

# 2018 Bond Planning Committee

**March 5, 2018**

- Finance 101 Recap
- Teaching and Learning:  
Connecting the Dots
- Long-Range Facilities  
Master Plan





## Birdville ISD Mission ...

- The mission of BISD is to ensure that all students position themselves to excel with integrity in an ever-changing global society through innovative and responsive learning environments.





## Your Birdville ISD Superintendent ...



**Dr. Darrell G. Brown**





## Outcomes for tonight ...

- Aligned work group; cohesive owners of the 2017 Community Bond Planning Committee work
- Superintendent's Remarks
- Process Review
- Public School Finance Review
- Facilities Tour Debrief
- Teaching & Learning: Connecting the Right Dots
- Long-Range Facilities Master Plan & Priority Codes
- Considerations for Replacement/New Facilities Needs
- Overview of Subsequent Meetings





# Housekeeping ...

- All presented materials & information will be distributed to you as handouts and on the Birdville ISD website at [birdvilleschools.net/BPC2018](http://birdvilleschools.net/BPC2018).
- Because of time constraints, no breaks have been scheduled, so please take plumbing or motion breaks as needed. Restrooms are outside the doors to your right.
- Ask any questions. **Unanswered questions or frequently asked questions and answers will be posted on the Birdville ISD website at [birdvilleschools.net/BPC2018](http://birdvilleschools.net/BPC2018).**
- A committee roster is under the Committee Members tab in your binder. If your information is incorrect, please write the correct information on the Sign-In sheet at the back of the room. **Your attendance at every meeting** will help yield optimum results for this Committee and this community.
- Those who miss three consecutive meetings will not receive further meeting notifications.
- Catch-up work and gathering information from missed meetings is the responsibility of the Committee member. Because of the amount and complex/sequential nature of the presentations, no Committee time will be allotted to remediating individuals at tables.





## Introductions ...

- Is there anyone here who was not at Meeting #1?





# BISD Bond Planning Committee

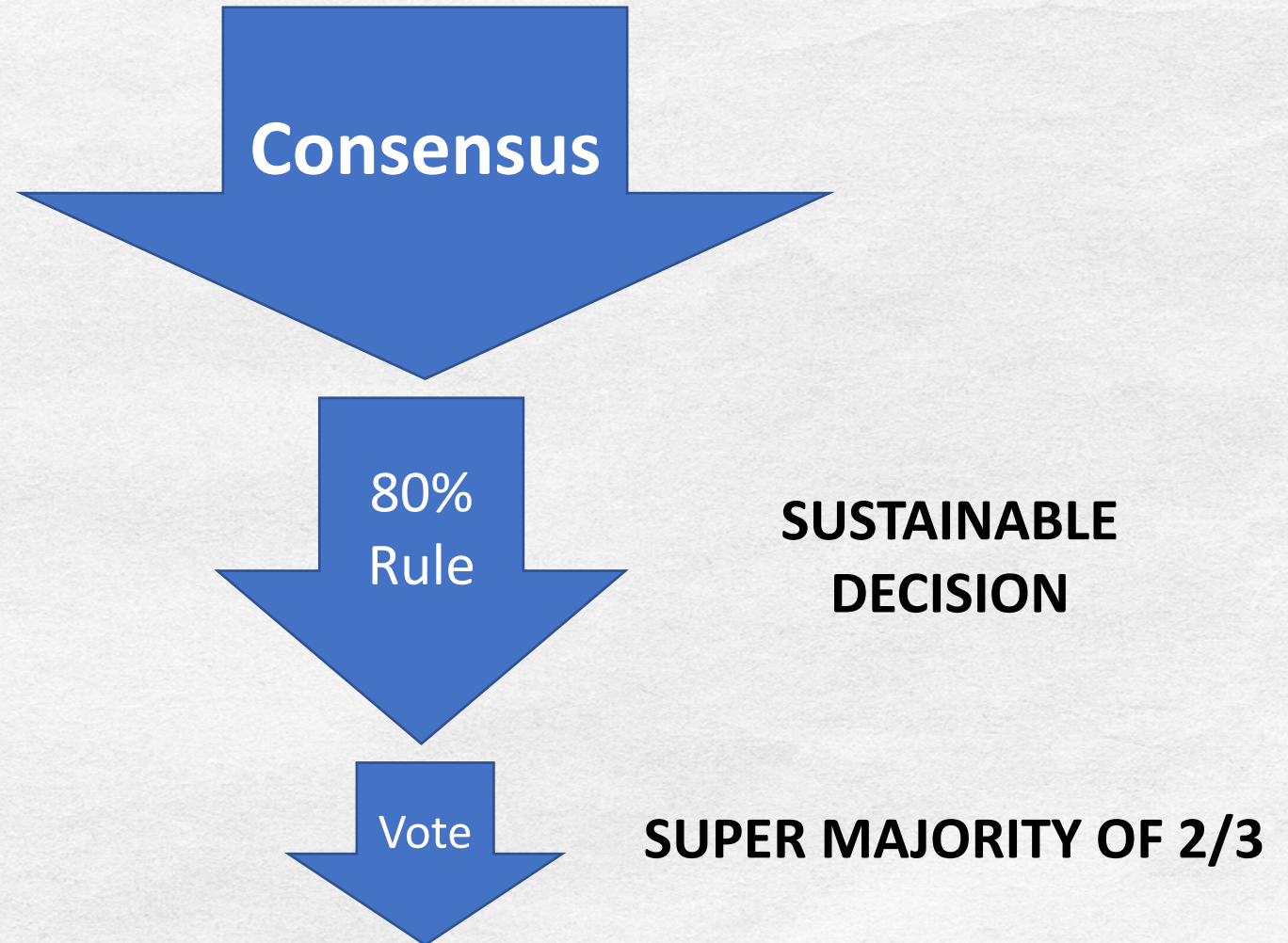
## Ground Rules ...

- One conversation at a time; no sidebar talk.
- Honor the time contract
- Stay on topic and on task
- Share ideas freely; no “duck shooting.”
- Listen to understand; respect and honor others’ input.
- Think holistically; sublimate personal agendas; consider the whole District.
- Be kind
- Be honest
- Be relentless in pursuing consensus
- HAVE FUN!
- Silence electronic devices
- Share the conversation—at tables and in large group.



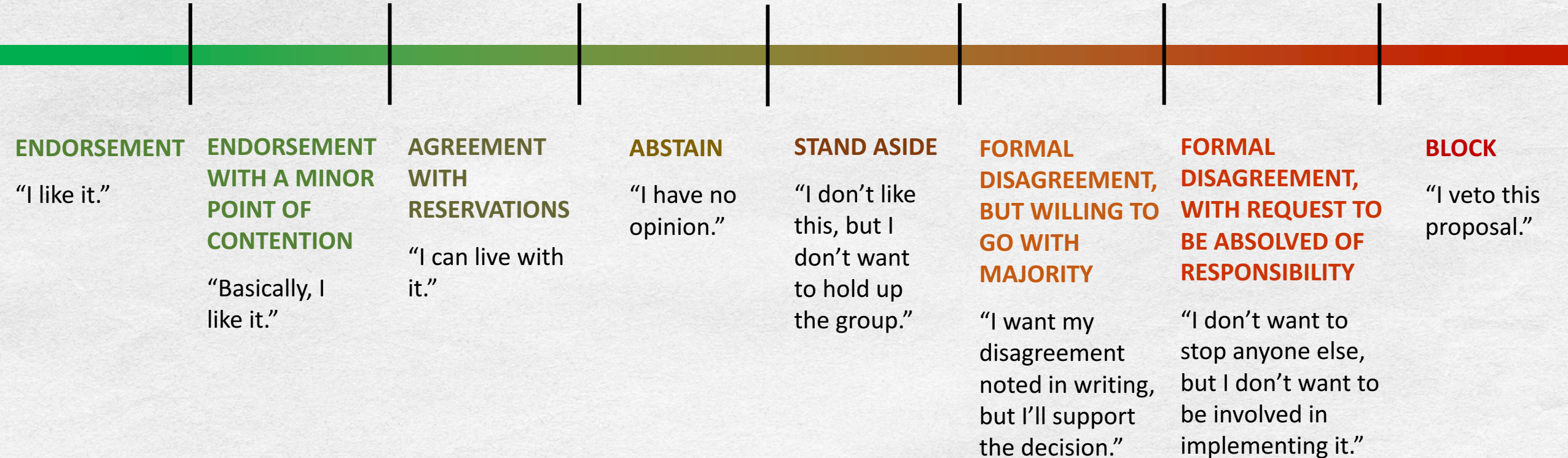


## Proposed Decision-Making Model ...





# Consensus and Gradients of Agreement ...



This is the Community At Work Gradients Of Agreement Scale.

This scale makes it easier for participants to be honest. Using it, members can register less-than-whole-hearted support without fearing that their statement will be interpreted as a veto.



# What General Process Shall We Follow in Our Meetings? ...

- We will be uniform and fair in our decision-making.
- We will have time to process information and ask questions.
- We will be presented complex school finance information by District and external professionals.
- We will gain understanding and insight into District needs through presentations by demographers and District professionals in several meetings.
- We will be given a spreadsheet with the projects and associated costs when all the presentations are complete.
- We will be informed of the District's financial capacity in Meeting #5.
- We will deliberate and make decisions individually, at our tables, in eight larger groups, then in four large teams, then collectively (more detailed description later).
- We will reach consensus on a bond referendum that we consider viable in the community, represents good stewardship, and that meets the needs of our District/students.
- We will present that proposed referendum to the Board of Trustees who have the final decision on bond election.





# Public School Finance 101 ... A Review



**Katie Bowman, CPA**  
**Associate Superintendent for Finance**





## “HOW DO WE PAY FOR BISD?”

### OPERATING BUDGET

#### MAINTENANCE & OPERATIONS (M & O)

##### EXAMPLES

TEACHER SALARIES  
ELECTRIC BILLS  
MINOR REPAIRS  
BUS GASOLINE

### “MORTGAGE”/DEBT

#### INTEREST & SINKING (I & S)

##### EXAMPLES

NEW ELEMENTARY SCHOOL  
SCIENCE WING ADDITION  
NEW SCHOOL BUSES  
LAND PURCHASE







## 4 Major Resources Affecting School Funding

Enrollment



State Funding



Property Values



Tax Rates





# General Fund Budget Development

## General Fund Revenue Factors

- Enrollment
  - Average Daily Attendance (ADA)
    - ❑ Each attendance day generates approximately \$36 per student
  - Weighted Average Daily Attendance (WADA)
- Taxable Value of District
- Comptroller's Property Tax Division (CPTD) Values
  - Prior Year's Tax Values
- State Funding Formulas
  - Basic Allotment of \$5,140 (no change since 2015–16)
- Proposed Tax Rate
  - **Capped at \$1.04 per \$100 of property value**
  - Tax rate increase to \$1.17 allowed only with voter approval

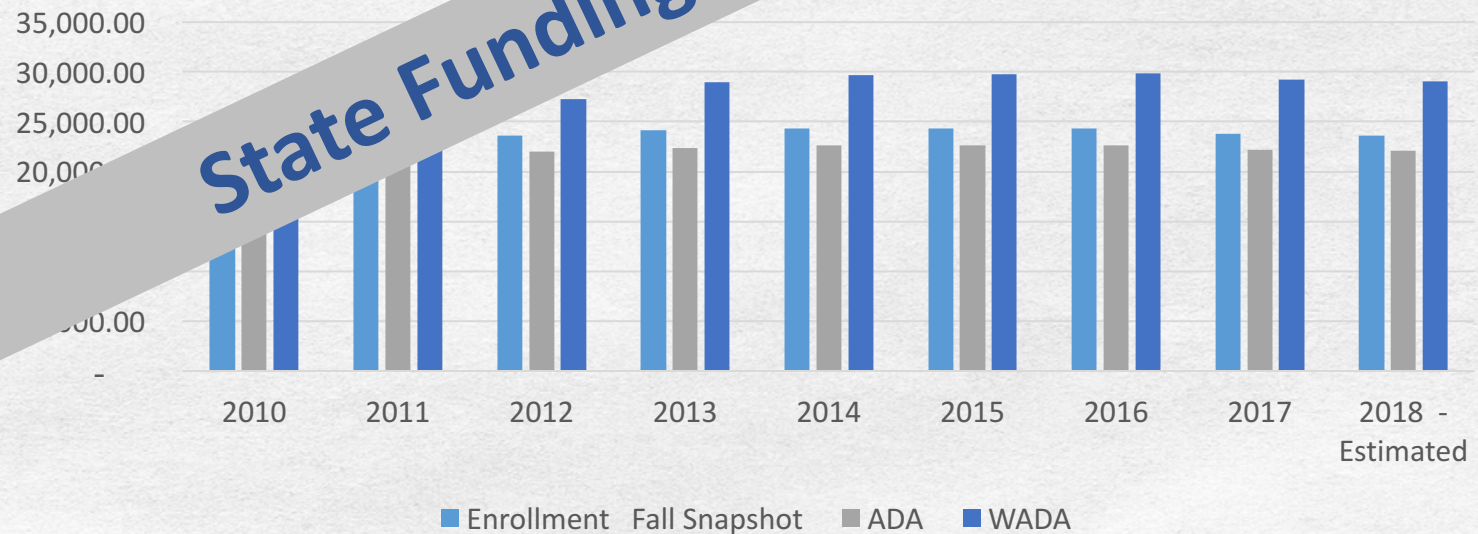




## 2017-18 Enrollment

Fiscal Year	Enrollment Fall Snapshot	ADA	WADA
2010	22,803.00	21,271.12	27,738.81
2011	23,441.00	21,820.49	28,594.87
2012	23,629.00	22,032.96	27,280.56
2013	24,119.00	22,376.20	28,968.31
2014	24,287.00	22,593.44	29,713.42
2015	24,356.00	22,671.65	29,713.42
2016	24,321.00	22,666.67	29,713.42
2017	23,802.00	22,180.00	29,713.42
2018 - Estimated	23,627.00	22,180.00	29,713.42

2016-17 experienced a 1.5 percent decline with the loss of 300 students of Interoceanic Partnership charter school. In September 2017, a loss of 1.5 percent in General Fund Revenue.

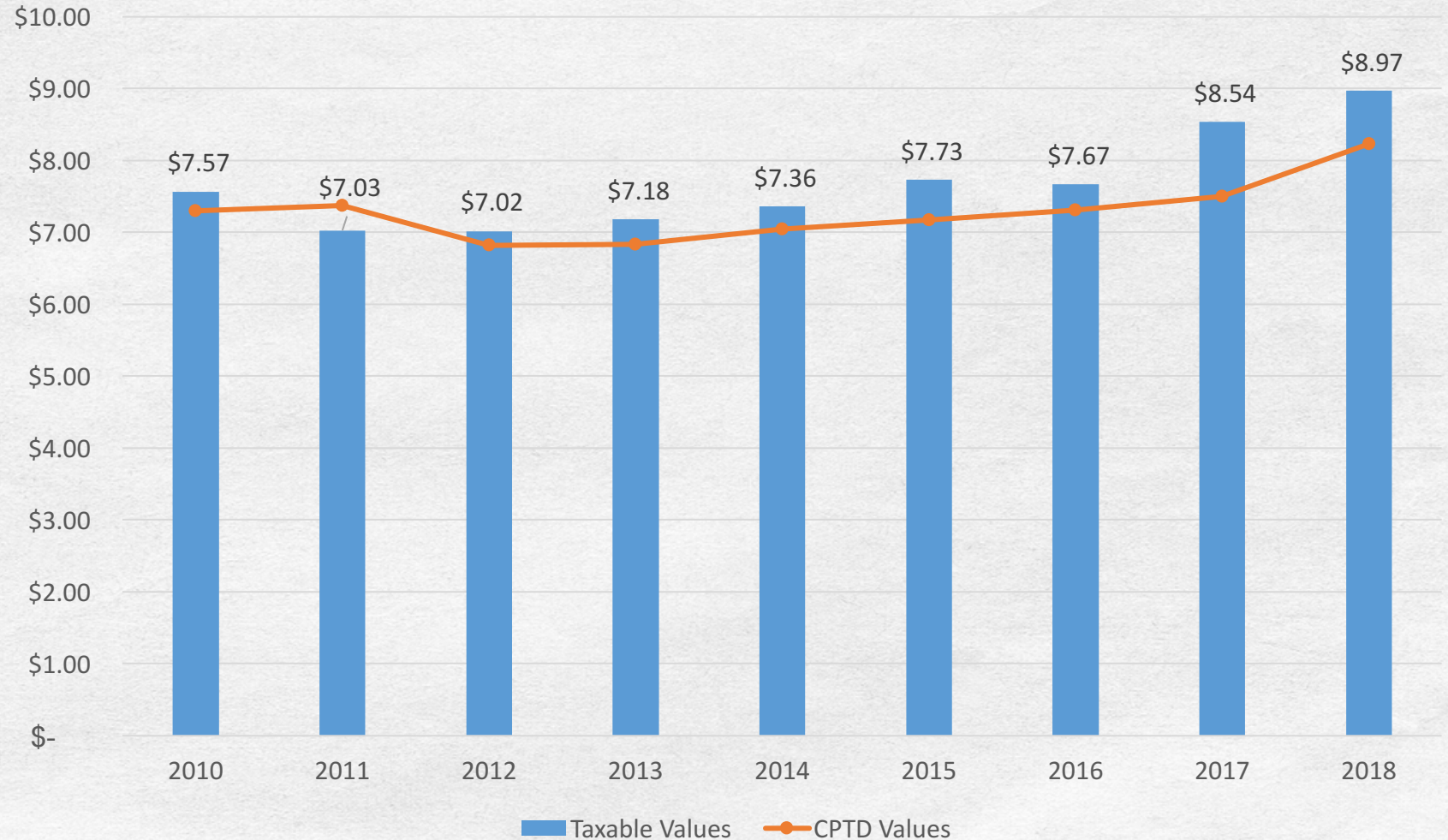


State Funding Follows the Student





## Birdville ISD Tax and CPTD Values (in billions)





## Birdville ISD General Fund (M&O) Tax Rates



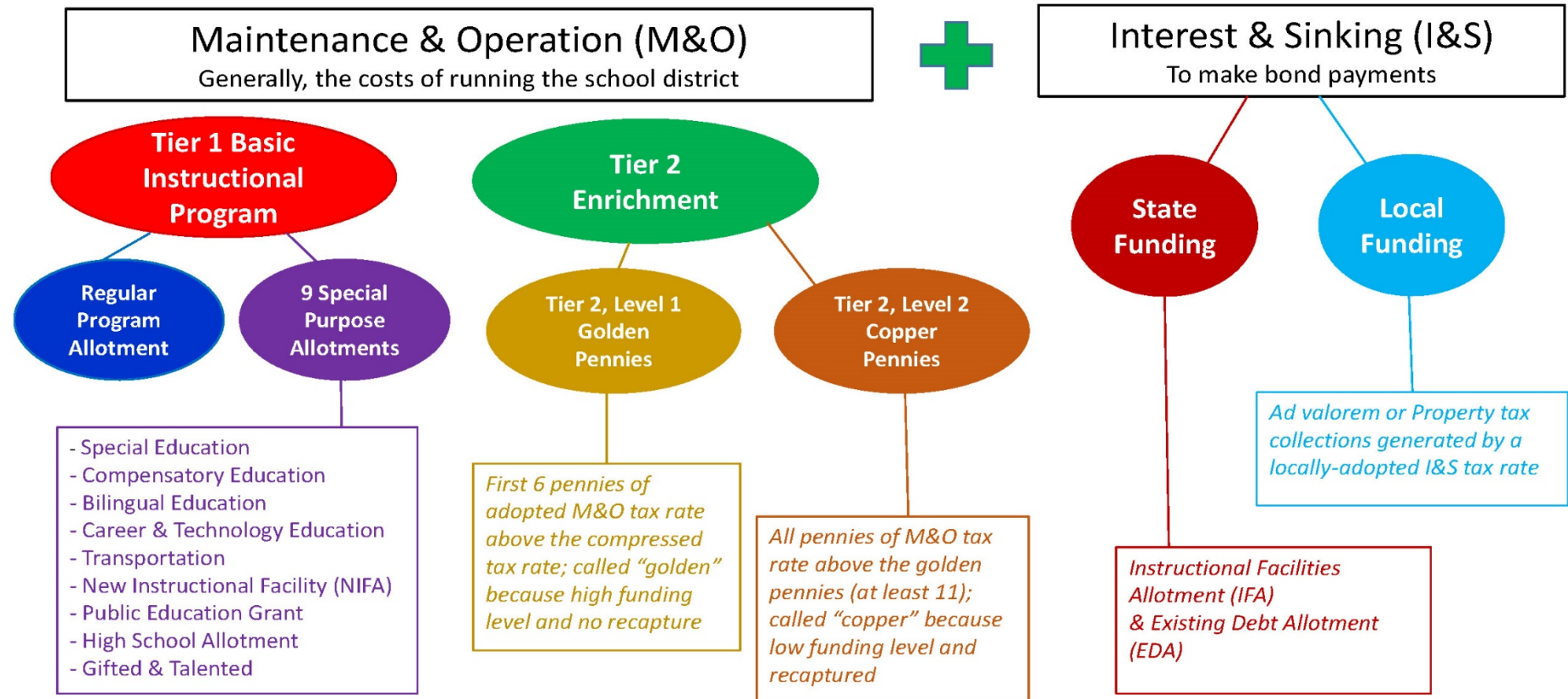
Note: Capped at \$1.04 per \$100 of property value since fiscal year 2007–08





## State Funding

### The Foundation School Program



Source: Equity Center



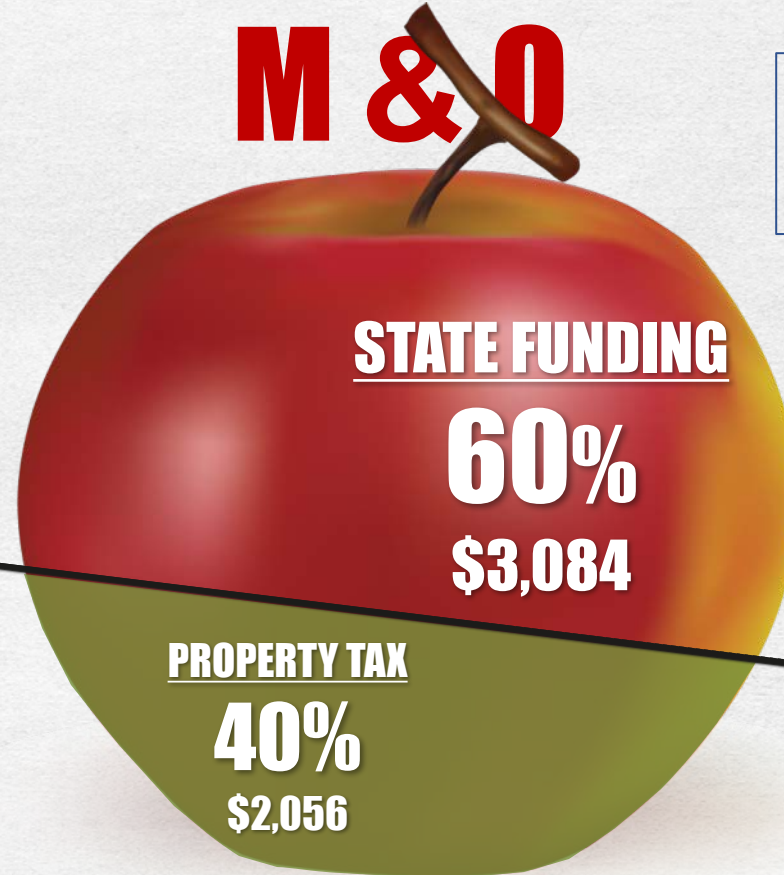


## “SO, WHAT IF OUR PROPERTY VALUES GO UP 5%?”

*Sally*



\$5,140



Example  
Year 1





# "SO, WHAT IF OUR PROPERTY VALUES GO UP 5%?"

Sally



\$5,140



**M & O**

STATE FUNDING

**55%**

**\$2,827**

- 5%

+ 5%

PROPERTY TAX

**45%**

**\$2,313**

Example  
Year 2

\$





## Tier I Funding

- 2018–19 FY Assumptions
  - No change in student population
  - No change in basic allotment
  - 2018–19 five percent property value growth
- No change in Tier I revenue
  - State Funding reduction of \$8.9 million

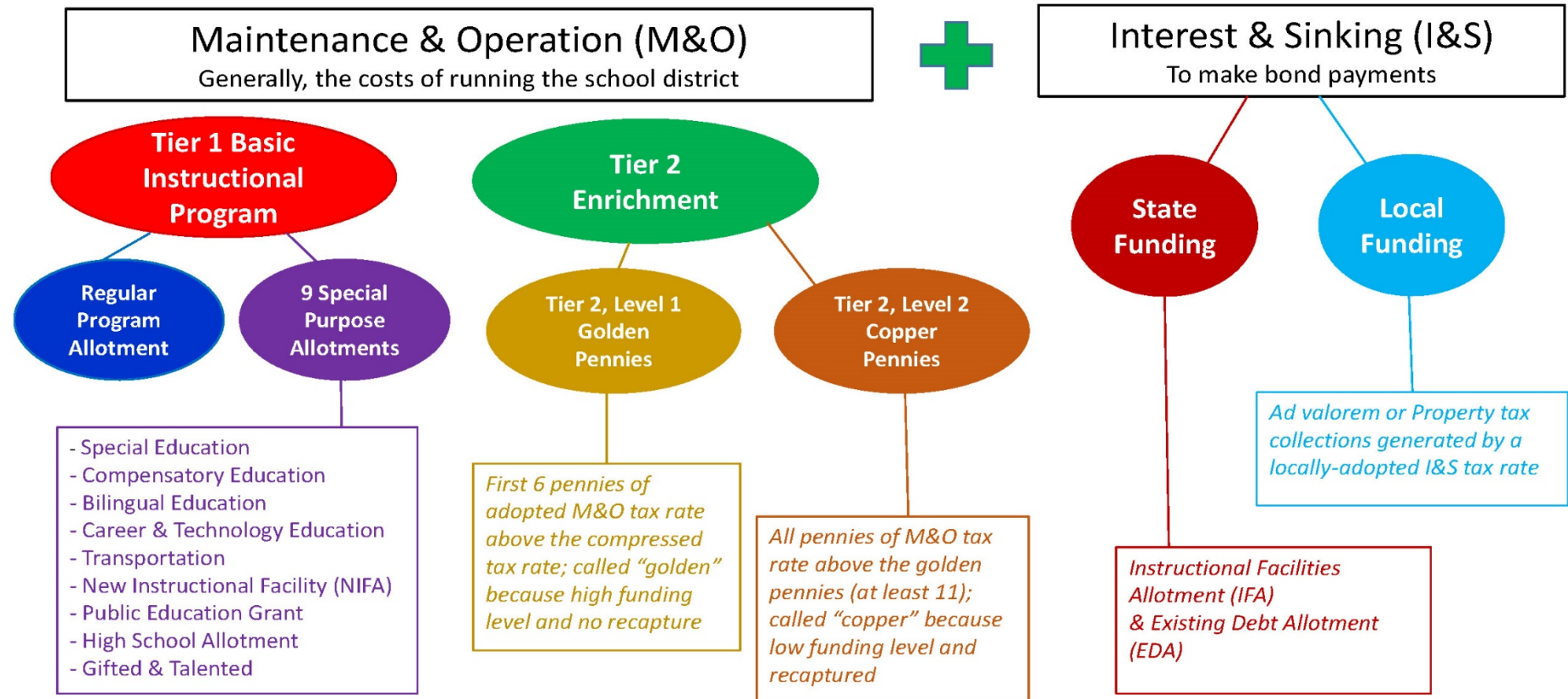
	2017-18	2018-19
Programs	Tier I Funding	Tier I Funding
11-Regular Program Allotment	\$112,545,950	\$112,545,950
23-Special Education Adjusted Allotment (Spend 52%)	\$12,989,897	\$12,989,897
22-Career & Technology Allotment (Spend 58%)	\$8,688,859	\$8,688,859
21-Gifted & Talented Adjusted Allotment (Spend 55%)	\$730,748	\$730,748
24-Comp Ed Allotment (Spend 52%)	\$15,810,752	\$15,810,752
25-Bilingual Education Allotment (Spend 52%)	\$2,415,454	\$2,415,454
99-Transportation Allotment	\$1,072,770	\$1,072,770
31-High School Allotment	\$1,824,576	\$1,824,576
Total Cost of Tier I	<b>\$156,079,006</b>	<b>\$156,079,006</b>
Less: Local Fund Assignment (based on prior year tax values)	\$80,691,251	\$89,567,288
State Share of Tier I	\$75,387,756	\$66,511,718
Change in State Contribution to Tier I Funding		<b>(\$8,876,038)</b>





## State Funding | The Foundation School Program

### The Foundation School Program



Source: Equity Center





# M&O Local Property Tax Rate Funding Tiers

## Tier I



**Compressed  
M&O Tax Rate  
(\$1.00)**

**RECAPTURE**

LEVEL 1

## Tier II

LEVEL 1

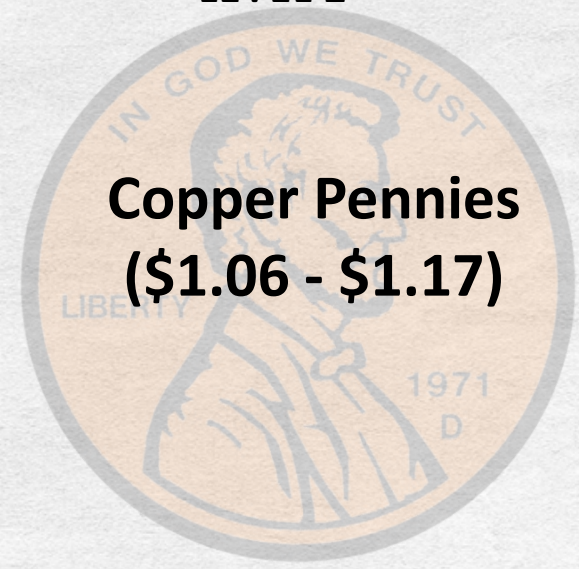


**Six Golden  
Pennies  
(\$1.00 - \$1.06)**

**NO RECAPTURE**

## Tier II

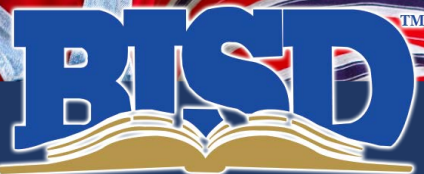
LEVEL 2



**Copper Pennies  
(\$1.06 - \$1.17)**

**RECAPTURE**

LEVEL 2





# Tier Funding

- Tier I Funding-Higher Property Wealth District Example

	2017-18
Programs	Tier I Funding
11-Regular Program Allotment	\$112,545,950
23-Special Education Adjusted Allotment (Spend 52%)	\$12,989,897
22-Career & Technology Allotment (Spend 58%)	\$8,688,859
21-Gifted & Talented Adjusted Allotment (Spend 55%)	\$730,748
24-Comp Ed Allotment (Spend 52%)	\$15,810,752
25-Bilingual Education Allotment (Spend 52%)	\$2,415,454
99-Transportation Allotment	\$1,072,770
31-High School Allotment	\$1,824,576
Total Cost of Tier I	\$156,079,006
Less: Local Fund Assignment (based on prior year tax values)	\$160,000,000
State Share of Tier I	(\$3,920,994)

- Tier II Funding (Golden Pennies)
  - Additional funding to ensure districts with lower property values are able to generate revenue similar to higher property wealth districts
    - (revenue generated per penny, per WADA)

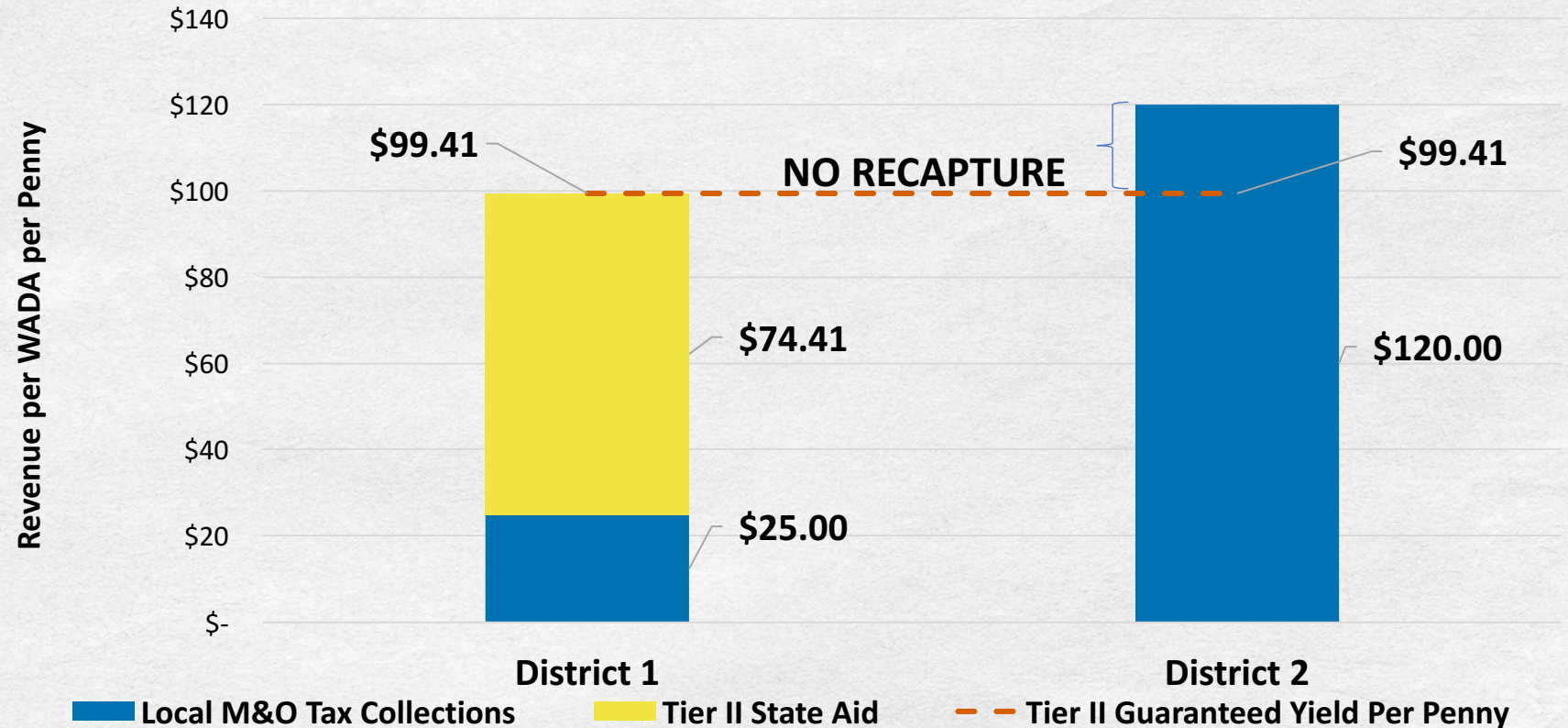
**Six Golden Pennies are equalized up to Austin ISD's 2017-18 wealth level of \$99.41**





## Tier II Equalizing Example

Reflects revenue generated per penny of tax, per WADA



Golden Pennies equalized up to \$99.41 per penny of tax effort per WADA (up to Austin ISD Wealth Level).

No recapture of M&O tax collections from districts that have a wealth per WADA greater than Austin ISD.





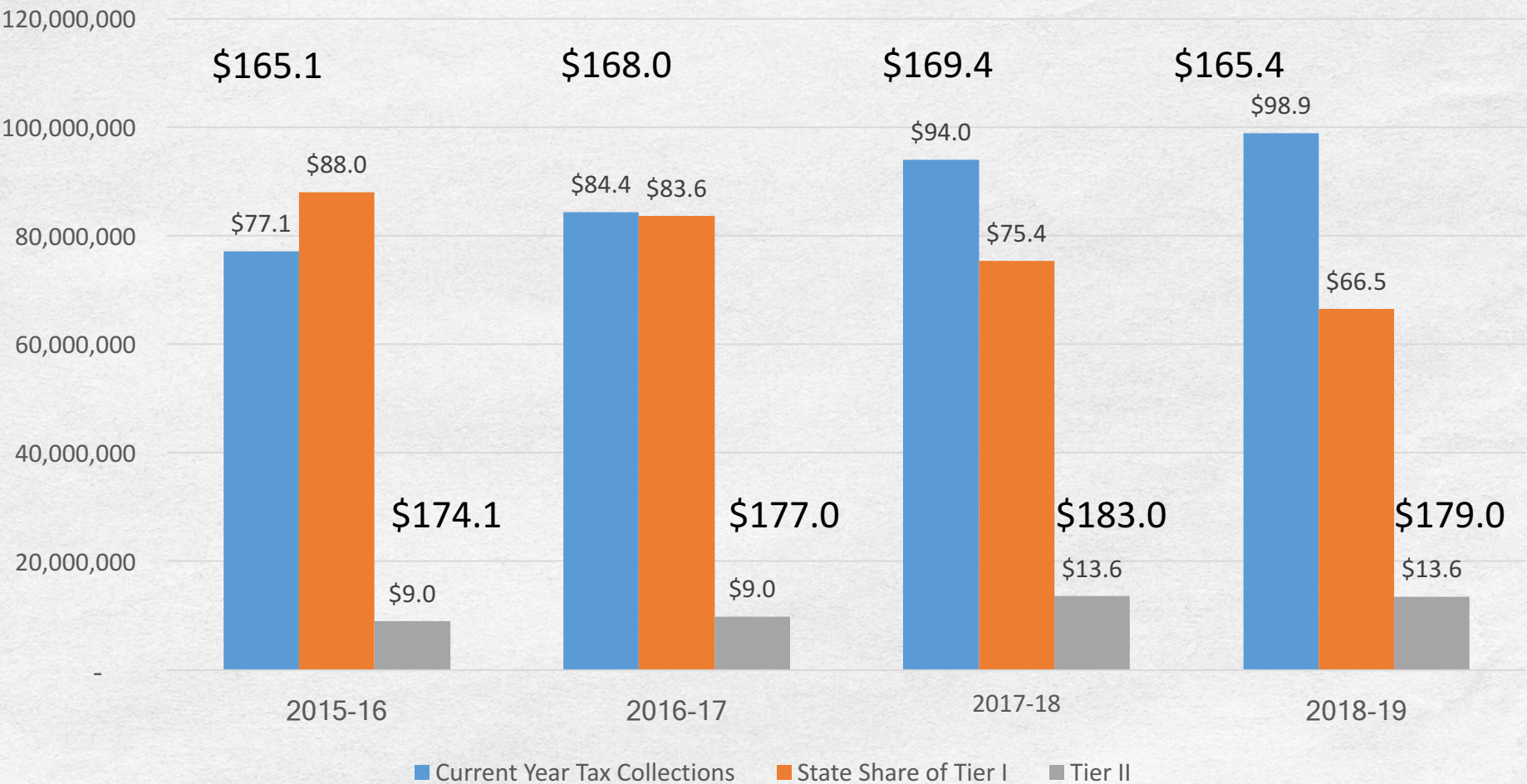
# Birdville ISD-2017-18 Tier II Funding

Birdville ISD 2017-18 Tax Revenue Per Penny	\$ 904,207
2017-18 Projected WADA	<u>29,051</u>
Birdville ISD Tax Revenue Per Penny, Per WADA	\$ 31.13
2017-18 Austin ISD Projected Tax Revenue Per Penny, Per WADA	<u>\$ 99.41</u>
Difference	<u>\$ 68.28</u>
Birdville ISD Tier II Revenue for Golden Pennies	\$ 13,605,432





# Birdville ISD Overall Funding





## “HOW DO WE PAY FOR BISD?”

### OPERATING BUDGET

#### MAINTENANCE & OPERATIONS (M & O)

##### EXAMPLES

TEACHER SALARIES  
ELECTRIC BILLS  
MINOR REPAIRS  
BUS GASOLINE

### “MORTGAGE”/DEBT

#### INTEREST & SINKING (I & S)

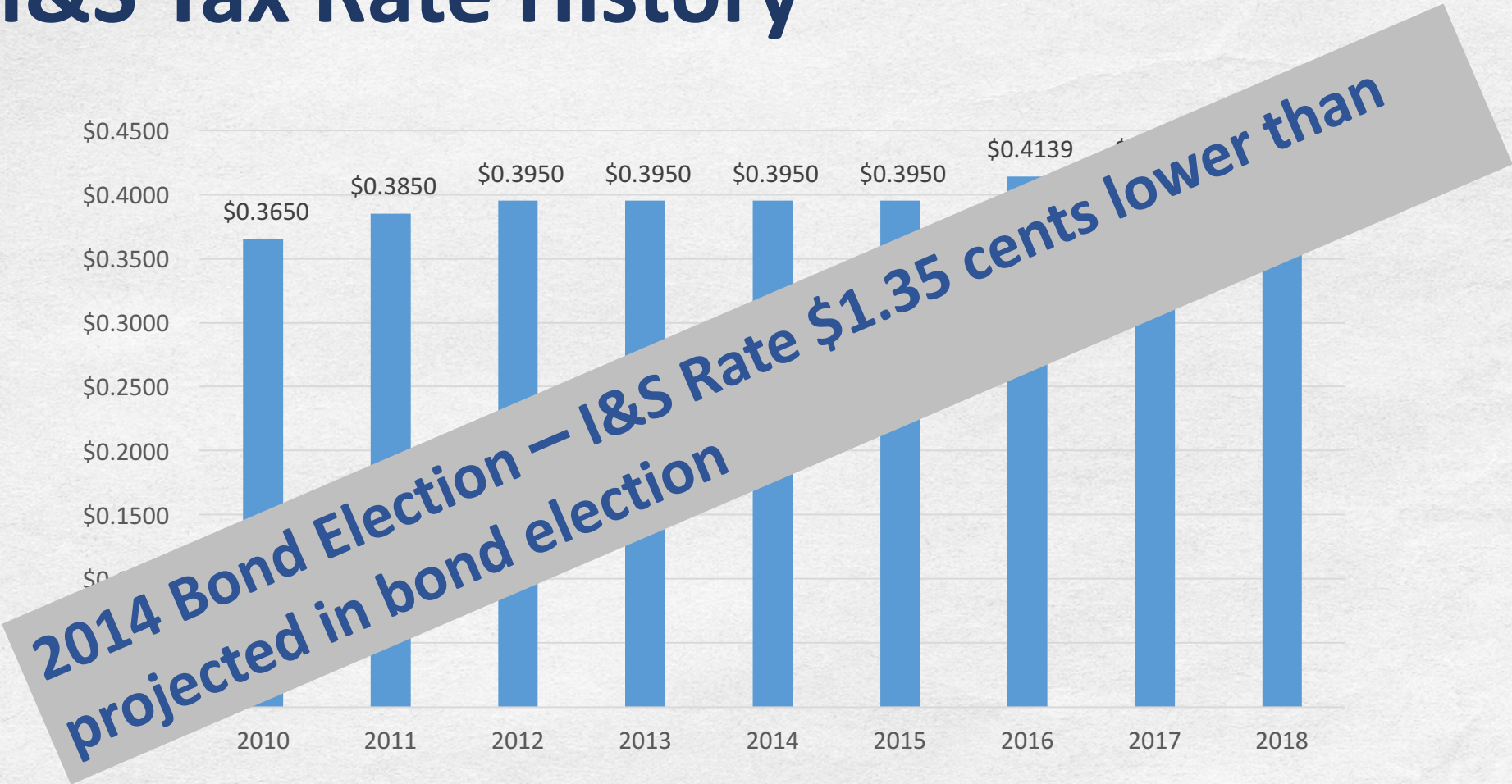
##### EXAMPLES

NEW ELEMENTARY SCHOOL  
SCIENCE WING ADDITION  
NEW SCHOOL BUSES  
LAND PURCHASE





# I&S Tax Rate History

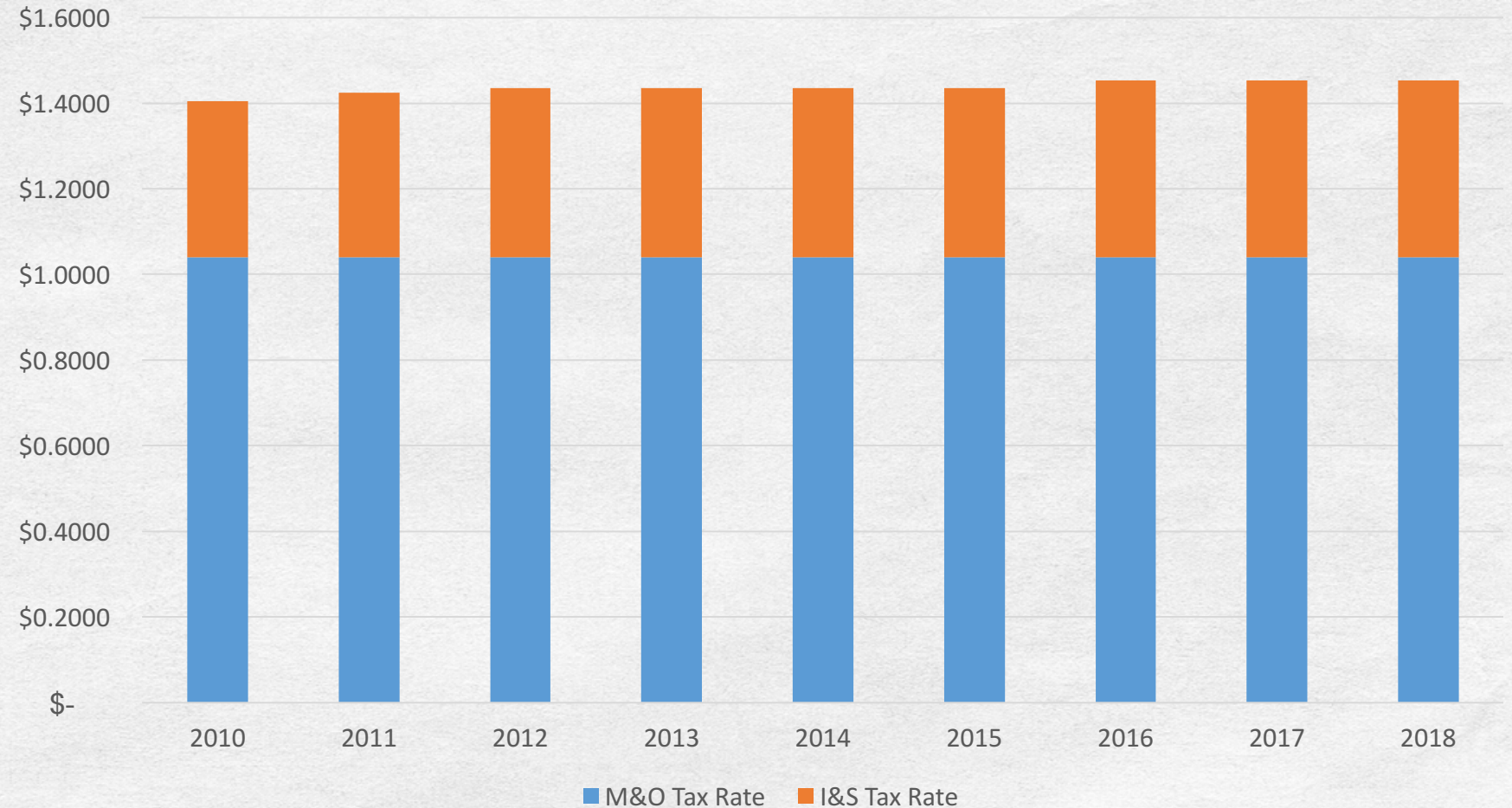


Note: 2014 Bond Election – I&S Rate projected at 3.24 cents. Final increase of 1.89 cents.





# Birdville ISD Tax Rate History





# Taxpayer Savings

- Over the last five years, bond refinancing and advanced payments have saved Birdville ISD taxpayers over \$27.3 million in interest costs.





## Let's Debrief Our Facilities Tour from 2/19 ...

- What did you see?
- How did your observations of North Richland Hills Middle School, Haltom Middle School, West Birdville Elementary, and Smithfield Middle School make you feel?
- What are the implications if we do nothing? If we solve the problems?
- At this point, what do you believe might reflect a good solution?





# What is Our “WHY?": Teaching & Learning ... Connecting the RIGHT Dots



**Dr. Elizabeth Clark**  
**Associate Superintendent for**  
**Curriculum & Instruction**





## CENTRAL QUESTIONS

1. What is our mission and purpose?
2. What future demands are placed on our students in a highly competitive global economy?
3. What requirements are needed to equip students for success in the future?
4. What is our current reality?
5. How do learning environments impact student learning?
6. What are our next steps?





## WHAT IS OUR MISSION and purpose?

The mission of Birdville ISD is to ensure that all students position themselves to excel with integrity in an ever-changing global society through **innovative and responsive learning environments.**





# WHAT IS OUR PURPOSE?



Our job is to prepare  
students for **their** future.







## View “Birdville ISD’s Portrait of a Graduate” Video





# What future demands are placed on our students in a highly competitive global economy?

Preparing students for the future is easier said than done; after all, the future is abstract and always changing.

Doing this takes a commitment to the practice of looking forward.

It requires anticipating and planning for the future by involving all stakeholders.









## High Demand, Emerging and Evolving Careers

Aerospace  
Engineers

Chemical  
Engineers

Civil Engineers

Electrical  
Engineers

Industrial  
Engineers

Biomedical  
Engineers

Cloud  
Architects

Nanosystems  
Engineers

Pharmacist

Nurses and  
Nurse  
Practitioners

Physicians and  
Surgeons

Robotics

Coding and  
Software  
Development

Data Analytics

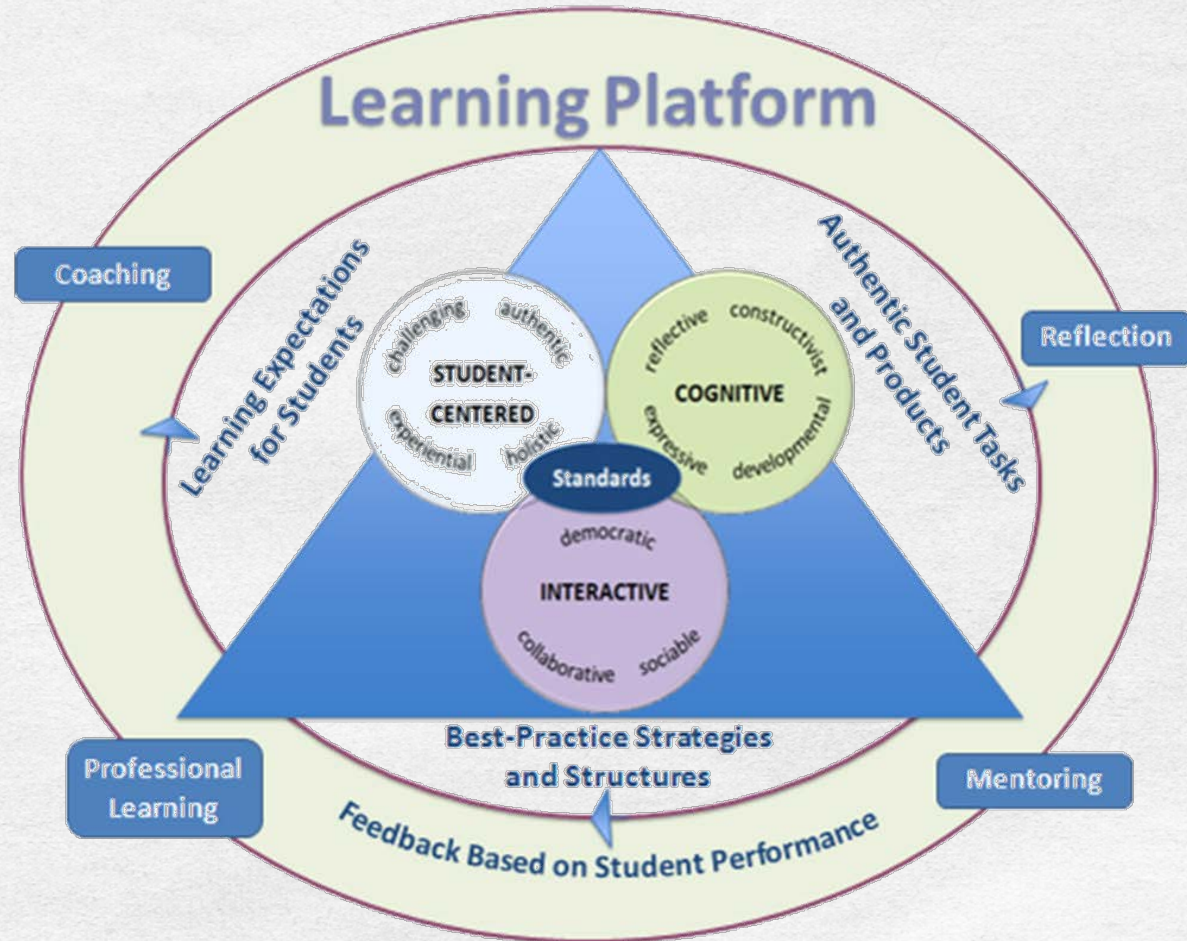
Marketing

Customer  
Service





# What requirements are needed to equip students for success in the future?





# Best-Practice instruction for the students of today and tomorrow requires ...

MORE

Experiential, hands-on learning

Student-student interaction

Active learning

Development of students' curiosity and intrinsic motivation

Reading of real texts: whole books, primary sources, and nonfiction materials

Responsibility transferred to students

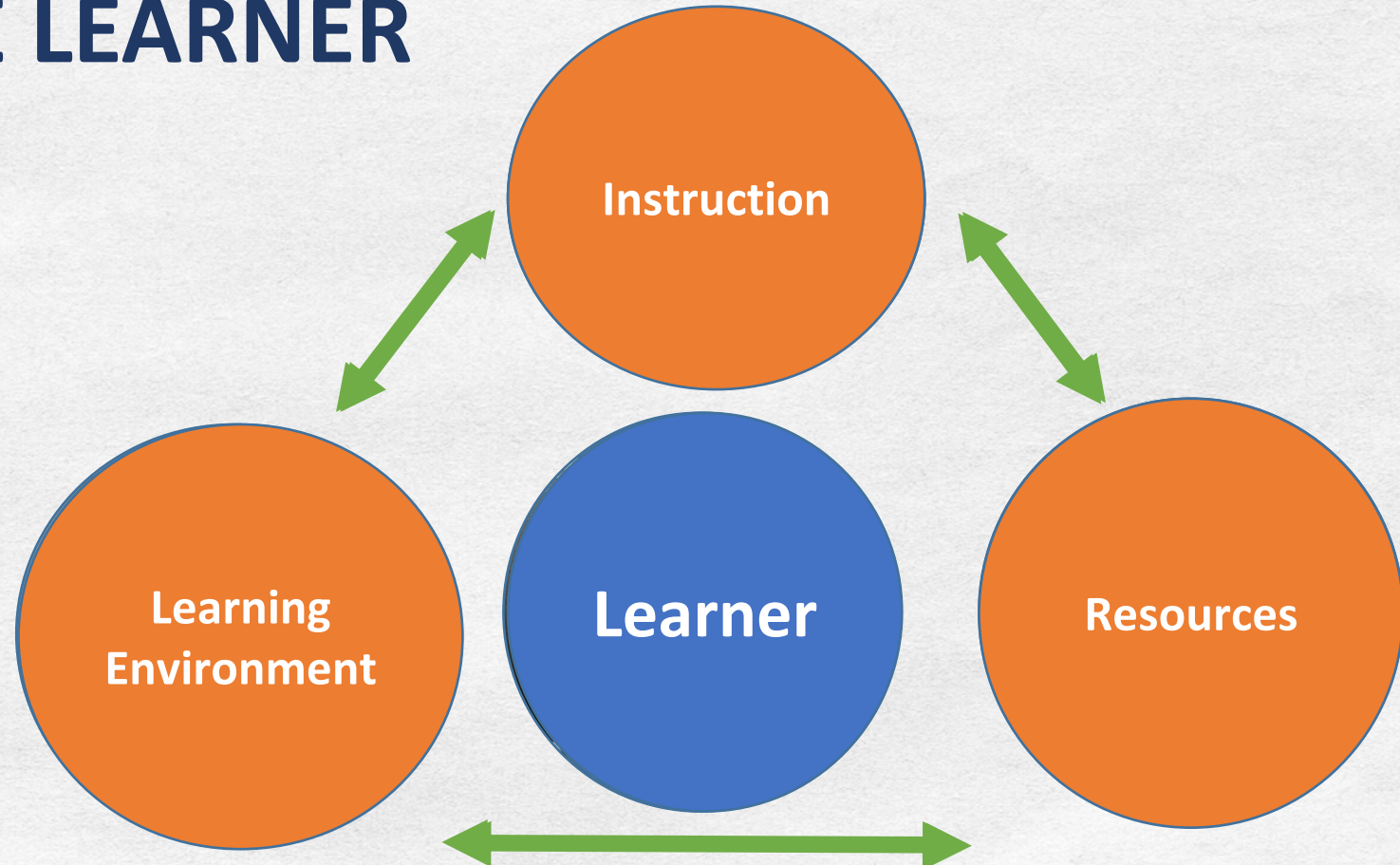
Flexible seating and work areas in the classroom

Choice for students

Cooperative, collaborative activity that develops classroom as interdependent community

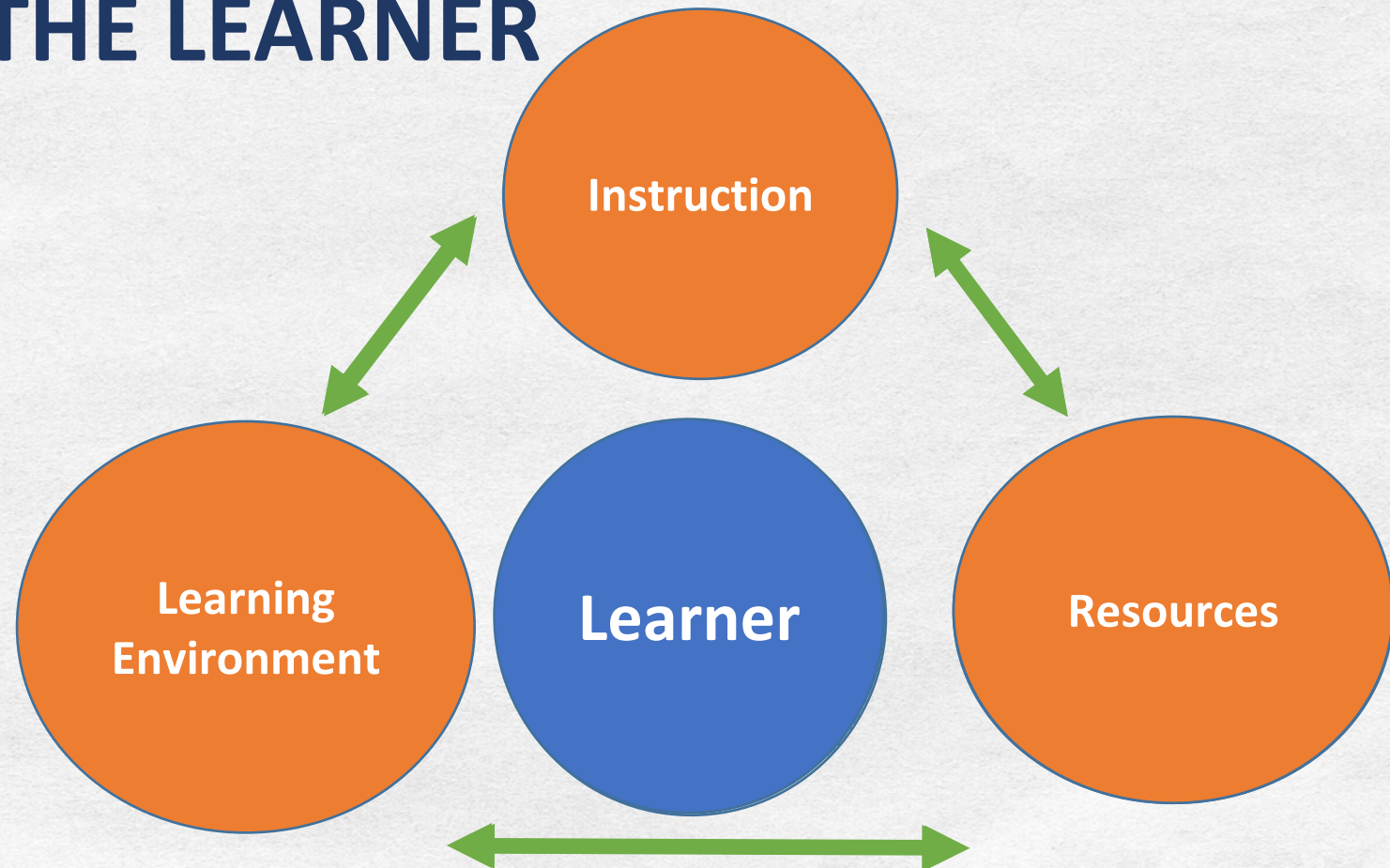


# ALIGNING INSTRUCTION, RESOURCES AND LEARNING SPACES TO THE NEEDS OF THE LEARNER





# ALIGNING INSTRUCTION, RESOURCES AND LEARNING SPACES TO THE NEEDS OF THE LEARNER





# What is our current reality?



60+  
Years

5  
Elementary  
Schools

2 Middle  
Schools

1 High  
School

50 +  
Years

4  
Elementary  
Schools

1 Middle  
School

40 +  
Years

2  
Elementary  
Schools

2 Middle  
Schools

30 +  
Years

2  
Elementary  
Schools

19 campuses  
in Birdville ISD  
are more than  
30 years old...

13 campuses  
are more than  
50 years old...

8 campuses  
are more than  
60 years old!





View “What is our  
current reality” Video?





# What is our current reality? (1)





## What is our current reality? (2)





## What is our current reality? (3)





## What is our current reality? (4)



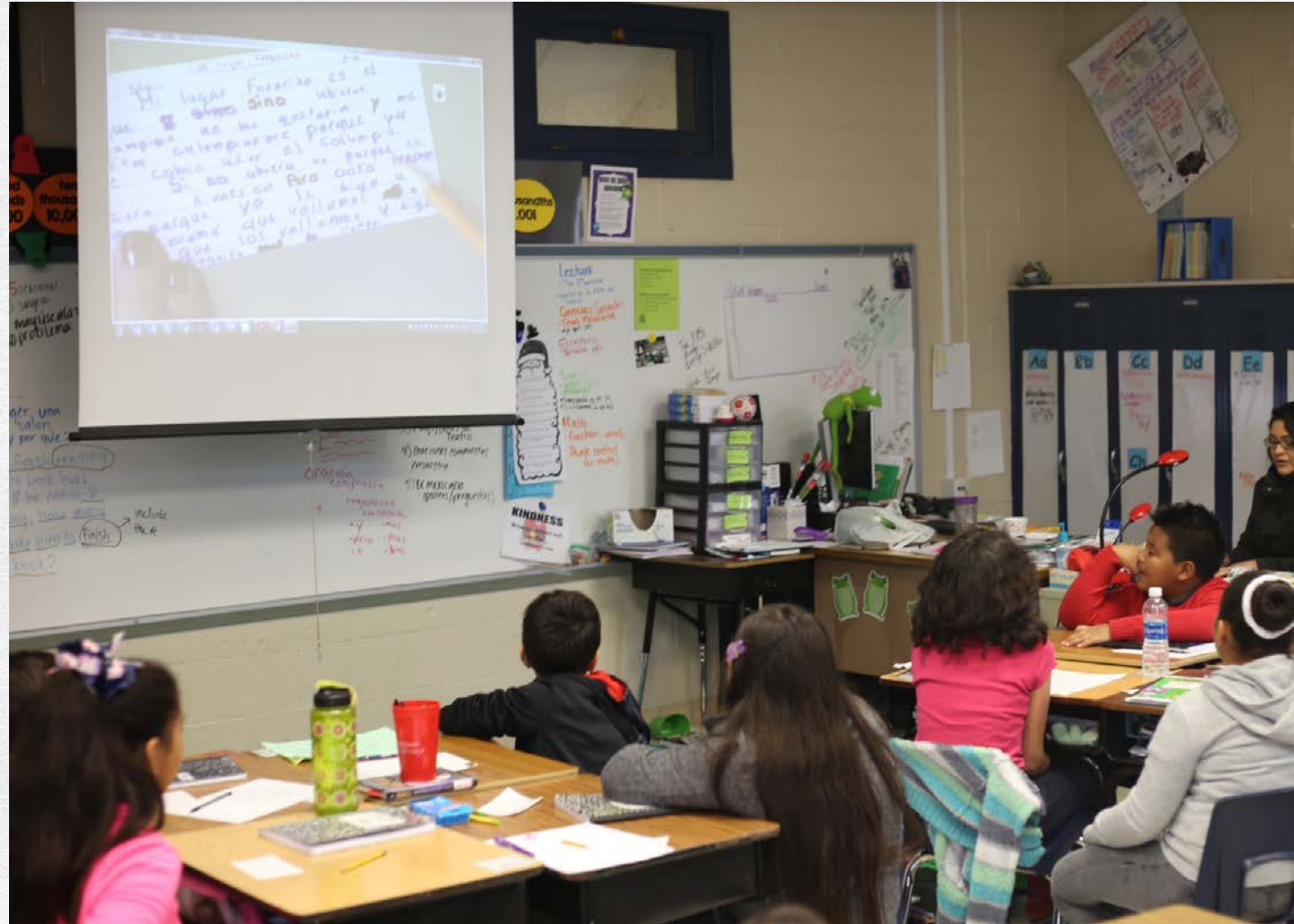


## What is our current reality? (5)





## What is our current reality? (6)





# What is our current reality?





# How do learning environments impact student learning?


University of Salford  
MANCHESTER

February 2015

## Clever Classrooms


Summary report of the HEAD Project  
(Holistic Evidence and Design)

Professor Peter Barrett  
Dr Yulan Zhang  
Dr Fay Davies  
Dr Lucinda Barrett



## School of the Built Environment University of Salford

- Classroom design : 16% impact, positive or negative, on student's progress
  - Light
  - Sound
  - Temperature
  - Air quality
  - Choice
  - Connection
  - Complexity
  - Color
  - Texture
  - Flexibility



Space is integral to the formation of memory ... all of our senses are engaged or influenced by the physical attributes of architecture – light, sound, surface textures, and the familiarity of the spaces.

— Nate Berg



## Form & Function: Design to support LEARNING

BISD Campus Practice	Facility Needs
PLC (Professional Learning Collaborative) Meetings	<ul style="list-style-type: none"><li>• Meeting space that is available at all times of day</li><li>• Projector, computer and screen</li><li>• Wall space for displaying long-term data and reference documents</li></ul>
Workshop Model	<ul style="list-style-type: none"><li>• Guided Reading meeting tables in each classroom</li><li>• Storage for leveled readers</li><li>• Flexible arrangements of furniture and space for student work stations in each classroom</li></ul>
80%–50% hands-on science investigations	<ul style="list-style-type: none"><li>• Designated campus science lab</li><li>• Safety equipment</li><li>• Sink</li><li>• Storage for materials-intensive labs for six grade levels</li></ul>
Transformation from library to a Learning Commons	<ul style="list-style-type: none"><li>• Makerspace area</li><li>• Flexible arrangements of furniture to support collaboration</li></ul>





# Learning Commons View

The libraries of the 21st century provide a welcoming common space that encourages exploration, creation, and collaboration between students, teachers, and a broader community.

They bring together the best of the physical and digital to create collaborative learning hubs that serve as the heart of the campus.



Holland, Beth. (2015). 21st-Century Libraries: The Learning Commons. *Edutopia*. Retrieved from <https://www.edutopia.org/blog/21st-century-libraries-learning-commons-beth-holland>





# Learning Commons View (1)

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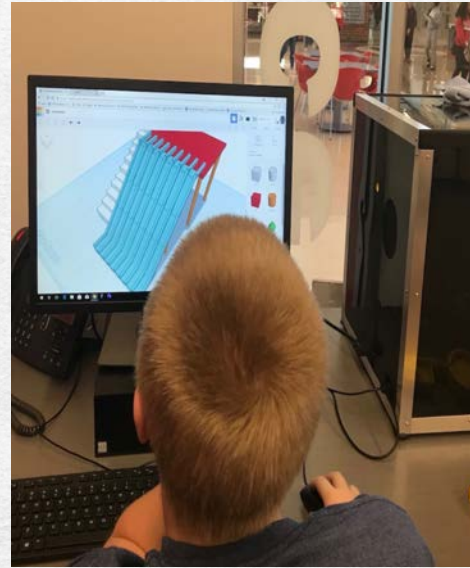


Holland, Beth. (2015). 21st-Century Libraries: The Learning Commons. *Edutopia*. Retrieved from <https://www.edutopia.org/blog/21st-century-libraries-learning-commons-beth-holland>





# MAKERSPACE View



A makerspace is a place where students can gather to create, invent, tinker, explore, discover and extend their learning from the classroom using a variety of authentic tools and materials.

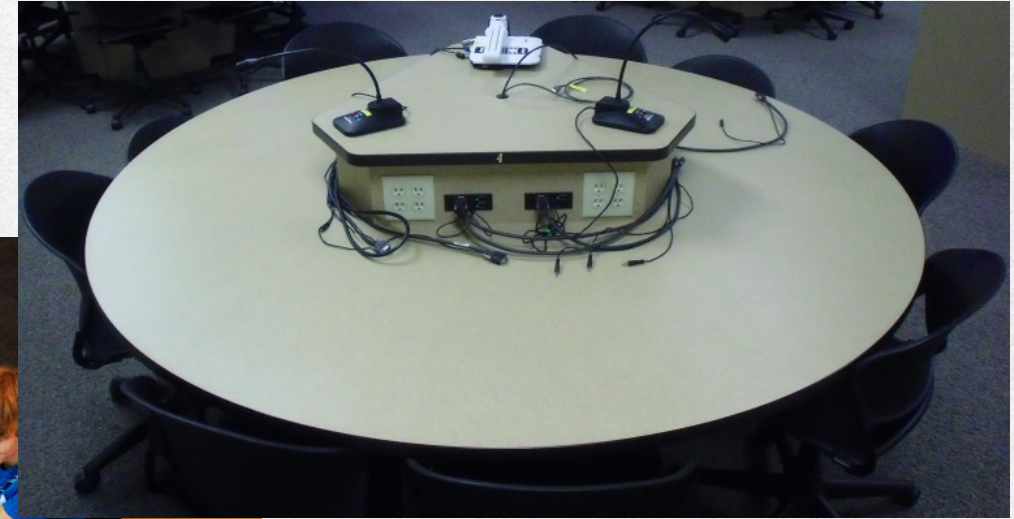


## MAKERSPACE View (1)





## Form & Function: Designed to Support LEARNING



**Technology  
Availability and Ease  
of Student Access**



## Form & Function: Design to support LEARNING Chart

Facility Design	Supports
Flexibility of space	<ul style="list-style-type: none"> <li>• Collaborative grouping within space (i.e., classroom) and outside of space (i.e., hallway, pod space, outdoor learning areas)</li> <li>• Space for communication between teacher to groups as well as groups to groups</li> </ul>
Open and larger spaces	<ul style="list-style-type: none"> <li>• Options for increased storage for equipment-intensive learning</li> <li>• Space for active learning in a safe manner for all students (i.e., Pre-K to the largest students)</li> </ul>
Mobile, flexible-use furnishings and common areas	<ul style="list-style-type: none"> <li>• Options for integration for self-contained as well as departmentalized classes</li> <li>• On the spot learning</li> <li>• Offers more options for projects/investigations access</li> </ul>





## Form & Function: Design to support LEARNING spaces



Flexible, open spaces adaptable for personalized and collaborative learning





## Form & Function: Design to Support LEARNING classrooms

Classes open to hallways for collaboration and easy monitoring



School design has a statistically significant impact on lowering discipline incidents and alternative school placements







[View “Spaces for future-ready learning” video](#)





# What are our next steps?



Commit to the vision Birdville ISD has for our students.

Acknowledge the inequities that exist within our current facilities.

Develop a bond package that will position Birdville ISD to replace outdated facilities with new facilities designed for today's learners.

Be ambassadors for public education in Birdville ISD because it is the best investment that a community makes.





If we want our students to be competitive and if we want families to stay in Birdville, we have to think about what holds them here.



Old schools are a constraint to learning.



**Educated children are at the heart of healthy,  
productive and prosperous communities.**



**If that is the future we want for Birdville,  
we must invest today.**





**What Are Your Questions or  
Comments for Dr. Clark? ...**





# What is Our Long-Range Facilities Master Plan? ...



**Dr. Darrell G. Brown**  
**Superintendent of Schools**



**Irene Nigaglioni**  
**Architect**





## Recap of the 2014 Bond

1. Constructed three new schools: WBE, BE, N. Richland MS.
2. Science lab additions/renovations at HHS, BHS, WMS, SMS and modular labs provided at HMS, RMS, NOMS and SHS.
3. Security vestibules, cameras, fencing to enhance safety at all campuses.
4. Technology infrastructure and device upgrades
5. Major renovations at BHS and WES
6. Roof, HVAC, plumbing, and lighting renovations/upgrades.
7. Upgrades such as access controls, parking lots, sidewalks, track resurfacing, elevators, and fire alarms.





## Needs for 2018 Bond

The Long-Range Facility Plan provides a blueprint for casting a vision for the following needs:

1. New construction to replace oldest schools
2. Some needed additions and renovations
3. Technology
4. Cycle for HVAC and roof replacements





## Vision for the Future

- The District is at a crossroad
- Two middle schools were constructed in 1955
- Seven elementary schools were built in the 1950s and two were built in the 1960s
- A Long-Range Facility Plan is needed for effective and efficient planning for the future
- New construction needs to be the focus of this bond in order to avoid renovating old, costly buildings for too long.
- At some point, no amount of money can correct the learning environment deficiencies in these old facilities, such as lack of flexible space, classroom size, infrastructure, special programming needs, etc.





## Looking to the Future

**If we use a strategic perspective for the 2018 bond, by:**

- Focusing on the more expensive rebuilds of middle schools;
- Coupled with constructing as many elementary schools as possible;
- Providing for needed technology; and
- Adding the replacement costs of critical equipment

**Then, in future bonds, the District could focus on replacing older, less expensive elementary schools.**

(Since the District will reach a tax cliff in 2024–25, it will be positioned very favorably for the next bond with regard to its financial capacity.)





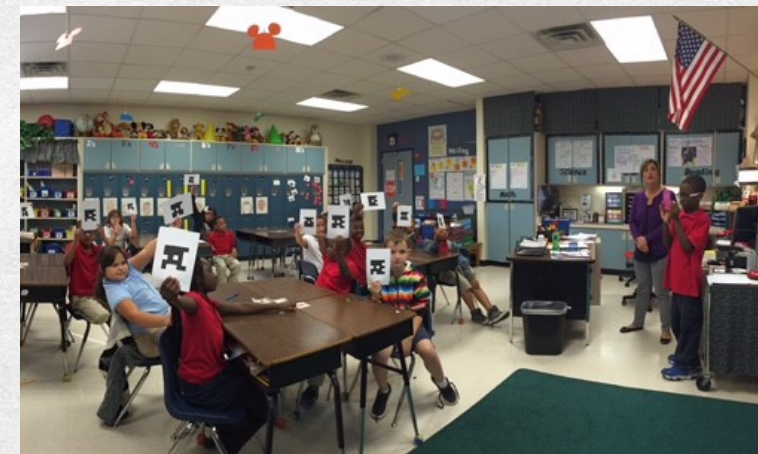
# Window of Opportunity

- Building costs will continue to escalate.
- By replacing two middle schools in this bond, the next bond should have enough bandwidth to replace several elementary schools.
- The result of planning strategically is that Birdville ISD will have secondary schools with new construction, renovated facilities, and/or facilities equipped with learning environments conducive to 21st Century Learning requirements at the end of the 2018 bond.
- As a result of this [2018] bond and the next bond, Birdville could, by the end of the second bond, replace ten of its oldest schools to provide learning environments that support 21st Century Learning requirements.
- The replacement cycle and renovation projects will be back on track for future demands.





# Long Range Facilities Master Plan





# Long Range Facilities Master Plan

## AGENDA

1. The Long Range Master Plan Process
  - a. Starting with 2014 Bond
2. Priority Definitions
  - a. Material Lifecycles vs. Conditions
3. Facilities Assessment Sample Findings
4. Facilities Conditions Index
  - a. School condition & school age
  - b. Inclusions & Exclusions
5. District Totals
6. Questions





# Long Range Facilities Master Plan



## 2014 Bond Planning Committee

Develop a Long Range Master Plan for the District

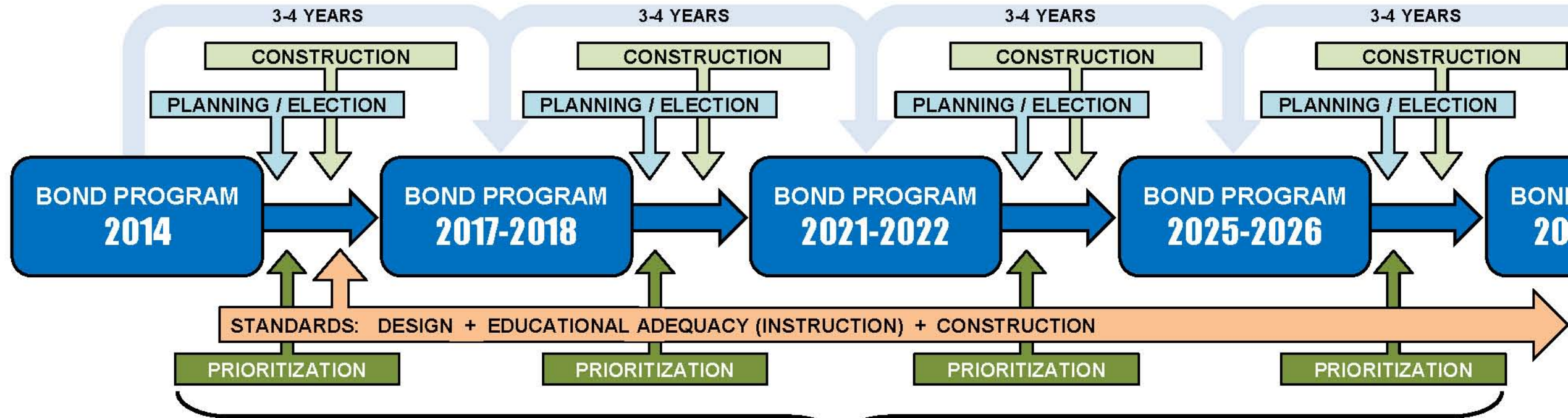


- Identify needs and chart along a Long Range Master Plan that shows priorities and ensures all needs are addressed in the most financially responsible manner.



# LONG-RANGE PLANNING - VISION 2025

(IMPLEMENTING A 3-4 YEAR BOND CYCLE)



## W O R K I T E M S

### POSSIBLE REPLACEMENT CAMPUSES

- Academy at West Birdville
- Birdville Elementary
- N. Richland Middle School
- Smithfield Elementary
- Haltom Middle School
- Richland Middle School

### ADDITIONS + RENOVATIONS

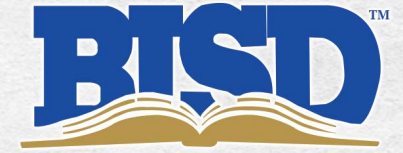
- Priority Repairs
- Safety + Security
- Technology Infrastructure

### EQUIPMENT + OTHER ASSETS

- Transportation
- Technology Equipment
- Land



# Long Range Facilities Master Plan



## THE PROCESS

### Launch Facilities Assessment



- Analysis of the condition of a facility in terms of age, design, construction methods, and materials.
- Identify district needs per campus and across the district
- Start with items left over from 2014 Bond
- Incorporate new state mandates and codes



# Long Range Facilities Master Plan

## THE PROCESS

### Facilities Assessment – Data Gathering



- Met with key district personnel to gain insights on goals, educational plan and vision for the district's facilities.
- Issued questionnaires for campus input.
- Met with Principals to review their input against findings



# Long Range Facilities Master Plan

## THE PROCESS

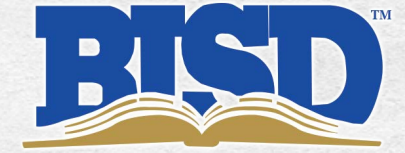
### Facilities Assessment – Facility Walkthroughs



- Teams of Architects, Engineers & Specialized Consultants walked every district facility & documented:
  - System Deficiencies
  - Code Issues / ADA Compliance Issues
  - Lifecycle Replacements
  - TEA Compliance
  - Programmatic Issues / Capacity Verification
  - Educational Adequacy
- Data entered and prioritized
- Costs estimates generated
- Reports generated by campus

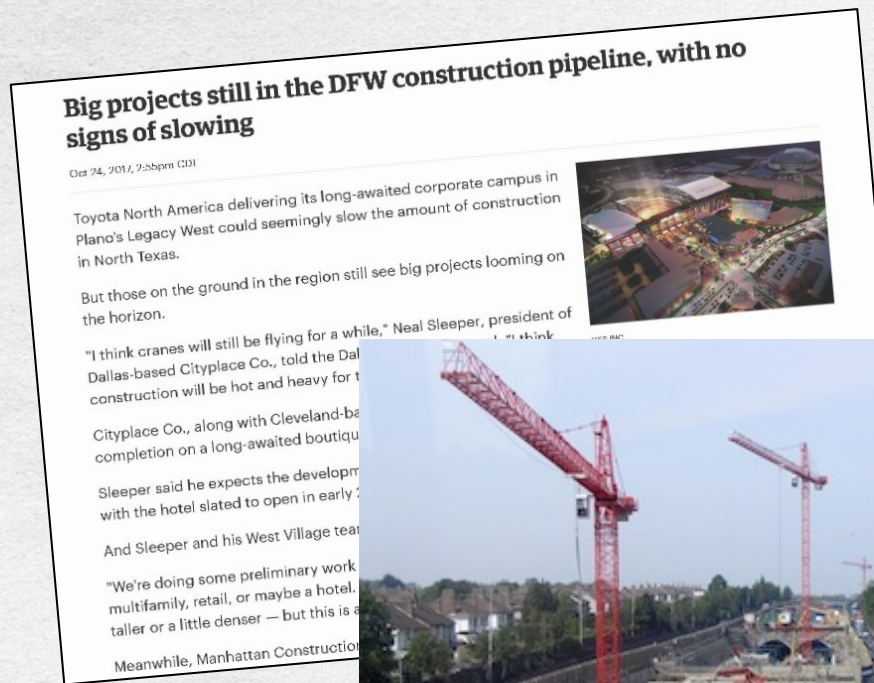


# Long Range Facilities Master Plan



## THE PROCESS

### Facilities Assessment – Cost Estimates



- Start with database of school costs
- Vet against regional marketplace
  - DFW Hot Construction Market
- Review with local contractors
- Update based on recently bid projects in the area.





# Long Range Facilities Master Plan



## THE PROCESS

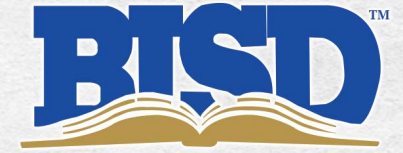
### Facilities Assessment – Other Reports

- Educational Specifications
  - Elementary
  - Middle
- Technical Design Guidelines





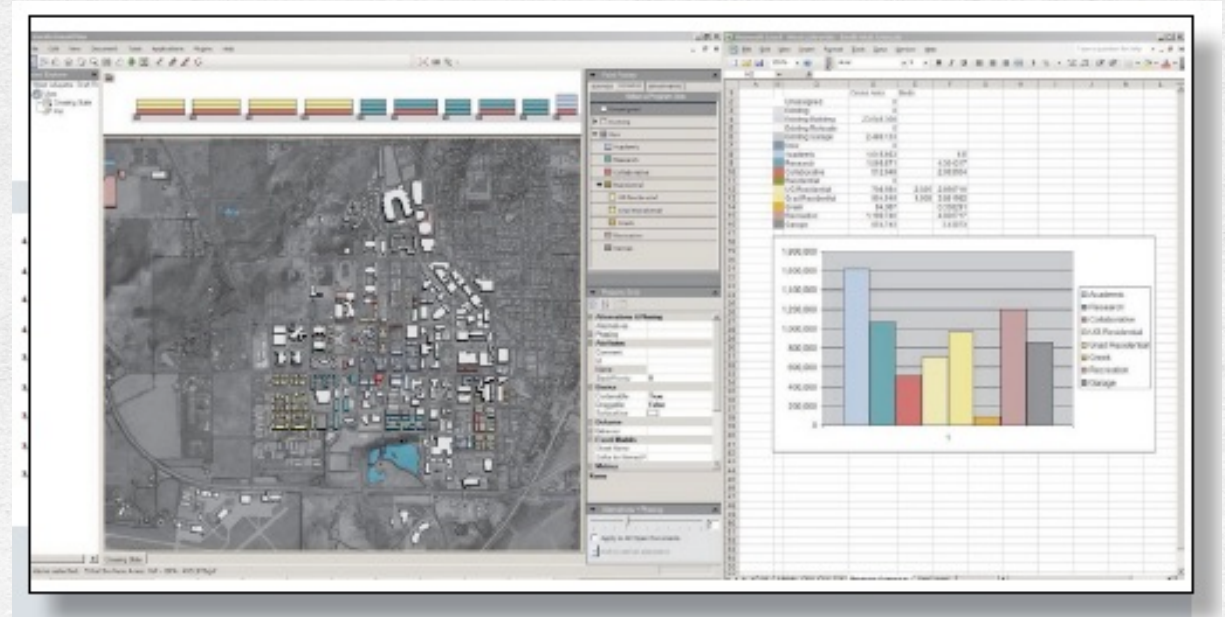
# Long Range Facilities Master Plan



## THE PROCESS

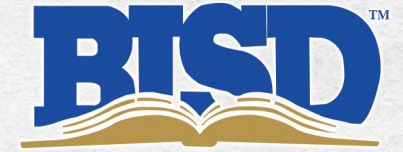
### Facilities Assessment – Capacity Study

- Utilization Study
- Review School Schedules
- Determine District approved methodology for determining capacities
- Optimal vs. Design Capacities





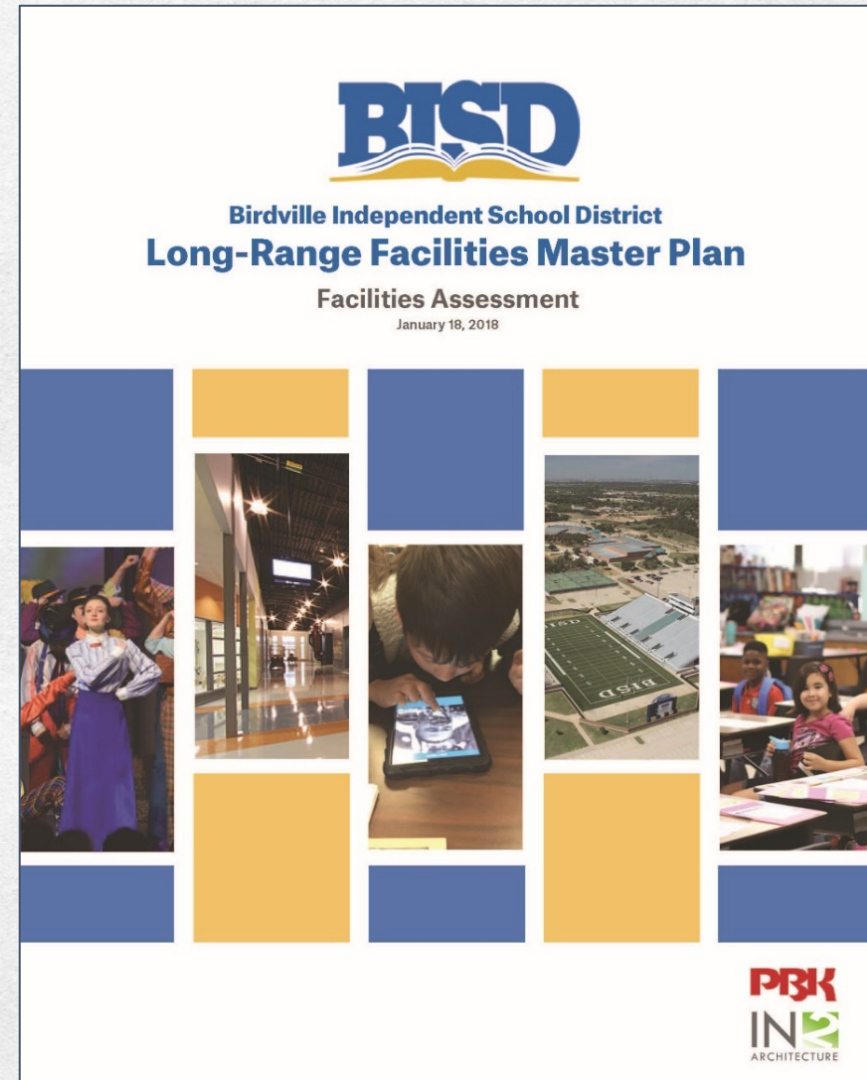
# Long Range Facilities Master Plan



## THE PROCESS

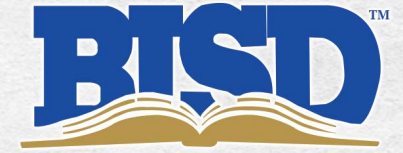
### Long Range Facilities Master Plan

- Campus Reports with all data including:
  - Floor Plans
  - Aerial Photographs
  - List of deficiencies and costs to correct
  - Capacity information





# Long Range Facilities Master Plan



## PRIORITY DEFINITIONS

**Priority 1 : Critical replacements of equipment & systems (0-5 years); critical programmatic or campus needs**

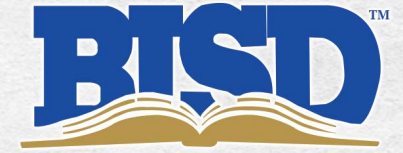
**Priority 2: Replacements of equipment & systems (5-10 years); programmatic or campus needs**

**Priority 3: Replacements of equipment & systems (10-15 years); programmatic or campus enhancements**

**Priority 4: Replacements of equipment & systems (15+ years)**

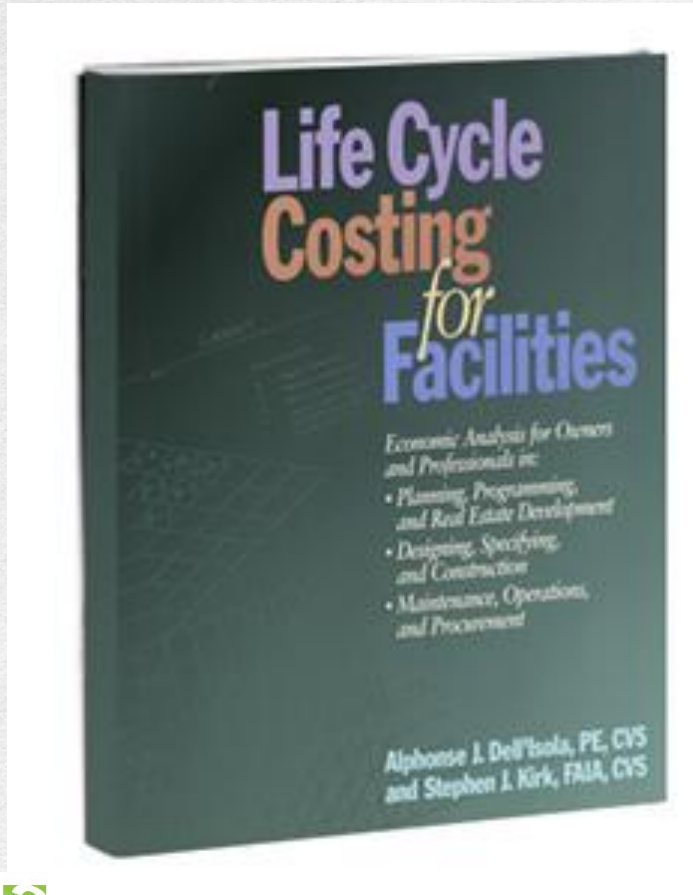


# Long Range Facilities Master Plan



## THE PROCESS

### Expected Lifecycles vs. Condition



- Researched life expectancy of systems and materials
  - Reviewed district's maintenance information
- Reviewed current condition
- Determined priorities based on the combination of both.

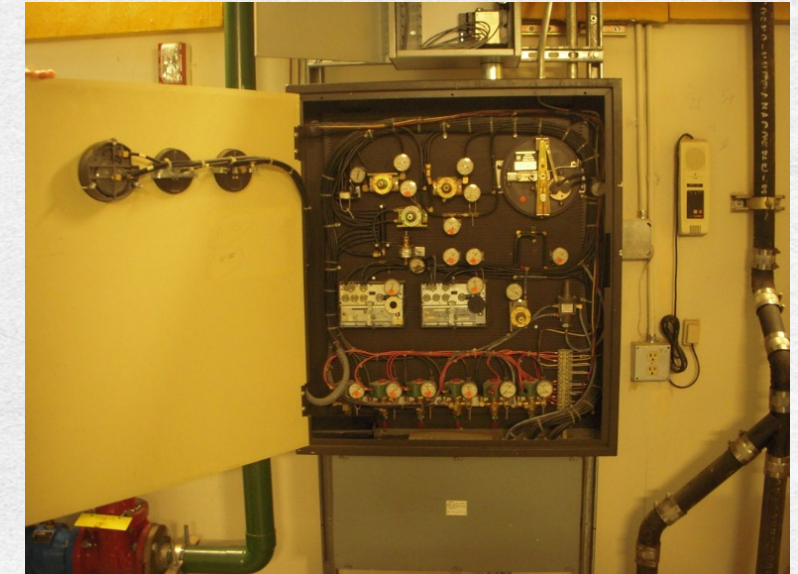


# Long Range Facilities Master Plan

## FACILITIES ASSESSMENT SAMPLE FINDINGS

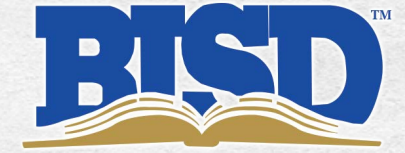
### Critical Replacements

### Districtwide HVAC Needs





# Long Range Facilities Master Plan



## FACILITIES ASSESSMENT SAMPLE FINDINGS

### Critical Replacements

#### Districtwide Roof Replacements





# Long Range Facilities Master Plan

## FACILITIES ASSESSMENT SAMPLE FINDINGS

### Critical Replacements

### Restroom Renovations





# Long Range Facilities Master Plan

## FACILITIES ASSESSMENT SAMPLE FINDINGS

### Critical Replacements

### Electrical Upgrades





# Long Range Facilities Master Plan

## FACILITIES ASSESSMENT SAMPLE FINDINGS

### Critical Replacements

### Casework / Flooring Replacements





# Long Range Facilities Master Plan



## FACILITIES ASSESSMENT SAMPLE FINDINGS

### Critical Replacements

#### Painting / Door Replacements



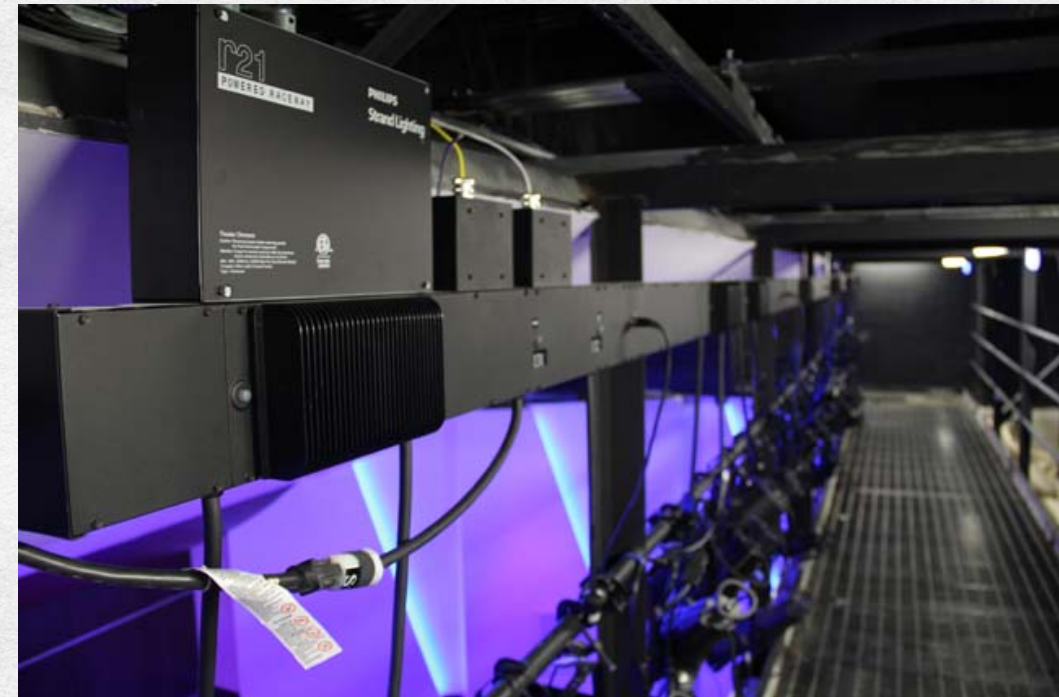


# Long Range Facilities Master Plan

## FACILITIES ASSESSMENT SAMPLE FINDINGS

### Critical Upgrades

#### Lighting system upgrades



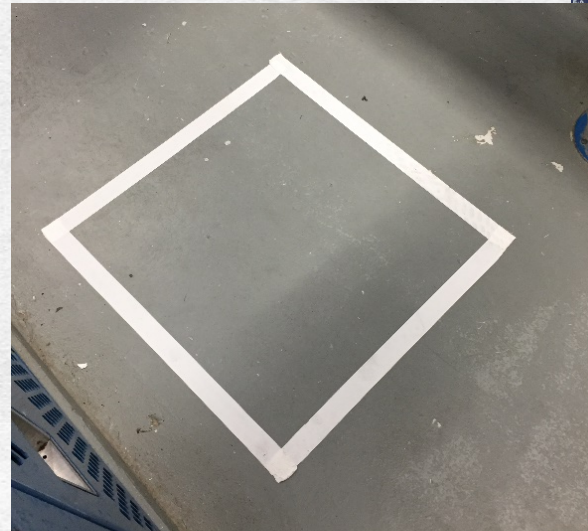


# Long Range Facilities Master Plan

## FACILITIES ASSESSMENT SAMPLE FINDINGS

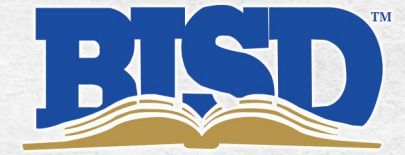
### Critical Needs

#### Smithfield MS Competition Gym





# Long Range Facilities Master Plan



## FACILITIES CONDITION INDEX





# Long Range Facilities Master Plan

## FACILITIES CONDITION INDEX

The **facility condition index** (FCI) is used in to provide a benchmark to compare the relative **condition** of a group of **facilities**.

FCI is an industry-standard measurement of a facility's condition that is the ratio of the cost to correct a facility's deficiencies to the Current Replacement Value (CRV) of the facilities. FCI is typically expressed as a percent.



# Long Range Facilities Master Plan

## FACILITIES CONDITION INDEX

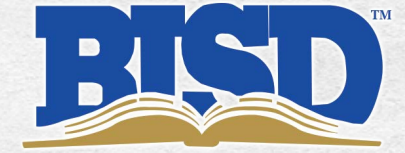
**Current Replacement Value (CRV)** represents the hypothetical total cost of rebuilding or replacing an existing facility in current dollars to its optimal condition under current codes and construction methods.

### Benchmark FCI

- Uses desired building area against repair costs.



# Long Range Facilities Master Plan



## FACILITIES CONDITION INDEX

School Name	Total P1 & P2	Benchmark FCI	Building Age
Haltom MS	\$32,475,012.78	59.67%	62
Smithfield ES	\$12,865,404.87	50.69%	64
Richland MS	\$20,907,533.59	38.42%	62
Smith ES	\$8,508,306.25	33.52%	64
Cheney ES	\$7,349,808.87	28.96%	65
Francisco ES	\$7,252,608.74	28.58%	59
Richland ES	\$6,594,159.22	25.98%	65
Smithfield MS	\$11,577,786.19	21.27%	43
Watauga ES	\$5,301,241.02	20.89%	52
Mullendore ES	\$4,905,177.28	19.33%	63
Hardeman ES	\$4,308,939.68	16.98%	47
Watauga MS	\$8,970,555.53	16.48%	49
Haltom HS	\$17,707,162.98	13.27%	29
North Oaks MS	\$6,023,640.80	11.07%	52



# Long Range Facilities Master Plan

## FACILITIES CONDITION INDEX

School Name	Total P1 & P2	Benchmark FCI	Building Age
North Ridge ES	\$2,793,385.44	11.01%	31
Holiday Heights ES	\$2,563,438.48	10.10%	52
Birdville HS	\$13,214,100.12	9.91%	19
Spicer ES	\$2,279,679.01	8.98%	27
Walker Creek ES	\$2,184,905.38	8.61%	13
Porter ES	\$2,020,733.32	7.96%	42
Foster Village ES	\$1,398,921.72	5.51%	38
Green Valley ES	\$1,111,422.10	4.38%	26
Stowe ES	\$965,605.23	3.80%	10
Binion ES	\$909,041.93	3.58%	10
Snow Heights ES	\$770,919.68	3.04%	59
Academy at CF Thomas ES	\$694,256.37	2.75%	27
Richland HS	\$3,104,986.88	2.33%	9
North Ridge MS	\$952,874.20	1.75%	29
North Richland MS	\$0.00	0.00%	1
Birdville ES	\$0.00	0.00%	1
West Birdville ES	\$0.00	0.00%	2



# Long Range Facilities Master Plan

## FACILITIES CONDITION INDEX

### Included in FCI number:

- Systems deficiencies i.e., plumbing issues
- Material replacements i.e., flooring, roofing
- Code compliance items i.e., fire alarm replacements
- Repairs to address safety issues

### Not included in FCI number:

- Room size modifications to meet Texas Education Standards
- Renovations to upgrade to new district standard designs
  - Collaboration spaces, makerspaces, cafeterias, kitchens, gym spaces, libraries, etc.



# Long Range Facilities Master Plan

## DISTRICT TOTALS – FACILITY ASSESSMENT

PRIORITY 1	\$99,955,184.50
PRIORITY 2As	\$41,212,295.22
PRIORITY 2Bs	\$81,782,310.52
PRIORITY 3	\$353,894,907.51
TOTAL	\$576,844,697.75





# What are the Considerations for New Construction/ Replacements/Additions? ...

Irene Nigaglioni  
Architect





# Considerations for New Construction/Replacements/Additions





# Considerations for New Construction/Replacements/Additions

## AGENDA

1. Cost of schools today
  - a. Estimating Costs
    1. Impact of DFW marketplace
    2. Other factors affecting construction costs
  - b. Cost to defer
2. Facilities Conditions Assessment Repairs versus Replacement
3. Questions?





# Considerations for New Construction/Replacements/Additions



## COST OF SCHOOLS TODAY





# Considerations for New Construction/Replacements/Additions



## COST OF SCHOOLS TODAY

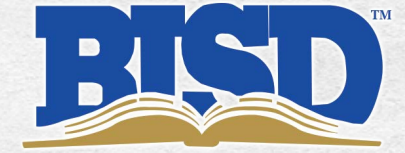
### Estimating Costs

- **Database of construction costs**
  - Cost symposium data
  - Birdville ES, West Birdville ES, North Richland MS
  - Area School District recent bids
- **Confirmation by area school contractors**
  - Trends and Concerns
    - Hurricanes Harvey, Irma & Maria
- **Publications by relevant organizations**
  - Association for Learning Environments – NTX Chapter
- **Updates based on DFW marketplace**





# Considerations for New Construction/Replacements/Additions



## **COST OF SCHOOLS TODAY**

### **DFW Marketplace**

- Huge Demand due to Growth
- Variety of Projects creates competition
- Limited Labor Force
- Competition from other educational groups

**DFW AREA  
INFLATION RATE  
10% – 12% YEAR**





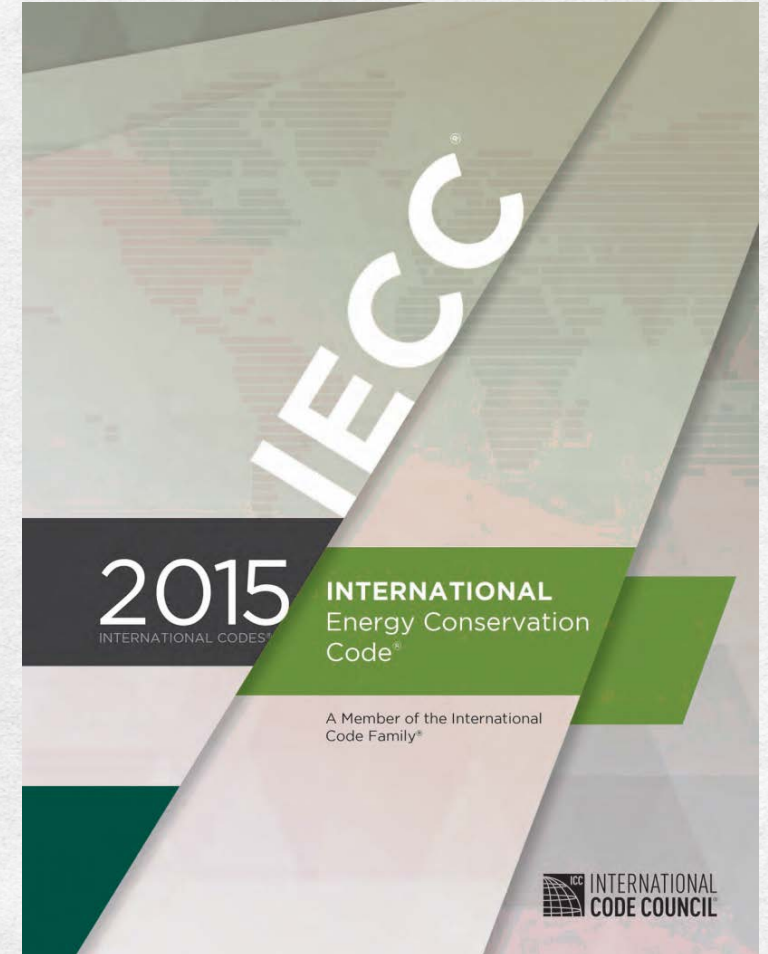
# Considerations for New Construction/Replacements/Additions



## COST OF SCHOOLS TODAY

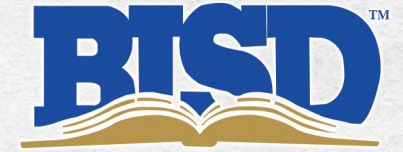
### Other factors affecting Construction Costs

- **New State Mandates**
  - International Energy Conservation Code 2015
  - Effective November 1, 2016
  - Next update 2018
  - Increased requirements for thermal envelope, including roofs and walls
  - Added requirements for fenestration/natural light
  - Added requirement for Commissioning
- **Add \$8.00 – \$10.40/SF**





# Considerations for New Construction/ Replacements/Additions ...



## COST OF SCHOOLS TODAY

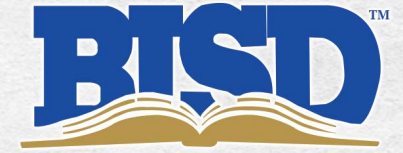
### Other factors affecting Construction Costs

- **New State Mandates**
  - International Building Code 2015
  - Effective April 1, 2017
  - Provide a storm shelter to house entire school population
  - Includes critical support systems and restrooms
- **Add \$6.00 – \$7.50/SF**





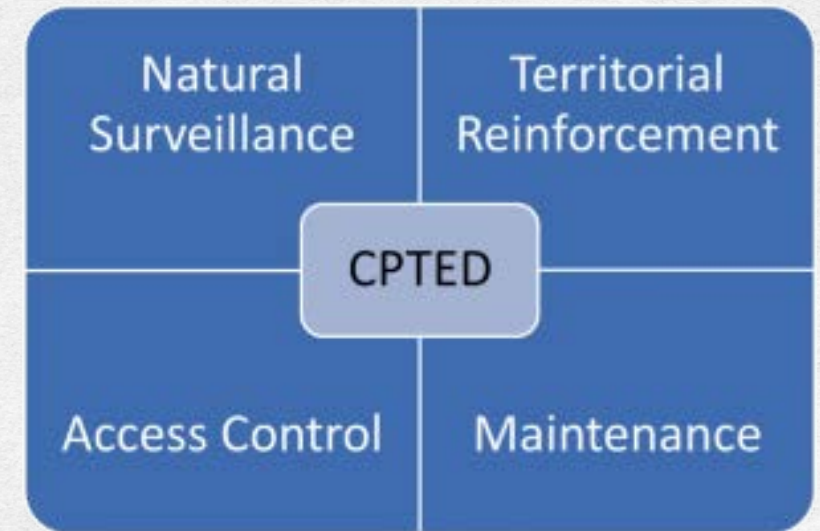
# Considerations for New Construction/Replacements/Additions



## COST OF SCHOOLS TODAY

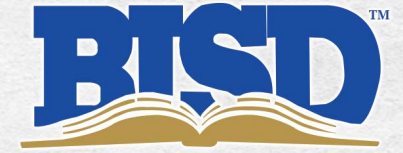
### Other factors affecting Construction Costs

- **Increased Safety and Security Focus**
  - Secure enhanced entry vestibules
  - Lockdown systems and Public Address system
  - Card access systems and security cameras
  - Designed to meet requirements from CPTED – Crime Prevention Through Environmental Design





# Considerations for New Construction/Replacements/Additions



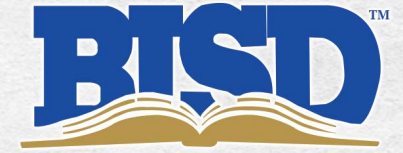
## COST OF SCHOOLS TODAY

Elementary School Replacements  
Capacity: 800 students  
Estimate of Probable Costs

1	Construction Cost	\$21,500,000.00
	Building Cost: 90,000 SF @ \$235.00 /SF	\$21,150,000.00
	Abatement Costs	\$350,000.00
2	AE Fees	\$1,290,000.00
3	FF&E @ 20%	\$4,300,000.00
4	Inflation @ 5%	\$1,075,000.00
TOTAL		\$28,165,000.00



# Considerations for New Construction/Replacements/Additions



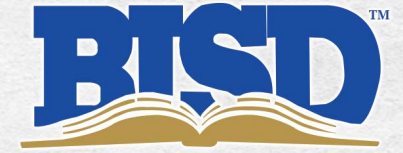
## **COST OF SCHOOLS TODAY**

**Middle School Replacements  
Capacity: 1000 students  
Estimate of Probable Costs**

<b>1</b>	<b>Construction Cost</b>	<b>\$46,361,604.00</b>
	Building Cost: 174,425 SF @ \$260.00 /SF	\$45,350,604.00
	Abatement Costs	\$761,000.00
	Relocate Portables	\$250,000.00
<b>2</b>	<b>AE Fees</b>	<b>\$2,781,696.24</b>
<b>3</b>	<b>FF&amp;E @ 20%</b>	<b>\$9,272,320.80</b>
<b>4</b>	<b>Inflation @ 5%</b>	<b>\$2,318,080.20</b>



# Considerations for New Construction/Replacements/Additions



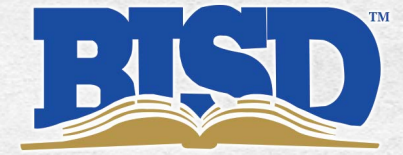
## COST OF SCHOOLS TODAY

**Middle School Replacements**  
**Capacity: 800 students**  
**Estimate of Probable Costs**

<b>1</b>	<b>Construction Cost</b>	<b>\$43,440,442.00</b>
	Building Cost: 161,652 SF @ \$260.00 /SF	\$42,449,442.00
	Abatement Costs	\$761,000.00
	Relocate Portables	\$250,000.00
<b>2</b>	<b>AE Fees</b>	<b>\$2,582,426.52</b>
<b>3</b>	<b>FF&amp;E @ 20%</b>	<b>\$8,608,088.40</b>
<b>4</b>	<b>Inflation @ 5%</b>	<b>\$2,152,022.10</b>



# Considerations for New Construction/Replacements/Additions



## **COST OF SCHOOLS TODAY – WHAT IF WE DEFER?**

### ELEMENTARY SCHOOL REPLACEMENT

Construction Cost escalation based on current known Inflation only

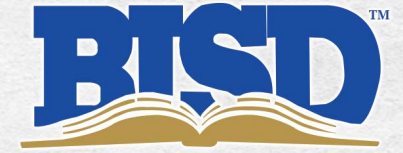
<b>2018</b>	<b>\$28,165,000</b>
2019	\$31,544,800
2020	\$35,330,176
2021	\$39,569,797

Does not include:

- Additional state mandates & changes adopted in future years
- Costs needed to maintain existing facilities



# Considerations for New Construction/Replacements/Additions



## **COST OF SCHOOLS TODAY – WHAT IF WE DEFER?**

### **MIDDLE SCHOOL REPLACEMENT**

Construction Cost escalation based on current known Inflation only

<b>2018</b>	<b>\$60,733,701</b>
2019	\$68,021,745
2020	\$76,184,354
2021	\$85,326,477

Does not include:

- Additional state mandates & changes adopted in future years
- Costs needed to maintain existing facilities



# Considerations for New Construction/Replacements/Additions



**FACILITIES CONDITION ASSESSMENT REPAIRS VERSUS REPLACEMENTS**

**WHAT SCHOOLS SHOULD BE CONSIDERED AS A PRIORITY 1?**

**FACILITIES CONDITION INDEX**



# Considerations for New Construction/Replacements/Additions



## FACILITIES CONDITION ASSESSMENT REPAIRS VERSUS REPLACEMENTS

### FACILITIES CONDITIONS INDEX

School Name	Total P1 & P2	Benchmark FCI	Building Age
Haltom MS	\$32,475,012.78	59.67%	62
Smithfield ES	\$12,865,404.87	50.69%	64
Richland MS	\$20,907,533.59	38.42%	62
Smith ES	\$8,508,306.25	33.52%	64
Cheney ES	\$7,349,808.87	28.96%	65
Francisco ES	\$7,252,608.74	28.58%	59
Richland ES	\$6,594,159.22	25.98%	65



# Considerations for New Construction/Replacements/Additions



## FACILITIES CONDITION ASSESSMENT REPAIRS VERSUS REPLACEMENTS

Haltom MS	\$32,475,012.78	59.67%
-----------	-----------------	--------

+ Additions to bring all spaces to TEA School Facility Standards

- Classroom sizes
- Science Labs
- Library

+ Additions to eliminate all Portable Buildings

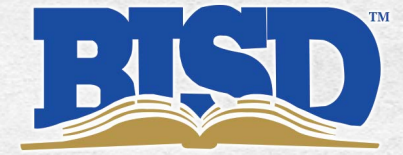
+ Renovations to bring building up to current codes

Haltom MS	\$52,911,012.70	87.11%
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**\$60,733,701 Replacement Value**



# Considerations for New Construction/Replacements/Additions



## FACILITIES CONDITION ASSESSMENT REPAIRS VERSUS REPLACEMENTS

Smithfield ES	\$12,865,404.87	50.69%
---------------	-----------------	--------

+ Additions to bring all spaces to TEA School Facility Standards

- Classroom sizes
- Science Labs
- Library

+ Additions to eliminate all Portable Buildings

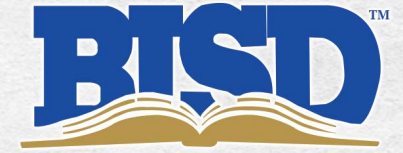
+ Renovations to bring building up to current codes

Smithfield ES	\$23,365,552.60	82.95%
---------------	-----------------	--------

**\$28,165,000 Replacement Value**



# Considerations for New Construction/Replacements/Additions



## FACILITIES CONDITION ASSESSMENT REPAIRS VERSUS REPLACEMENTS

### PRIORITY 1 SCHOOLS

School Name	Total P1 & P2	Benchmark FCI	Building Age
Haltom MS	\$32,475,012.78	59.67%	62
Smithfield ES	\$12,865,404.87	50.69%	64
Richland MS	\$20,907,533.59	38.42%	62
Smith ES	\$8,508,306.25	33.52%	64
Cheney ES	\$7,349,808.87	28.96%	65
Francisco ES	\$7,252,608.74	28.58%	59
Richland ES	\$6,594,159.22	25.98%	65



# Considerations for New Construction/Replacements/Additions



## FACILITIES CONDITION ASSESSMENT REPAIRS VERSUS REPLACEMENTS

### Summary – Considerations:

- What's included in the repairs?
- What is not included?
- When would other repairs be needed if not replaced?
- What are long term operations and maintenance costs?





# Committee's Questions, Comments and Feedback ...





## Next Meeting ...

- **Monday, March 19:**

- New Construction/Replacements/Additions
- Additional New Construction Possibilities
- Existing Facilities Needs
- Technology
- Safety & Security

**Have a Safe and Enjoyable Spring Break!!!!**





# Process Check Likes & Wishes

LIKES:

WISHES:

