

# Model Assessment Status & Summary of Findings

November 30, 2016

# Why Conduct an Assessment Effort?

## **Critical to answer fundamental questions expeditiously and accurately:**

- What condition are our assets in?
- Do our facilities meet facility/educational goals & requirements?
- What is the level of effort to correct deficiencies?
- What will the corrections cost?
- Which are the most urgent needs?

## **Collecting key information enables SBISD to:**

- Establish a baseline condition of facilities
- Prioritize findings based on predetermined standardized ratings
- Make Decisions based on the analysis of collected data and related costs to repair
- Justify Investments in facilities



# Model Assessment Status Update (Performed November 16,17,18)

- Performed model assessments at Terrace ES, Memorial MS, Spring Woods HS
- Model Assessment Intent is to:
  - Test and refine process to ensure expectations are met
  - Obtain District approval of the report template & contents
  - Report Submittal on December 9<sup>th</sup>

*The output of the model assessment is the agreed upon path forward for the remainder of the project*



*Establishing the Baseline*

# Data Analysis – Examining our Findings

- Integrate Facility Findings and Educational Suitability results
- Perform data sampling and quality control
- Identify and resolve duplicated and/or missing information
- Reconcile data
- Review findings with stakeholders



Provide quality, accurate information

# Deficiency Analysis and Cost Estimating

- Standardized Ratings of Deficiencies
- Breakdown by campus
- Deficiencies are estimated using RS Means to determine investments required to perform repairs
- Review/validate results with Spring Branch ISD

Building Component	Cost Impact	Condition
Structure	\$110,769	Good
Mechanical	\$84,065,960	Fair
Electrical	\$36,013,702	Good
Plumbing	\$14,735,980	Good
Building Fabric	\$5,735,104	Good
Environmental	\$2,853	Good
Vertical Transportation	\$8,381,750	Good
Building Facade	\$4,323,022	Good
Roofing	\$7,101,979	Fair
Plaza & Sidewalks	\$6,273,584	Poor
<b>TOTAL</b>	<b>166,744,703</b>	

Rating	Standard
5 - Excellent	New equipment, no visible deficiencies. Only normal scheduled maintenance required.
4 - Good	Well maintained, only minor repairs needed. Operates at optimal conditions.
Average	More minor repairs and infrequent larger repairs required, but equipment is functioning properly.
Poor	Significant repairs or replacement required. Equipment is operating but deficiencies beginning to affect the performance.
Fail	Major repair or replacement required. Equipment is no longer functioning or is a life safety hazard. Unit in need of a large overhaul repair or entire replacement in order for functionality to operate at ideal, safe conditions.

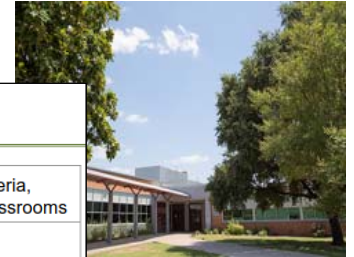


Concise relevant reporting

# Report Format

- **Executive Summary**
- **Project Process**
  - Facility Assessment Methodology
  - Cost Estimation Approach
- **Building Deficiencies Summaries**
  - Elementary School Overview
    - Individual Building Summary
      - Deficiency Summary and projected costs
  - Middle School Overview
    - Individual Building Summary
      - Deficiency Summary and projected costs
  - High School Overview
    - Individual Building Summary
      - Deficiency Summary and projected costs

System	Subsystem		
Exterior	Exterior Walls	<div> <div> Main School Building </div> <div> <div> <div>Building Purpose</div> <div>Administrative, Cafeteria, Gymnasium, and Classrooms</div> </div> <div> <div>Building Area</div> <div>69,914 SF</div> </div> <div> <div>Inspection Conditions</div> <div>95°F - Sunny</div> </div> </div> </div>	
	Exterior Windows		
	Exterior Doors		
Roofing			
Interior Construction	Interior Walls	<div> <div> Introduction </div> <div> Elementary School is located on [redacted] Street in Houston, Texas, and [redacted] The primary, original facility is a single structure with additional campus buildings including a library, gymnasium, a kindergarten building, and portable buildings (T-buildings). gymnasium buildings were reportedly constructed in [redacted] </div> </div>	
	Interior Doors		
	Interior Specialties		
Stairs	Exterior Stairs	<div> <div> Deficiency </div> <div> Recommendation </div> </div>	
	Interior Stairs		
Interior Finishes	Interior Wall Finishes	<div> <div> Boiler appeared aged original to 1973 and was past typical design service life, and the corresponding flue vent was heavily worn and corroded. </div> <div> Replace the boiler and any other aged / degraded subcomponents. </div> </div>	
	Interior Ceiling Finishes		
	Interior Floor Finishes		
Conveying			
Plumbing	Plumbing Fixtures	<div> <div> C - INTERIORS </div> <div> <div> <div>C10 Interior Construction</div> <div>\$ 7,364</div> </div> <div> <div>C1010 Partitions</div> <div>\$ 7,364</div> </div> <div> <div>C1020 Interior Doors</div> <div>\$ -</div> </div> <div> <div>C1030 Fittings</div> <div>\$ -</div> </div> </div> </div>	
	Domestic Water Distribution		
	Other Plumbing		
Mechanical/HVAC			
Fire Protection	Fire Alarm	<div> <div> C20 Stairs </div> <div> <div> <div>C2010 Stair Construction</div> <div>\$ -</div> </div> <div> <div>C2020 Stair Finishes</div> <div>\$ -</div> </div> </div> </div>	
	Fire Protection Suppression		
Electrical	Electrical Distribution	<div> <div> Interior Finishes </div> <div> <div> <div>C3010 Wall Finishes</div> <div>\$ -</div> </div> <div> <div>C3020 Floor Finishes</div> <div>\$ 63,202</div> </div> <div> <div>C3030 Ceiling Finishes</div> <div>\$ -</div> </div> </div> </div>	
	Lighting		
	Communications & Data		



Execute the proven process

## Important Terms

- **“Deficiency”** – Denotes an element that does not meet District standards or requires repair. This reference does not denote a failure of maintenance or an error by the District.
- **“End of Useful Life”** – Denotes an element or system that has exceeded its functional and/or operational life. Repair/replacement parts cannot be acquired, system is not cost effective to maintain.
- **“Big Ticket Item”** – Denotes costs related to building systems or equipment unit replacement that comprise a major portion of the overall deficiency repair total costs.



## Campus Assessment Process

- Initial interview with Principal, other key campus staff, assessment team.
- Facility Condition team assesses campus with Facility and Maintenance staff
- Educational Suitability Assessor tours campus with Principal or key campus staff member
- Child Nutrition team assesses kitchen and support facilities with CNS manager
- Technology team assesses campus with IT manager for campus



# Terrace ES

74,349 sf



## Terrace ES (1971) Summary of Findings

- Site Improvements
  - Site-wide asphalt paving for parking and vehicle circulation is deteriorated and failing in some areas
  - Perimeter site fencing is insufficient or inappropriate
  - Soil erosion noted at grade around perimeter of main building and concrete walk surfaces.
- Exterior Enclosures
  - Main building exterior window system is original and has single pane glazing in aluminum frames are at the end of their useful life.
  - Main building exterior aluminum framed doors with single pane glazing are original and are at the end of their useful life.

## Terrace ES



## Terrace ES

- Plumbing
  - Domestic water distribution piping (galvanized pipe) – 75% is original, 25% replaced.
- Heating, Ventilation, Air Conditioning (HVAC)
  - System designed for open plan school, air distribution outdated (**Big Ticket Item**)
  - Pneumatic controls on units are aged and at (**End of Useful Life**)
  - Multiple HVAC units use outdated refrigerant (**Deficiency**)
  - Eight air handling units appear to be original construction and are at the end of their useful life



## Terrace ES



## Terrace ES

- Main electrical distribution equipment and switchboards are at the end of their useful life.
- Several rooftop equipment units, switches, panels are heavily corroded and need replacement
- Exit and emergency light fixtures are aged, battery pack replacement costs are excessive
- Clock system is out dated
- School lacks emergency generator and lightning protection

## Terrace ES





# Memorial MS

188,852 sf



## Memorial MS (1963) Summary of Findings

- Exterior Enclosures
  - Original building exterior window system and entry system (both single pane) are at the end of their useful life.
  - Brick façade at SW corner of main building experiencing moderate stress cracking. Similar conditions were not noted elsewhere on main building.
- Site Improvements
  - Several areas around the buildings experience storm drainage issues, multiple downspouts drain direct onto ground.

# Memorial MS



# Memorial MS

- HVAC System

- Original 2 pipe water system and fan coil units are operational throughout the building. System is at the end of its useful life.
- Multiple HVAC package units use outdated refrigerant.
- HVAC system controls are outdated and require replacement.



# Memorial MS

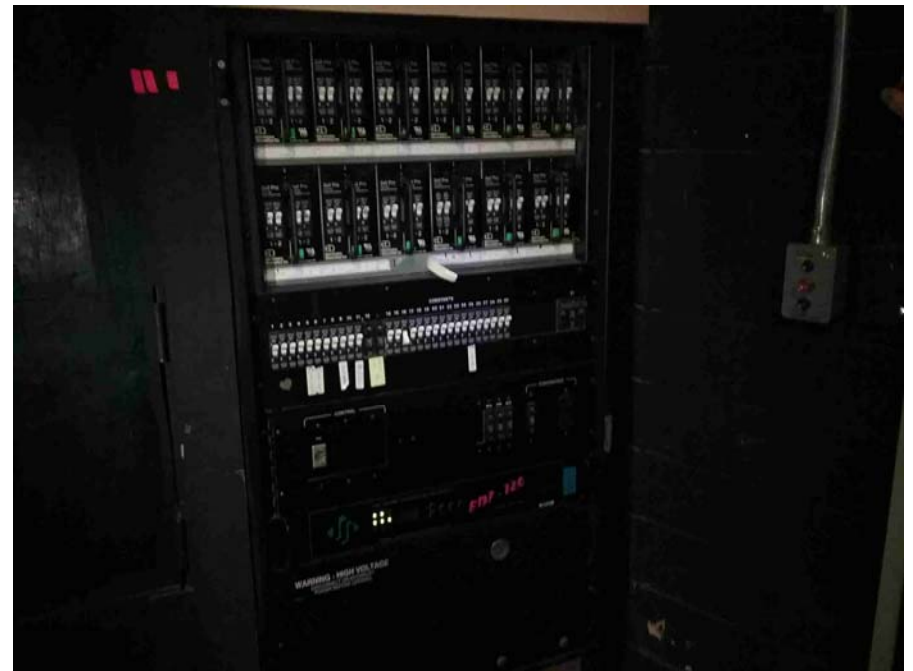


# Memorial MS

- Electrical

- Switchgear units appear original and are at the end of their useful life.
- School lacks emergency generator and lightning protection system
- Dimmer system in Auditorium is outdated, replacement parts are not available.
- Exit and emergency light fixtures are aged, battery pack replacement costs are excessive
- Clock system is outdated

# Memorial MS





# Memorial MS

- Interior Finishes

- Original terrazzo floors are severely stained and are deteriorating campus wide, most notably in restrooms

- Plumbing Fixtures

- Plumbing fixtures in original building are aged and at the end of their useful life. Fixtures do not meet accessibility standards and create unsanitary condition.

## Memorial MS



# Spring Woods HS

336,366 sf



## Spring Woods HS (1964) Summary of Findings

- Exterior Structure and Enclosure
  - Exterior Plaster Covered Columns are showing stress and the plaster veneer is deteriorating.
  - Exterior windows on main building are original and are at the end of their useful life. Glazing is single pane, some operable windows are damaged
  - Original exterior doors to classrooms (first and second levels) are wood with aluminum frames. Door System is at the end of its useful life and does not create a weathertight closure.

## Spring Woods HS



# Spring Woods HS

- Interior Finishes

- Black and Gold Gym synthetic flooring is deteriorated and is at the end of its useful life.
- Mini Gym wood flooring is deteriorating and needs to be evaluated for replacement.
- Carpeting in various classrooms is roll type and in need of replacement. Carpet is worn, stained and is at the end of its useful life.



# Spring Woods HS






# Spring Woods HS

- HVAC System

- Current HVAC system and unit ventilators is the original 2 pipe system.
- HVAC system in new Office Suite (converted from former classrooms) is inadequate.

- Site Electrical

- NW parking lot and track area lighting needs upgrading.
  - Existing athletic field lighting is outdated.
  - Exterior corridor canopy light fixture lenses are worn and discolored.
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# Spring Woods HS



# Spring Woods HS

- Electrical
  - Electrical Switchgear in main mechanical room and other electrical distribution rooms reported as original to building and at the end of its useful life.
  - Exit and emergency lighting fixtures are aged, battery pack replacement costs are excessive
  - Clock system is outdated.
- Elevator cab, equipment and controls are outdated.

# Spring Woods HS



# Spring Woods HS

- Site Improvements

- Asphalt paving in parking areas and vehicle circulation was observed as deteriorating, cracked and crumbling in some areas. Parking lots are surface drained.

- Site Drainage

- Several areas are experiencing flooding due to insufficient drainage around the campus and within courtyards. Limited numbers and potentially undersized inlets were noted. In some areas, downspouts are not connected to underground storm drainage.

# Spring Woods HS



# Summary of Technology Findings

- Common Conditions

- Lack of floor space, proper racks, cable management, and grounding/bonding across cable closets
- Inadequate surge protection for network devices in cable closets
- Mixture of CAT5 and CAT 6 cables. Cat 5 cables are no longer district standards and are at the end of its useful life.
- Concerns noted regarding wireless network capacity as schools move toward classroom one to one Device/Student Ratio



# Summary of Child Nutrition Facility Findings

- Common Conditions

- Undersized spaces for server, cold storage, locker room/office and dry storage.
- Proper locations for chemical storage, mop/brooms racks needed
- Air screens at exterior doors are missing or in poor condition
- Certain equipment is aged or not efficiently located based on current operations.

The background is a solid green color. On the right side, there are several thin, white, intersecting lines that create a geometric pattern, resembling a stylized 'X' or a series of overlapping planes.

Questions?