SHAWNEE MISSION SCHOOL DISTRICT

ACI BOLAND ARCHITECTS

RUSHTON ELEMENTARY

FACILITY EVALUATION

OVERALL SUMMARY

ACI Boland Architects along with MFEC and BHC Rhodes Engineers visited each of the elementary schools over a several week process. Each school was evaluated and scored using the A4LE School Facility Appraisal document included in this report. The school's principal and maintenance personnel were present at the building walk-throughs to offer insight into building positives and negatives.

The overall Assessment scores are indicated as follows:

- **Rushton Elementary School** **523 points**
- **Belinder Elementary School** **557 points**
- **Tomahawk Elementary School** **562 points**
- **Rosehill Elementary School** **656 points**
- **East Antioch Elementary School** **669 points**

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Rushton
ELEMENTARY SCHOOL
OCTOBER
20TH EMERALD CITY
NIGHT 7-9 PM
23RD-27TH RED RIBBON WEEK
2007

SUMMARY

Rushton Elementary is a one story school with approximately 360 students from ages Kindergarten through 6th grade. School hours are from 7:30 a.m. to 3:00 p.m. The building is 49,384 s.f. with 18 classrooms, cafeteria, kitchen, gymnasium, library, art, music and administrative areas including nurse's office and staff room. The building is a brick and masonry building with steel roof joists and some concrete structure as well. The roof system is a ballasted built up roof on sloped roof areas and membrane roofing on other flat roof areas with gutters and downspouts. There are no interior permanent ladders to access the roof. There is an HVAC room in the basement and one on main floor. An underground tunnel system exists as part of the original building.

The school is located in a residential neighborhood on 52nd Street. There is a neighborhood park called Water works located south east of the site adjacent to a sewage treatment facility. The rest of the site is surrounded by individual homes. Overhead power lines run through the playground area to the south. The site has some small asphalt parking lots for staff and visitors with sidewalks connecting these areas. Hard and soft surface play areas are provided with appropriate play equipment. A separate bus drop off and parent drop off is accessed off of 52nd Street. There are grass ball fields on the west end of the site. The school building has an interior courtyard with some trees and there are several large mature trees on the rest of the site. Most entries into the building are handicapped accessible.

GUIDE FOR

SCHOOL FACILITY APPRAISAL

RUSHTON ELEMENTARY

APPRAISAL

Directions for Appraising Facilities

Elementary School Appraisal

Prior to evaluating a building, the appraiser should become familiar with the educational program provided within the existing school facility. It is essential to determine other pertinent factors about the facility, which will provide background information sufficient to insure a thorough and accurate appraisal. Particularly helpful are the building's architectural plans, specifications and layout, if these are available. If possible, the school plant should be appraised at a time when school is in session, so that the actual use of the building is more apparent.

Although the Appraisal Guide is designed for individual appraiser use, ideally the school facility should be evaluated at the same time by three to five appraisers. The ratings of each of the appraisers should then be used to arrive at a consensus for each item. The final rating is the result of careful review of the individual scores.

The instrument uses an additive scoring method, with each item having a maximum number of allowable points. A total of 1,000 points is distributed among these six major categories:

Section		Maximum Points
1.0	The School Site	100
2.0	Structural and Mechanical Features	200
3.0	Plant Maintainability	100
4.0	School Building Safety and Security	200
5.0	Educational Adequacy	200
6.0	Environment for Education	200

Prior to Appraisal

Step I

Review the educational program; identify the number of faculty members and students; and examine the floor and plot plans carefully.

Overview of the Building and Grounds

Step II

Upon approach to the site, look for traffic patterns, school safety signs, neighborhood environment, etc. Begin the appraisal by taking a preliminary tour of the entire building noting both exterior and interior features. Information obtained prior to arrival at the campus recorded in the Building Data Record should be verified. The appraisal weights should not be determined during this initial walk through. The appraisal is better accomplished as separate individual steps in the process.

Assignment of Scores

Step III

After the completion of the preliminary inspection, go through the entire instrument section by section. The appraisal will be more accurate if each item is carefully considered, while it is appropriately observed. **Do not try to evaluate from memory** - use actual observation when making the appraisal decision.

Items that are needed/required, but are non-existent, should be given a 0 score. If an item is not needed and is non-existent, full credit should be allowed.

Note the Table of Weights for assistance in determining the score to be given each item. Each item should first be considered in the following terms: Non-Existent, Very Inadequate, Poor, Borderline, Satisfactory and Excellent. The weight (score) should then be assigned for that item. Place score in space provided in the Points Allotted column, total the score for each Section and insert in the space provided. The Section totals should then be tabulated and indicated in the Points Assigned column of the Appraisal Summary. Use the space provided in the Justification for Allocation of Points to provide notes justifying the scores at the extreme ends of the scale (e.g., very inadequate or excellent).

Building Data Record

Name of Appriaser: ACI Boland Architects **Date of Appraisal:** 10/30/2017

Building Name: Rushton Elementary School

Street Address: 6001 West 52nd St.

City, State, Zip Code: Mission, Kansas 66202

Telephone Number(s): 913-993-4900

School District: Shawnee Mission School District

Setting: ☐ Urban ■ Suburban ☐ Small City ☐ Rural

Site Acreage: 6.64 Building Square Footage 49,374

Grades Housed: K thru 6th Student Capacity 357

# of Teaching Stations: 18 # of Floors One plus Basement Furnace

Student Enrollment: 357 As of: 11/1/2017

Dates of Construction: Original Building - 1953 Additions and Renovations in 1954, 1955, 1967, 1988, 1993, 1997, 2007 and 2009

Energy Source: ☐ Fuel Oil ■ Gas ☐ Electric ☐ Solar

Air Conditioning: ■ Roof Top ☐ Window Units ■ Central ■ Room Units

Heating: ■ Central ■ Roof Top ☐ Individual Unit ■ Forced Air ☐ Steam ■ Hot Water

Types of Construction	**Exterior Surfacing**	**Floor Construction**
■ Load Bearing Masonry	■ Brick	☐ Wood Joists
☐ Steel Frame	☐ Stucco	☐ Steel Frame
■ Concrete Frame	☐ Metal	■ Slab on Grade
☐ Wood	☐ Wood	■ Structural Slab
■ Other Steel roof joists	■ Other Precast panels	☐ Other

APPRAISAL GUIDE FOR SCHOOL FACILITIES

Table of Weights and Categories	Maximum Points Allotted	Non-Existent	Very Inadequate 1 - 29%	Poor 30 - 49%	Borderline 50 - 69%	Satisfactory 70 - 89%	Excellent 90 - 100%
	5	0	1	2	3	4	5
	10	0	2	4	6	8	10
	15	0	3	6	9	12	15
	20	0	4	8	12	16	20
	25	0	5	10	15	20	25

Appraisal Summary	Section	Possible Points	Total Earned	Percent	Rating By Category
	1.0 The School Site	**100**	**67**	67%	
	2.0 Structural and Mechanical	**200**	**91**	46%	
	3.0 Plant Maintainability	**100**	**71**	71%	
	4.0 School Building Safety & Security	**200**	**121**	61%	
	5.0 Educational Adequacy	**200**	**87**	44%	
	6.0 Environment for Education	**200**	**86**	43%	
	TOTAL	**1,000**	523	52%	

1.0 The School Site

100 Points

1.1	**Site is large enough** to meet present and future educational needs as defined by state and local requirements.	**25**	10
1.2	**Site is easily accessible** and conveniently located for the present and future population.	**20**	15
1.3	**Location** is removed from undesirable business, industry, traffic and natural hazards.	**10**	10
1.4	Site is **well landscaped and developed** to meet educational needs.	**10**	8
1.5	Well equipped **athletic areas** are adequate with sufficient solid-surface parking.	**10**	7
1.6	**Topography** is varied enough to provide desirable appearance and without steep inclines.	**5**	4
1.7	Site has stable, well drained **soil free of erosion.**	**5**	4
1.8	Site is suitable for **special instructional needs,** e.g. outdoor learning.	**5**	3
1.9	**Pedestrian services** including adequate sidewalks with designated crosswalks, curb cuts and correct slopes.	**5**	4
1.10	Sufficient **on-site, solid surface parking** is provided for faculty, students, staff and community.	**5**	2
	Total - The School Site	**100**	67

Table of Weights and Categories

Maximum Points Allotted	Non-Existent	Very Inadequate 1 - 29%	Poor 30 - 49%	Borderline 50 - 69%	Satisfactory 70 - 89%	Excellent 90 - 100%
5	0	1	2	3	4	5
10	0	2	4	6	8	10
20	0	4	8	12	16	20
25	0	5	10	15	20	25

2.0 Structural and Mechanical Features

200 Points

Structural

2.1	Structure meets all **barrier-free** requirements both externally and internally.	**15**	6
2.2	**Roofs** appear sound, have positive drainage, and are weather-tight.	**15**	7
2.3	**Foundations** are strong and stable with no observable cracks.	**10**	8
2.4	**Exterior and interior walls** have sufficient expansion joints and are free of deterioration.	**10**	6
2.5	**Entrances and exits** are located so as to permit efficient student traffic flow.	**10**	2
2.6	**Building "envelope"** generally provides for energy conservation (See criteria).	**10**	2
2.7	Structure is **free of friable asbestos** and **toxic materials.**	**10**	9
2.8	Interior walls permit sufficient **flexibility** for a variety of class sizes.	**10**	2

Table of Weights and Categories

Maximum Points Allotted	Non-Existent	Very Inadequate 1 - 29%	Poor 30 - 49%	Borderline 50 - 69%	Satisfactory 70 - 89%	Excellent 90 - 100%
10	0	2	4	6	8	10
15	0	3	6	9	12	15

Mechanical/Electrical

2.9	**Adequate light sources** are well maintained, properly placed and are not subject to overheating.	**15**	10

2.10	**Internal water supply** is adequate with sufficient pressure to meet health and safety requirements.	**15**	5
2.11	Each teaching/learning area has adequate convenient **wall outlets**, phone and computer cabling for **technology applications**.	**15**	3
2.12	**Electrical controls** are safely protected with **disconnect switches** easily accessible.	**10**	5
2.13	**Drinking fountains** are adequate in number and placement, and are properly maintained including provisions for the disabled.	**10**	2
2.14	Number and size of **restrooms meet requirements.**	**10**	5
2.15	**Drainage systems** are properly maintained and meet requirements.	**10**	0
2.16	**Fire alarms, smoke detectors and sprinkler systems** are properly maintained and meet requirements.	**10**	8
2.17	**Intercommunication system** consists of a central unit that allows dependable **two-way communication** between the office and instructional areas.	**10**	8
2.18	**Exterior water supply** is sufficient and available for normal usage.	**5**	3
	Total - Structural and Mechanical Features	**200**	91

Table of Weights and Categories

Maximum Points Allotted	Non-Existent	Very Inadequate 1 - 29%	Poor 30 - 49%	Borderline 50 - 69%	Satisfactory 70 - 89%	Excellent 90 - 100%
5	0	1	2	3	4	5
10	0	2	4	6	8	10
15	0	3	6	9	12	15

3.0 Plant Maintainability

100 Points

3.1	**Exterior windows, doors and walls** are of material and finish requiring minimum maintenance.	**15**	12
3.2	**Floor surfaces** throughout the building require minimum care.	**15**	8
3.3	**Ceilings and walls** throughout the building, including service areas, are easily cleaned and resistant to stain.	**10**	6
3.4	**Built-in equipment** is designed and constructed for ease of maintenance.	**10**	6
3.5	**Finishes and hardware**, with a compatible keying system, are of durable quality.	**10**	10
3.6	**Restroom fixtures** are wall mounted and of quality finish.	**10**	8
3.7	Adequate **custodial storage space** with water and drain is accessible throughout the building.	**10**	8
3.8	Adequate **electrical outlets and power**, to permit routine cleaning, are available in every area.	**10**	5
3.9	**Outdoor light fixtures, electric outlets**, equipment, and other fixtures are accessible for repair and replacement.	**10**	8
	Total - Plant Maintainability	**100**	71

Table of Weights and Categories

Maximum Points Allotted	Non-Existent	Very Inadequate 1 - 29%	Poor 30 - 49%	Borderline 50 - 69%	Satisfactory 70 - 89%	Excellent 90 - 100%
10	0	2	4	6	8	10
15	0	3	6	9	12	15

4.0 Building Safety and Security

200 Points

Site Safety

4.1	**Student loading areas** are segregated from other vehicular traffic and pedestrian walkways.	**15**	3
4.2	**Walkways**, both on and offsite, are available for safety of pedestrians.	**10**	9
4.3	**Access streets** have sufficient signals and signs to permit safe entrance to and exit from school area.	**5**	5
4.4	**Vehicular entrances and exits** permit safe traffic flow.	**5**	2
4.5	**Athletic field equipment** is properly located and is free from hazard.	**5**	3

Building Safety

4.6	The **heating unit(s)** is located away from student occupied areas.	**20**	10
4.7	Multi-story buildings have at least **two stairways** for student egress.	**15**	7
4.8	**Exterior doors** open outward and are equipped with panic hardware.	**10**	10
4.9	**Emergency lighting** is provided throughout the building with exit signs on separate electrical circuits.	**10**	5
4.10	**Classroom doors** are recessed and open outward.	**10**	6
4.11	**Building security systems** are provided to assure uninterrupted operation of the educational program.	**10**	5

Table of Weights and Categories

Maximum Points Allotted	Non-Existent	Very Inadequate 1 - 29%	Poor 30 - 49%	Borderline 50 - 69%	Satisfactory 70 - 89%	Excellent 90 - 100%
5	0	1	2	3	4	5
10	0	2	4	6	8	10
15	0	3	6	9	12	15
20	0	4	8	12	16	20

Building Safety (cont.)

4.12	**Flooring** (including ramps and stairways) is maintained in a nonslip condition.	**5**	5
4.13	**Stairs** (interior and exterior) meet standards (maximum 7" rise to 11" tread) and steps range in number from 3 - 16.	**5**	4
4.14	**Glass** is properly located and protected with wire or safety material to prevent accidental student injury.	**5**	3
4.15	**Fixed projections** in the traffic areas do not extend more than 8" from the corridor wall.	**5**	1
4.16	**Traffic areas** terminate at an exit or a stairway leading to an egress.	**5**	4

Emergency Safety

4.17	Adequate **fire safety equipment** is properly located.	**15**	12
4.18	There are at least **two independent exits** from any point in the building.	**15**	15
4.19	**Fire-resistant materials** are used throughout the structure.	**15**	12
4.20	Automatic and manual **emergency alarm system** with a distinctive sound and flashing light is provided.	**15**	0
	Total - Building Safety and Security	**200**	121

Table of Weights and Categories

Maximum Points Allotted	Non-Existent	Very Inadequate 1 - 29%	Poor 30 - 49%	Borderline 50 - 69%	Satisfactory 70 - 89%	Excellent 90 - 100%
5	0	1	2	3	4	5
15	0	3	6	9	12	15

5.0 Educational Adequacy

200 Points

Academic Learning Space

5.1	**Size of academic learning areas** meets desirable standards.	**10**	1
5.2	**Classroom space** permits arrangements for small group activity.	**10**	2
5.3	**Location of academic learning areas** is near related educational activities and away from disruptive noises.	**10**	8
5.4	**Personal space** in the classroom away from group instruction allows privacy time for individual students.	**5**	0
5.5	**Storage for student materials** is adequate.	**5**	5
5.6	**Storage for teacher materials** is adequate.	**5**	5

Specialized Learning Space

5.7	**Size of specialized learning area(s)** meets standards.	**15**	7
5.8	**Design of specialized learning area(s)** is compatible with instructional need.	**10**	7
5.9	**Library/Resource/Media Center** provides appropriate and attractive space.	**15**	8
5.10	**Gymnasium and outdoor facilities** adequately serve physical education instruction.	**15**	6
5.11	**Pre-kindergarten and kindergarten** space is appropritae for age of students and nature of instruction.	**10**	2
5.12	**Music Program** is provided adequate sound-treated space.	**10**	6

Table of Weights and Categories

Maximum Points Allotted	Non-Existent	Very Inadequate 1 - 29%	Poor 30 - 49%	Borderline 50 - 69%	Satisfactory 70 - 89%	Excellent 90 - 100%
5	0	1	2	3	4	5
10	0	2	4	6	8	10
15	0	3	6	9	12	15
25	0	5	10	15	20	25

Specialized Learning Space (cont.)

5.13	**Space for art** is appropriate for instruction, supplies and equipment.	**10**	9
5.14	**Space for technology education** permits use of state-of-the-art equipment.	**10**	2
5.15	Space for **small groups and remedial instruction** is provided adjacent to classrooms.	**5**	2
5.16	**Storage for student and teacher material** is adequate.	**5**	5

Support Space

5.17	**Teacher's lounge and work areas** support teachers as professionals.	**10**	6
5.18	**Cafeteria/Kitchen** is attractive with sufficient space for seating/dining, delivery, storage and food preparation.	**10**	2
5.19	**Administrative offices** are consistent in appearance and function with the maturity of the students served.	**10**	1
5.20	**Counselor's office** insures privacy and sufficient storage.	**5**	1
5.21	**Clinic** is near administrative offices and is equipped to meet requirements.	**5**	1
5.22	**Suitable reception space** is available for students, teachers and visitors.	**5**	0
5.23	**Administrative personnel** are provided sufficient work space and privacy.	**5**	1
	Total - Educational Adequacy	**200**	87

Table of Weights and Categories

Maximum Points Allotted	Non-Existent	Very Inadequate 1 - 29%	Poor 30 - 49%	Borderline 50 - 69%	Satisfactory 70 - 89%	Excellent 90 - 100%
5	0	1	2	3	4	5
10	0	2	4	6	8	10

6.0 Environment for Education

200 Points

Exterior Environment

6.1	Overall **design is aesthetically pleasing** and appropriate for the age of students.	**15**	6
6.2	Site and buildings are well landscaped.	**10**	4
6.3	**Exterior noise and surrounding environment** do not disrupt learning.	**10**	8
6.4	**Entrances and walkways are sheltered** from sun and inclement weather.	**10**	7
6.5	**Building materials** provide attractive color and texture.	**5**	4

Interior Environment

6.6	**Color schemes, building materials and decor** provide an impetus to learning.	**20**	8
6.7	**Year around comfortable temperature and humidity** are provided throughout the building.	**15**	6
6.8	**Ventilating system** provides adequate quiet circulation of clean air and meets 15cfm VBC requirement.	**15**	5
6.9	**Lighting system** provides proper intensity, diffusion and distribution of illumination.	**15**	12
6.10	**Sufficient drinking fountains and restroom facilities** are conveniently located.	**15**	5
6.11	**Communication among students** is enhanced by commons area.	**10**	0

Table of Weights and Categories

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5	0	1	2	3	4	5
10	0	2	4	6	8	10
15	0	3	6	9	12	15
20	0	4	8	12	16	20

Interior Environment (cont.)

6.12	**Traffic flow** is aided by appropriate foyers and corridors.	**10**	4
6.13	**Areas for students to interact** are suitable to the age group.	**10**	3
6.14	**Large group areas** are designed for effective management of students.	**10**	2
6.15	**Acoustical treatment** of ceilings, walls and floors provides effective sound control.	**10**	2
6.16	**Window design** contributes to a pleasant environment.	**10**	5
6.17	**Furniture and equipment** provide a pleasing atmosphere.	**10**	5
	Total - Environment for Education	**200**	86

Table of Weights and Categories

Maximum Points Allotted	Non-Existent	Very Inadequate 1 - 29%	Poor 30 - 49%	Borderline 50 - 69%	Satisfactory 70 - 89%	Excellent 90 - 100%
10	0	2	4	6	8	10

Justification for Allocation of Points

BUILDING NAME AND LEVEL:

Name of School Building

Indicate the justification for the appraisal decision in the space provided.

BUILDING FEATURES THAT CLEARLY EXCEED CRITERIA:

1. Item 1 Building well maintained.
2. Item 2 Courtyard feature nice.
3. Item 3
4. Item 4
5. Item 5

BUILDING FEATURES THAT ARE NON-EXISTENT OR VERY INADEQUATE:

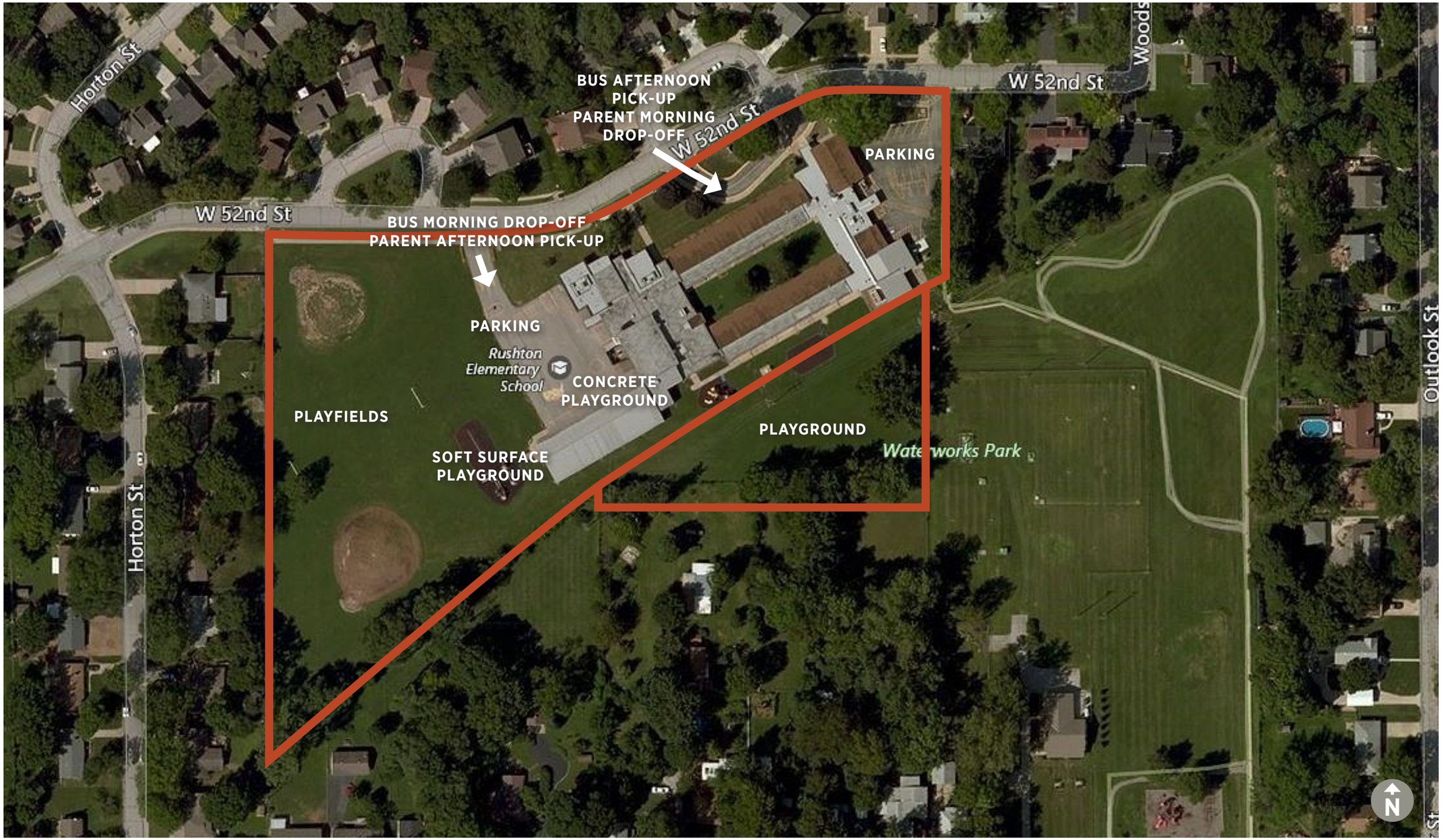
1. Item 1 No Early Childhood Program
2. Item 2 No Small Group Instruction
3. Item 3 No Public Common Space
4. Item 4 Limited Technology
5. Item 5 Can't fit entire school population into one space
6. Item 6 Not energy efficient
7. Item 7 HVAC System noisy and not balanced through out school. No roof access.
8. Item 8 Non usable collaboration spaces
9. Item 9 Cafeteria/Kitchen is undersized.

Date of Appraisal: 10/30/2017

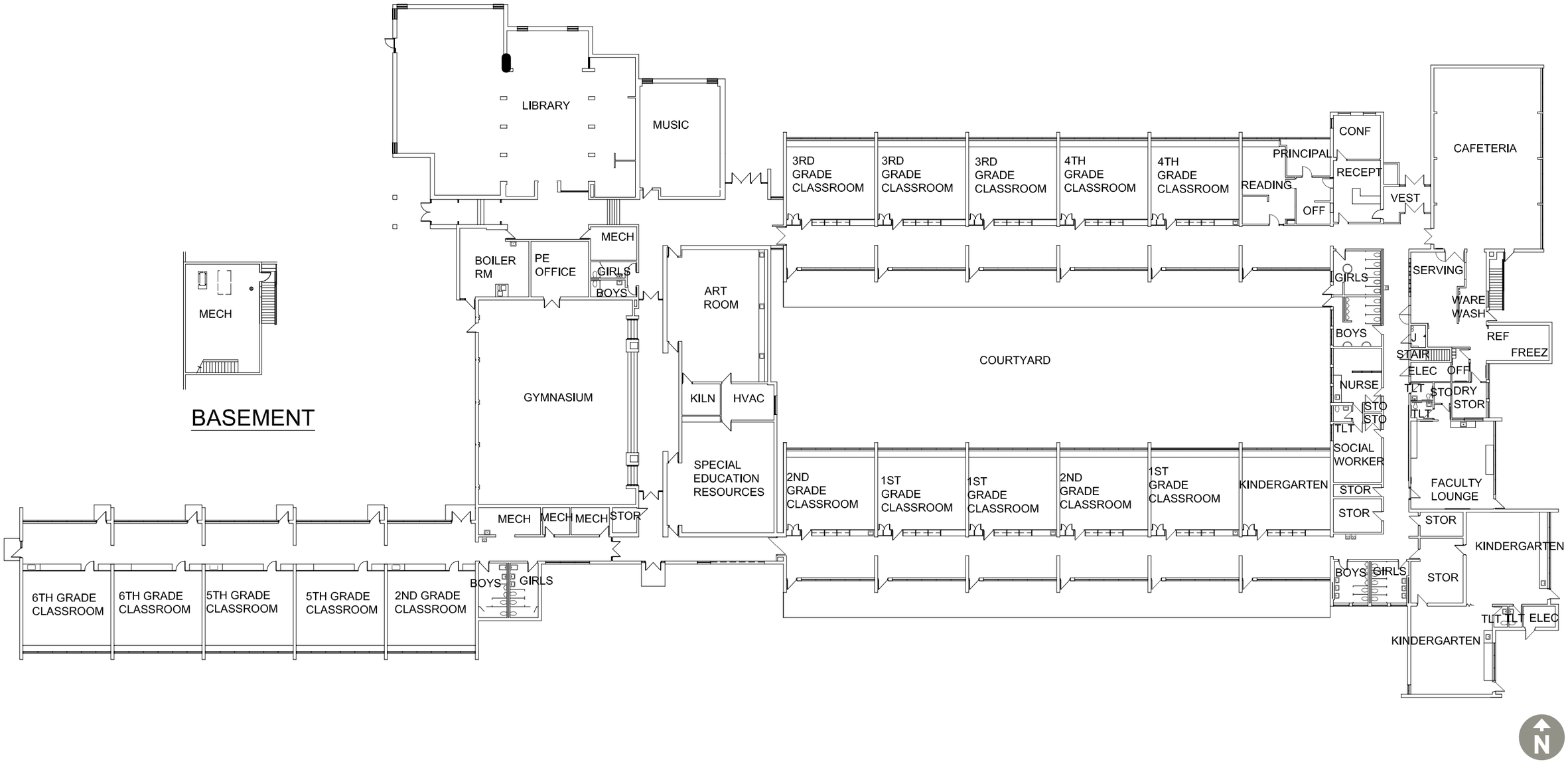
Name of School: Rushton Elementary School

Name of Appraisers: ACI Boland Architects

SITE PLAN


Horton St
W 52nd St
BUS AFTERNOON
PICK-UP
PARENT MORNING
DROP-OFF
W 52nd St
W 52nd St
Woods
PARKING
BUS MORNING DROP-OFF
PARENT AFTERNOON PICK-UP
PARKING
Rushton
Elementary
School
CONCRETE
PLAYGROUND
PLAYFIELDS
PLAYGROUND
SOFT SURFACE
PLAYGROUND
Waterworks Park
Horton St
Outlook St
N

FLOOR PLAN


LIBRARY
MUSIC
3RD GRADE CLASSROOM
3RD GRADE CLASSROOM
3RD GRADE CLASSROOM
4TH GRADE CLASSROOM
4TH GRADE CLASSROOM
READING
PRINCIPAL
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VEST
CAFETERIA
MECH
BOILER RM
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GIRLS
BOYS
ART ROOM
GIRLS
BOYS
SERVING
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FREEZ
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STAIR
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DRY STOR
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COURTYARD
NURSE
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TLT
SOCIAL WORKER
STOR
STOR
FACULTY LOUNGE
STOR
KINDERGARTEN
BOYS
GIRLS
STOR
TLT
TLT
ELEC
KINDERGARTEN
MECH
GYMNASIUM
KILN
HVAC
SPECIAL EDUCATION RESOURCES
2ND GRADE CLASSROOM
1ST GRADE CLASSROOM
1ST GRADE CLASSROOM
2ND GRADE CLASSROOM
1ST GRADE CLASSROOM
KINDERGARTEN
MECH
MECH
MECH
STOR
6TH GRADE CLASSROOM
6TH GRADE CLASSROOM
5TH GRADE CLASSROOM
5TH GRADE CLASSROOM
2ND GRADE CLASSROOM
BOYS
GIRLS
BASEMENT
N

FACILITY OBSERVATIONS

Architectural Observations

Small Administration Reception area has no waiting chairs for visitors or students.

Corridors with low ceilings (7'-5" a.f.f.). Doors swinging into Corridor. VCT flooring requires maintenance. No common areas for students to meet.

No shower in Nurse's area for kids.

Drinking fountains protruding into Corridors more than allowed by ADA.

Small Cafeteria- A long Lunch period extends from 11:00 to 1:15. There are 75 to 100 kids per lunch period. Constant loud background noise from the HVAC unit.

Small kitchen/serving area. Exposed ductwork directly over food areas.

Typical Classroom: 24 shared cubbies. Need to be one cubby per student. Rooms have 709 s.f. which is smaller than most other schools in the district that have a minimum of 850 to 900 s.f.

Small classrooms (709 s.f.) with traditional desks. Need different furniture types to allow for various teaching instruction. HVAC moisture problem is causing drooping ceiling tiles. High clerestory windows are covered up and large mechanical ductwork also blocks the clerestory windows.

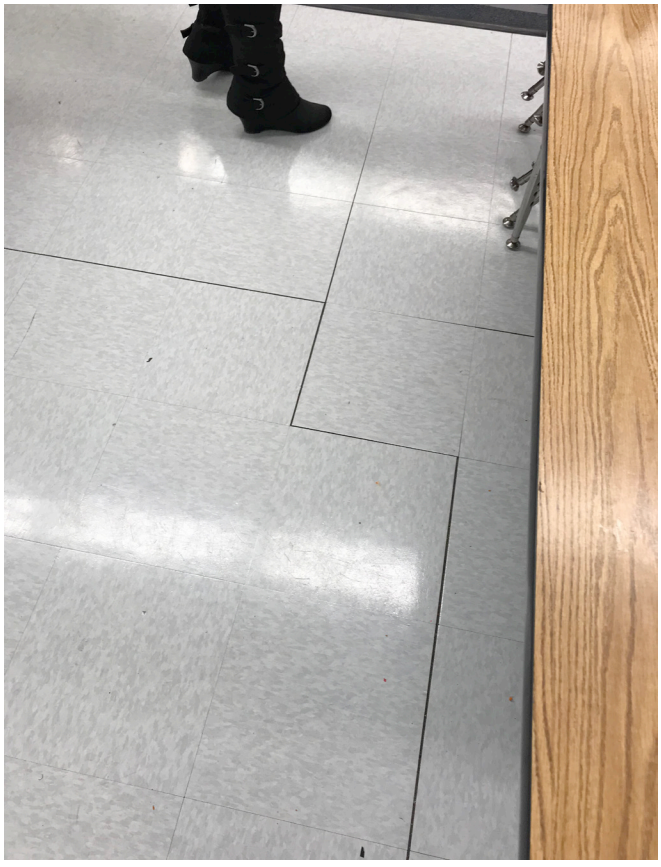
Corridor break out spaces have a lot of wasted space that could be used more efficiently. The wood cubbies are too high, prevents visibility behind them. A kidney shaped table can be used as small break out space but Principal said students using the space are distracted by people walking by. Need updated lighting fixtures.

Corridor break out spaces with extra storage. The cubbies are not needed since each classroom has them in the room. These cubbies are too high. Bad visibility allows kids to hide from staff.

Art Room used as storm shelter so it has no windows for natural light. The Special Ed Resource room also has no windows.

Library needs more natural light. There are no teaching areas in the layout.

VCT flooring with cracks and unlevel surface for walking.



VCT flooring has large gaps in between the tiles.

Students in a gym assembly have to come out of these exterior doors, walk through the playground over to the exterior doors to the classroom wing to get to their classes. The corridors are too crowded to walk directly to their classrooms inside the building. Playgrounds too close to drop off areas.

Playground adjacent to parking and drop off areas.

Playground balls are being thrown into the HVAC fence enclosure due to the close proximity to the playgrounds. Roof is accessed with a loose ladder at brick wall west of HVAC equipment.

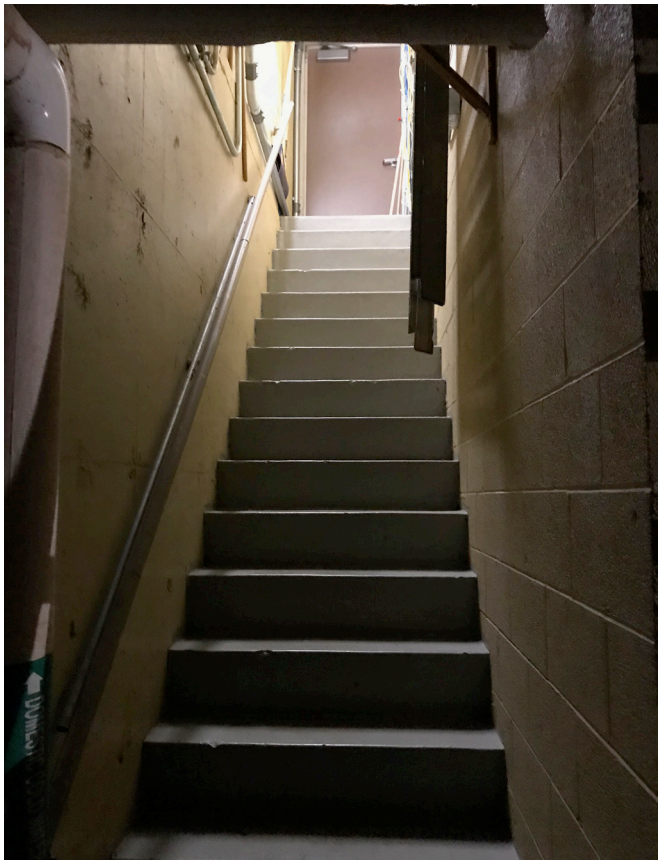
Courtyard drainage issues. Gutters and downspouts all drain into the courtyard. A downspout extender is being used to direct water away from wall.

Exterior building: maintenance issues at brick and foundation walls.

Concrete surface deterioration due to moisture issues.

Overhead powerlines running through the playground areas. Guy wires are a tripping hazard.

Exterior building: maintenance issues at brick and foundation walls.



Water issues in corner of the courtyard brick wall.

Gravel at ballasted roofs is washing away. No permanent roof access.

Gravel at ballasted roofs is washing away. No permanent roof access.

MEP Observations

Distance from exhaust outlet to outside air intake should be a minimum of 10 feet does not appear to be

Hallway ceiling exposed conduits

HVAC unit in restroom - accessible to students

Insufficient electrical outlet quantities

Kiln with exhaust system

Low head clearance in Kitchen

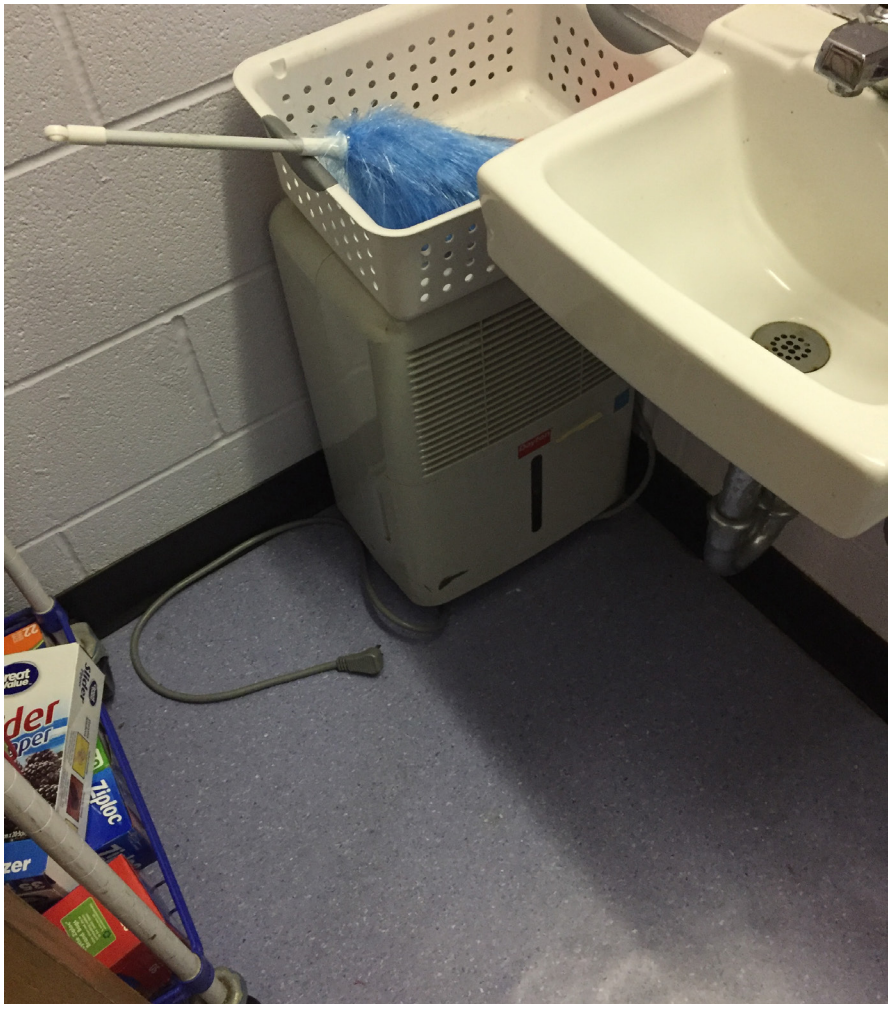
Low pressure for hot water supply from classroom sinks

Main fire alarm control panel for outdated system

Mop sink deteriorated
recommend replacement

Non-accessible drinking fountain

Overhead power lines above playground



Portable dehumifification unit indicates high humidity levels

Sanitary vent piping near kitchen dishwasher

Roof Access is not permanent

Thermostat near cooking line could cause false operation

Data rack on blocks in basement that floods

SITE ANALYSIS

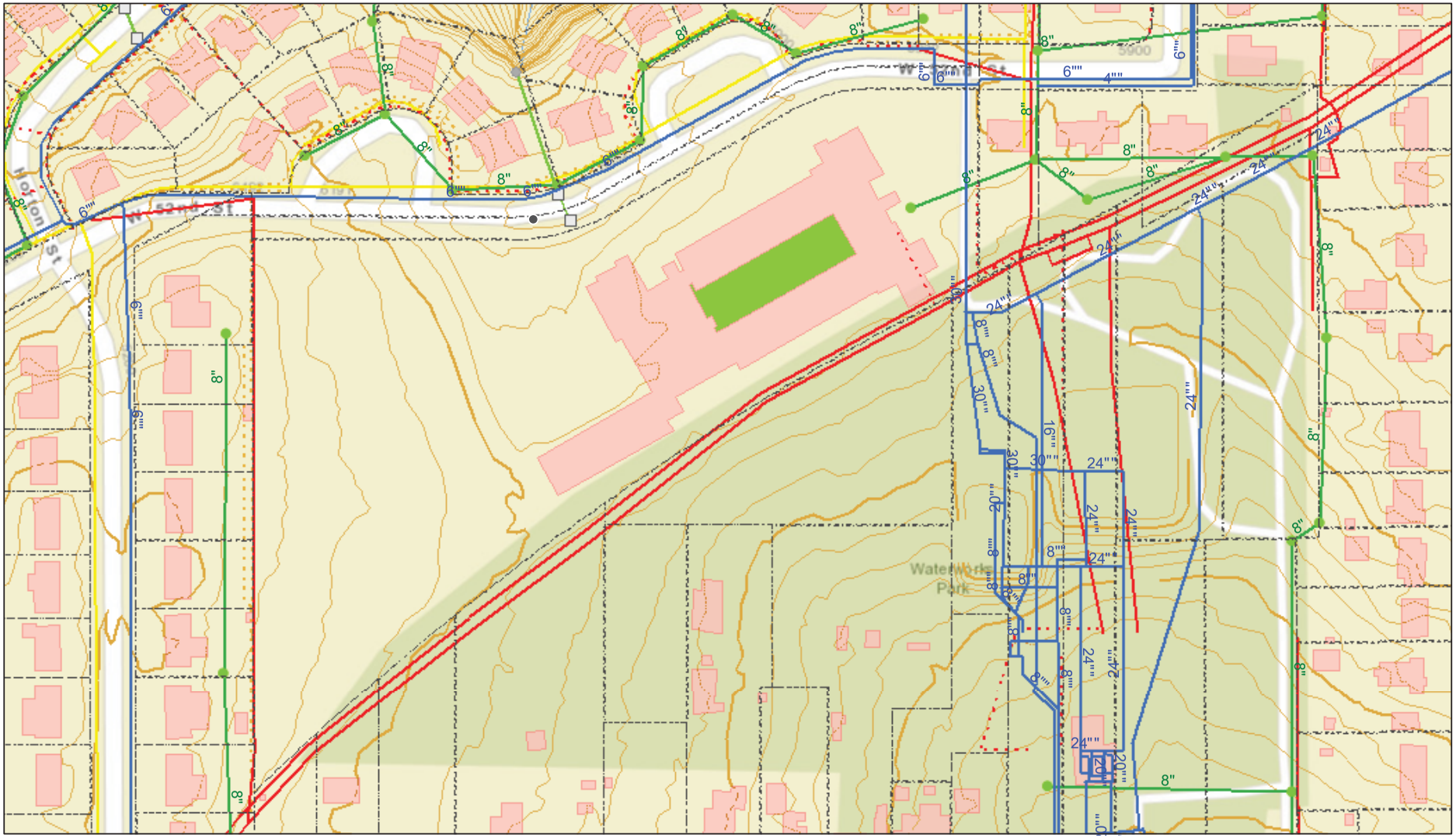
Existing Conditions

The existing school building and parking is situated on the eastern portion of the site. The existing playgrounds are located on the west and south sides of the existing building. There are existing grass ballfields along the western portion of the property. This area slopes moderately (2-3%) from the west property line towards the school and west parking lot. There are sidewalk connections along 52nd Street and up to the building. There are approximately 120 parking stalls located throughout the site. The west parking lot and hard playground is used for pickup of students at the end of the school day. There appears to be enough space for approximately 20 vehicles to queue onsite and not be on 52nd Street. The site appears to be reasonably well drained. There is an extra triangular piece of land owned by the school district along the south side of the building which is split off by some overhead electric lines.

Replacement School Assessment

If a replacement school was to be built on the same site while the existing school would remain open, it would need to be constructed along the west side of the property where the existing grass ballfields are located. This is a relatively flat piece of ground that would be easily developable for the new school building. New parking lot, drives, and playgrounds would not be able to be built until the existing school building and parking areas are demolished. With likely increasing the amount of impervious surface with a new school, stormwater detention and water quality facilities would need to be provided with the project. A Johnson County Wastewater sanitary main extension would likely be required for the project as the only existing main on the property is at the very east side. All other utilities are readily available around the proposed building location to serve the new building. The main concern with a replacement school on the existing site while the existing building remains open would be the phasing and timing of the demolition of the existing school building and the construction of the new parking lot.

Rushton Elementary Existing Utility Map



October 27, 2017

Johnson - Parcels

Johnson - Water Mains
- Main

Johnson - Sewer Manholes
- Active Manhole or Cleanout
- Johnson - Sewer Mains

Johnson - Stormwater Inlet
- Others
- Curb Inlet
- Johnson - Stormwater Pipe
- Johnson - OH Electric
- Johnson - UG Electric

Johnson - Telecom
- Underground
- Johnson - Gas Main

Johnson - 2 Foot Contour
- 2ft Contour
- Obscured

Johnson - 10 Foot Contour
- 10ft Contour
- Obscured

Johnson - Building Footprint
- Building
- Courtyard

Johnson - Streams & Ponds
- Stream

Johnson - Major Roads

1:2,257

0 0.0175 0.035 0.07 mi

0 0.02 0.04 0.08 km

Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

BHC Rhodes ArcGIS Online User
BHC Rhodes

ARCHITECTURAL NARRATIVE

Principal: Amy Simeonov | Mascot: Indians

S. F. 49,374 | 1 story except one HVAC room in Basement

1. Attendance according to the Principal: 360 kids
2. Building is open at 7:30 for staff. Class hours are from 8:00 to 3:00. They have before and after school programs with Johnson County Parks and Recreation.
3. Secure entry vestibule with buzz in hardware, display case, Fire Alarm Annunciator Panel and cabinet unit heater.
4. Administration offices has a reception desk (without an ADA lower height), security monitors on back wall,
5. Classrooms are only 709 sf. Which is smaller than the most recent new schools of 850 to 900 s.f.
6. Low ceilings throughout school corridors (approx. 7'-5" tall). There are steps in several locations. Some have a chair lift and some don't. A couple of the side entries are not ADA accessible.
7. No roof access. Maintenance staff has to use a loose ladder to get on the roof.
8. Security cameras don't cover all hallways.
9. Drinking fountains protrude into hallway clearances, against ADA guidelines.
10. Classrooms have 24 cubbies with more than one student sharing a cubby. Most of the high clerestories are covered up. Some of the exterior
11. Break out spaces in main corridors are not used a lot. They contain cubby storage and a kidney shaped table. Principal said there is a visibility concern because kids hide behind the tall cubbies. Kids using these spaces are distracted by people walking in corridors. Some have sinks in the hallway instead of the classroom. Window treatment (mini blinds) at all exterior windows, mostly closed.
12. Kitchen has new equipment, very clean. The space seems small. Not enough serving area. Principal said they have a very long lunch hour from 11:00 to 1:15 with 75 to 100 kids per lunch period. Seamless flooring and base.
13. Cafeteria has bad acoustics. Loud background HVAC noise. The space is shared with other groups such as Johnson County Parks and Recreation. Also the Band uses the space.
14. Gymnasium has wood floors, ceiling hung basketball goals, a stage, 3 steps with a chair lift.
15. Teacher's Lounge is adequate size. Sink and cabinets, vending machine, microwave, ceiling fans.
16. Basement below kitchen has HVAC equipment. Maintenance person said the basement floods when it rains.
17. Nurse's office does not have a shower. They need one to clean up messy kids. VCT flooring.
18. Social Worker office next to Nurses area with connecting door. It has exposed electrical panels and conduit on outside wall.
19. Art Room is also a storm shelter so there are no windows. Adequate size room with casework, stainless steel sinks, wood tables and ceiling fans.
20. Special Education resource room is also a storm shelter with no windows.
21. Library has more than adequate space. Study carrels, different book shelf heights, small square tables. Could use more natural light.
22. Floor materials are mostly VCT and rubber base in corridors and carpet in classrooms.
23. Kindergarten rooms are smaller than the district standard and have VCT.

24. West Classroom wing has very noisy overhead HVAC unit.

25. Courtyard is large and sunny with big trees and picnic tables and some landscaping with a butterfly garden. A lot of the building's roof scupper/ downspouts drain into the courtyard. The area drains take on a lot of water. The courtyard west concrete storm shelter wall is eroding away, rebar was exposed.

26. Playgrounds are adequate. 2 large pieces of play equipment. Hard and soft playground areas. Overhead powerlines run through the green play areas on south side of school.

27. Exterior of building is mostly brick.

MEP NARRATIVE

General Project Information

Owner:	Shawnee Mission School District
School Name:	Rushton Elementary School
Project Address 1:	6001 W 52nd St.
City: Mission	State: KS
	Floor Area: 49,374 sf
Building Stories:	1
Building Use Type:	Elementary School
Code Occupancy Group:	E Occupancy

Team Contact Information

Contact Name:	Keith Hammerschmidt
Contact Company:	MFEC, Inc.
Contact Phone:	913-322-1400
Contact Fax:	913-825-6697
Contact Email:	khammerschmidt@mfec.com

General

- **Significant portion of existing building included non-accessible ceiling space. Piping, Ductwork, Conduits and Data Cabling were installed visible on ceiling. Existing ceiling height was low enough that adding a drop accessible ceiling to conceal these systems is not feasible.**
- **Head clearance in kitchen area felt limited. Ductwork and piping were exposed in Kitchen and Serving Areas.**
- **Observations regarding code deficiencies are in reference to the current 2012 IBC code series adopted by local jurisdictions. Should local jurisdictions adopt codes newer than the 2012 IBC, additional updates may be required to building systems. Items of note include:**
  - 2015 IBC requires a full FEMA storm shelter which would require backup generator power, ventilation and restrooms.
  - 2015 IBC added requirements for carbon monoxide detection in select classrooms served by fuel fired equipment.
- **Basement Mechanical and Electrical room appeared that room had flooded in the past, data racks and electrical equipment were placed on blocks to get them above the floor level. Sump pump is installed to clear water, but appears to allow several inches of water to collect before being able to clear the floor.**
- **No permanent roof access was available at the building. A temporary ladder was required to be leaned against side of building to access equipment on roof. Other levels of roof above first level also required temporary ladders to access equipment.**

Mechanical

- **System Descriptions**
  - Majority of building is fed from a 2-pipe system. System is either heating or cooling, no simultaneous heating and cooling.
  - Central Chillers one of the chillers has been replaced within last 5 years the other doesn't seem to have been replaced.
  - Central Boilers serving building one of the boilers was replaced 10 years ago the other doesn't seem to have been replaced.
  - Rooftop unit serving Cafeteria. Noise from unit is excessive.
  - Rooftop units were either 10 years old or 20 years old. Typical life span of a rooftop unit is 15 years. Majority of rooftop unit's fin are damaged, which limits performance and efficiency.
  - The majority of the classrooms are being conditioned from unit ventilators fed from the 2-pipe system.
  - All classrooms were provided with ceiling fans. Some of them were operational, many were not.
  - Air Handler serving Newest Classroom wing often requires power reset and does not control humidity in the space to reasonable levels. Humidity has exceeded 60-70%.

- Split system air handler serving Music and Art classroom is almost 20 years old. All exterior refrigerant piping insulation needs to be replace.

Controls Systems

- Full BMS control system had been installed to serve all HVAC equipment.
- Not all classrooms were provided with dedicated thermostat controls. Several classrooms shared thermostats which can cause student and teacher discomfort.

- **At least one classroom had a portable dehumidifier in classroom and ceiling tiles were visibly sagging most likely due to high humidity levels.**
- **Additional Updates required to bring systems up to current codes:**
  - Add emergency boiler shutdown to existing boiler systems.
  - Provide minimum ventilation per current codes to each classroom.
  - Energy recovery will be required when minimum ventilation rates are brought up to code.
  - Provide minimum 10'-0" distance from exhaust to outside air intake.
- **Additional Updates required to bring systems up to current SMSD Standards:**
  - HVAC equipment efficiencies shall be increased.
  - 2-pipe hydronic system shall be eliminated.
  - Each classroom shall be provided with its own thermostat.

Plumbing Systems

- **Hot Water**
  - Hot water system is gas fired with multiple water heaters distributed around the building. Majority of water heaters are around 10 years old.
  - Hot water supply appeared to be sufficient though water piping may be under sized due to the low pressure being supplied from the hot water fixtures.
- **Water Supply**
  - There were at least two separate water service entrances to the building.
  - At multiple locations the water pressure was lacking. If the nearby water closets were flushed, the drinking fountain in the hallway would not have sufficient pressure to use the fixture.
- **Roof Drains**
  - Roof drains are drained to grade by down spouts and not piped to storm sewer. This causes drainage issues around the building.
- **Some restroom groups appeared to have been updated with new fixtures, wall and floor finishes and were in good condition.**
- **Nurse area does not have a shower – accessible or otherwise.**

- **Additional Updates required to bring systems up to current codes:**
  - Not all water coolers and plumbing fixtures are ADA compliant.
  - All handwashing sinks shall have thermostat mixing valve to limit maximum water hot water temperature to 110°F.
- **Additional Updates required to bring systems up to current SMSD Standards:**
  - Replace all faucets and flush valves with Toto sensor devices.
  - Add accessible roll in shower to Nurse Area.
  - Hot water shall be with-in 3 feet of every hand washing sink.
  - All classrooms shall be provided with a sink in the classroom.
  - Replace majority of water closets to wall mounted water closets.

Electrical Systems

- **Lighting**
  - Basement Electrical and Mechanical room illumination was not sufficient to see or maintain equipment.
  - Exterior illumination did not appear sufficient. There was no dedicated parking lot lighting. Wall mounted light fixtures were aged and lenses were significantly yellowed.
- **Power**
  - Playground South of building had overhead power lines running above play area. There was at least one pole with support wires accessible to students.
  - Overhead electrical service had been upgraded to an underground service to the building from the overhead utility lines.
  - Extension cords and power supplies were common in classrooms due to insufficient quantities and locations of electrical receptacles.
  - Power systems appeared to have available space and spare for future improvements, depending on scope. However, should a different HVAC system be installed, the electrical service would likely require an upgrade.
- **Special Systems (Fire Alarm, Intercom, Data Systems)**
  - Fire Alarm system was an analog system and would not support a new mass notification system. An entirely new fire alarm system and infrastructure would be required to bring the system up to current codes.
  - Intercom system appeared functional and sufficient.
  - Data systems appeared functional and sufficient. However, locations for data racks were in difficult to access storage spaces at times. Also, basement which is prone to flooding had data rack installed on blocks.
- **Additional Updates required to bring systems up to current codes:**

- Electrical
  - All receptacles to be replaced with tamper resistant devices.
  - Additional Exterior lighting to ensure sufficient illumination.
- Lighting – New lighting controls with occupancy sensors installed in entire building.
- Fire Alarm – Complete Replacement of all devices and control panels to support a mass notification system. Additional Smoke Detection may be required.
- Intercom system – None
- Data systems – None

- **Additional Updates required to bring systems up to current SMSD Standards:**
  - Electrical
    - Energy Metering added to all electrical equipment. May require replacement of main service panel.
    - Additional receptacles added throughout classrooms.
  - Lighting
    - New LED light fixtures installed in all areas, interior and exterior
    - Dimming Controls added in classrooms.
  - Fire Alarm – Complete Replacement of all devices and control panels to support a mass notification system. Additional Smoke Detection may be required.
  - Intercom system – New Valcom Intercom System
  - Data systems – Dedicated IT closets for Data Racks and data associated equipment.

ACI BOLAND ARCHITECTS

SHAWNEE MISSION SCHOOL DISTRICT