Study Team

## Goals

- Develop recommendation(s) and time line for maximizing the use of the District's facilities (Elementary, Middle and High Schools, and District Buildings)
- Develop recommendation(s) that maintain quality of education with financial efficiency use of team
- Utilize team developed criteria utilized in such evaluation giving consideration to the basic understandings of current operating profiles.

# Scope of Facility Study Team

## **Establish understanding of**

- Current finances, revenue sources and contemplated revenues
- Current operational costs as baseline for potential enhancements.
- Evaluate and quantify operating costs of facilities and potential impact of consolidation
- Current enrollment, demographics and trends related thereto
- Building infrastructure, e.g., age, condition, floor plan, flexibility, special room needs and proximity to other schools

# Scope of Facility Study Team

## Parameters

- Maintain the Quality of the education provided to insure equity among schools
- Maintain current building configuration related to IB, Elementary Schools (K-5), Middle Schools (6-8) and High Schools (9-12)
- The team is not responsible for recommending staffing, program assignment or class size
- District vacant properties are being continually monitored for sale by the board and should not be considered by the team
- Personnel pay, benefits, class size and other employee related matters have been and are being currently addressed by the District in its normal course and subject to current personnel labor agreements and policies. These areas are not subject to team evaluation.

# Proactive Approach

## **The Rationale for Facility Consolidation, Cost Efficiency and Revenue Enhancements Studies**

- The Troy School District has chosen to be pro-active in an investigation of current vs. future facility utilization in response to possible reductions in state funding, equalized value driven receipts and potentially declining student enrollment

## **Financial Condition**

- Current General Fund balance is at, or slightly above, optimum levels (14% of Operating Budget for the General Fund)
- Such Fund balance may decline to below the optimum value in three years, subject to items outside of the control of the District, such as Equalized value, State Revenue Sharing, and Population Trends

# Current and Expected Facility Loading

## Five Year Forward Forecast

- Middle and high schools enrollment simulations indicate loading at or greater than current enrollment over the five-year forward period, thus no consolidation is required at these levels
- Elementary school enrollment had been managed, to date, with certain levels of Schools of Choice in addition to normal system enrollment based upon birth and population trends
  - Subject matter expert (Dr. Ignatovich) has provided a range of enrollment projections (mean, high and most likely) that would preclude a decision to consolidate facilities
  - Subject matter expert has developed a low estimate that could result in a 300 plus enrollment drop primarily occurring in the 4<sup>th</sup> and 5<sup>th</sup> years out, but advises against using this estimate



# Projected Enrollment

School Year	Elementary Schools	Middle Schools	High Schools	All Enrollment	
2011/12	5,234	2,825	4,077	12,136	
2012/13	5,340	2,758	4,138	12,236	
2012/14	5,395	2,763	4,167	12,325	
2014/15	5,389	2,792	4,203	12,384	
2015/16	5,328	2,911	4,165	12,404	
2016/17	5,185	3,057	4,131	12,373	

\* Based on Dr. Ignatovich's formula.

# Financial Background Factors

## Personnel Costs

- As indicated within the financial section of this report, efficiencies related to personnel costs (aggregating 89 to 90% of total operating costs of the District) have been attained by a combination of
  - Employee concessions (wage freezes and cost sharing of benefits)
  - Support staff re-balancing
  - Privatization of non-educational personnel such as custodial, transportation, and cafeteria services

## Other Costs

- Operating cost efficiencies and ease of implementation, related to potential cost reductions, net of investments and revenue sources, while of interest, may have small yields effecting the General Fund

# Conventional Revenue Sources

## **Revenue sources are relatively limited by declining property values and state revenue sharing formulas**

- 2004 General Obligation Bond Issue authorized 5 mills to cover \$100 million debt service. Current millage is at 4.4 mills and may only be applied to Debt Service
- If a Sinking Fund Millage were to be sought and approved, such assessment would yield would annually aggregate \$3.5 million per mill
- The Board may desire to consider such sources of funding for potential Capital Maintenance or Capital Improvements with appropriate financial payback periods

# Bonding Conditions Precedent

## Bonding versus General Fund

- In the evaluation of a decision to undertake a bond issue, with taxpayer support, we believe that items exhibiting less than three year payback are most likely not candidates for bond issuance, but rather should be considered in view of general fund maintenance and repair plans

## Payback Hurdle

- Bond and sinking fund requests should be in line with initiatives having greater than three years payback
- If supported by bond issuance, the payback period should be such as to generate funds in excess of the bond in a period shorter than the term of the bonds—positive cash flow

## Overriding Facility Condition Considerations

- Internal (District Facilities Management) evaluations of facility conditions, confirmed in our facility reviews, indicated near term needs for boiler and paving maintenance and improvements in a large number of facilities
  - These repairs may not be sustainable within current General Fund availability and must be considered as a rationalization for alternative funding requests

# Additional Enrollment Revenue Sources

**The Troy School District currently utilizes Schools of Choice to balance facility utilization, primarily with K-1 and IB entrance points:**

- In view of the projected short term enrollment indicators we suggest that this process continue as a conduit to funds that balance facility loading at the 85 – 90% of practical capacity use range
- Additional revenues may be available via class loading analysis utilizing other than K-1 and IB entrance points, subject to Board approval as to a change in strategy, which was outside of the scope of the Facilities Study Team

# Additional Enrollment Revenue Sources

**Special Education Expansion may result in the potential to reduce the amounts of “tuition” paid out of district for certain programs not currently offered by the District:**

- Such expansion may effectively become mandated under State Guidelines in future years , thus making the decision for the District Board by default
- With consideration to relatively high tuition paid to transfer students out of the District, at this time, initiating programs within the District, may reduce overall net costs on a per student basis

# Other Revenue Sources

## Government Grants and Funding

- Certain cost efficiency ideas discussed in detail under “Cost Efficiencies” are in line with alternative and renewable energy initiatives being fostered through various federal programs and agencies
- We suggest that the District expand in place grant and funding activities to consider these sources to satisfy two objectives - Cost Efficiency and Qualitative improvement, such as “green” objectives

# Other Revenue Sources

## Sale and Leaseback

- Consider only for non-educational locations, for example Administration Campus and Rankin facility
- Funds would give one time increase but would effectively be paid back over 8 to 10 years with no long term net benefit to the District
- Use may be limited to Building fund, and as such provide some short term funding for efficiency improvements

***For such a “transaction” to work, the funds would have to be invested in facility related initiatives that would create positive net cash flow from savings in excess of fund re-payment requirements, most likely not attainable with efficiency initiatives identified.***



# Cost Reduction Considerations

## **Focus- those actions that can be undertaken to increase operating efficiency by reducing operating costs**

### **General business considerations-payback:**

- 3 year payback or less being funded from current general funds
- Over 3 year payback funded by incremental taxpayer funds (in the form of debt instruments such as Specific Bonds or Sinking Funds), or potential government funding that may be available, or become available, with the intent of fostering qualitative improvements

### **Qualitative versus Quantitative considerations:**

- Certain initiatives that may have qualitative opportunities related to emerging technologies that cannot be cost justified in current cost environment
- These initiatives should be continually monitored as such costs decline in the general market due to technological maturation and increased market acceptance resulting in lower costs to implement

# With Decline of 300 or More Elementary Students

**Close an elementary school and re-district all  
remaining elementary schools**

***OR***

**Accept a less than theoretical optimal occupancy**

- Mothballing of classrooms
- Balancing of educational staff according to contractual obligations
- Potential building administration sharing to the extent practical and according to contractual obligations subject to emerging strategic direction on educational performance parameters

# Cost Reduction Consideration-Conclusion

- We recommend that the District continue to monitor birth and population trends over the next two years in balance with “School of Choice” policies to respond to a potential 300 student decline, at the elementary level, should it occur
- There are no individual or groups of cost reduction initiatives that can be viewed as the solution for General Revenue Reductions
- Cost containment actions to date, may be inadequate in amount to maintain ending fund balances in future years
- Major maintenance requirements cannot be funded from current general fund availability
  - Therefore: Bonding will be required to maintain facilities
- Current state government direction indicates continued pressures upon reducing and or containing personnel costs (payroll and benefits) either through consolidation activities or other actions to continue current funding levels, based upon state driven evaluation

# Thank you

Thank you for an opportunity to help make a difference and maintain Troy School District's competitive edge and excellence