Huckabee

KILLEEN INDEPENDENT SCHOOL DISTRICT

CLIFTON PARK / BELLAIRE ELEMENTARY SCHOOL CONSOLIDATION

DECEMBER 11, 2018

NOT FOR REGULATORY APPROVAL, PERMITTING, OR CONSTRUCTION - JASON ANDRUS TX # 19417

SCHEMATIC DESIGN PRESENTATION

TABLE OF CONTENTS

KILLEEN INDEPENDENT SCHOOL DISTRICT
NEW ELEMENTARY

Superintendent

Dr. John Craft

District Board Members

Corbett Lawler	Board President
Minerva Trujillo	Board Vice President
Susan Jones	Board Secretary
Shelley Wells	Board Member
JoAnn Purser	Board Member
Marvin Rainwater	Board Member
Brett Williams	Board Member

District Leadership

David Manley	Assistant Superintendent for Instructional Leadership Services
Diana Miller	Assistant Superintendent Curriculum & Instruction
Sharon Davis	Interim Assistant Superintendent Curriculum & Instruction
Megan Bradley	Chief Financial Officer
Kirk Thomas	Special Assistant to Deputy Superintendent
Adam Rich	Executive Director for Facilities Services
Jo-Lynette Crayton	Executive Director for Elementary Leadership
Steve Hudson	Executive Director for Elementary Leadership
Abdul Subhani	Interim Executive Director for Technology Services
Janice Peronto	Executive Director for Special Education
Troy Kittell	Director of Construction and Facilities Planning
Martha Blount	Facilities Planning and Evaluation Specialist
John Dye	Director School Safety
George Ybarra	Director Purchasing Services
Edward Thomas	Director Transportation Services
John Hocking	Manager Telecommunications
Jeff Heckathorn	Coordinator PEIMS and Demographer

Project Design Team

Huckabee - Austin, Texas

LaShae Stinson Principal	Jason Andrus, AIA Associate Principal	Michael Hall, AIA Design Director
Mike Vermeeren, AIA Planning	Brian Cotsworth, AIA Project Architect	Bryan Acomb, AIA Project Architect
Pierre Zoungrana Architectural Associate	Dan Zou, AIA Architect	Darrick Jahn Interior Designer
Kim Costa Interior Designer		

Civil Engineering & Surveying

Kimley-Horn

Austin, Texas

Technology/Security

Crux Solutions

Fort Worth, Texas

MEP Engineering

IEG

Westlake, Texas

Geotechnical

Langerman Foster

Waco, Texas

Structural Engineering

Huckabee

Houston, Texas

Foodservice

FDP

San Antonio, Texas

Project Introduction

Clifton Park/Bellaire ES is a consolidation replacement school that will serve the feeder boundaries for two existing schools. The project will reside on the current Nolan Middle School site. The new facility will accommodate a student population of 1,050 students and provide spaces and elements that are consistent with KISD's curriculum standards and those provided in Elementary School #35. The follow spaces are included in the program:

- Classrooms for Pre-Kindergarten through 5th grades
- Special Education/ Resource Rooms
- Library/ Media Center
- Computer Labs
- Science Rooms
- Music Rooms
- Gym/ Activity Room
- Cafeteria with Platform

.

Site and Topography

The site is approximately 19.8 acres bounded to the south by Jasper Road, to the west by Florence Road, to the north by Lydia Dr, and the east by South 2nd Street. The site does not reside in the FEMA floodplain. The existing Nolan Middle School facility will remain functional through 2020 and the building will remain intact thereafter with the potential for an alternate use by KISD.

Access and Site Circulation

Bus access will be via the existing drive that runs behind Nolan Middle School and queue at the back of the school. Special Education buses will have a separate drive that will enter and exit off of Lydia Drive. Parent access will be via South 2nd Street with queuing at the front of the school. This arrangement provides the important separation of buses and cars accessing the site. Maintenance access will be off of Lydia Drive into the back parking area.

Drainage

Stormwater will be captured and stored temporarily in a detention pond at the southeast area of the site.

Storm Water Best Management Practices (BMPs)

The City of Killeen development code requires that storm water BMPs, such as the protection of natural areas, multi-use detention ponds, etc., be implemented based on the type and extent of development. This will be analyzed during the preliminary site design to determine the BMPs that will be required.

Pavement

We anticipate that pavement for the onsite drives and parking lots will be concrete rather than asphalt, based on Killeen ISD's preference. We understand that the geotechnical study that will provide pavement thickness and subgrade preparation recommendations is underway.

Building Design

The current prototype design is a two-story configuration. Site modifications will be necessary to conform to the new site for access and topography. The parking requirements will match ES #35 with a planned total of 208 spaces. A significant number of walkers are anticipated for this campus, so the pedestrian circulation is controlled to maintain safety and security without impacting convenience. The play areas are located on the north side of the school flanking either side of the main entry and separated by age groups. Landscaping will be low maintenance and drought tolerant.

At this time, the floor plans are a near carbon copy of ES #35 and the only minor change made by KISD is adding cross-corridor doors for lockdown options. The building will utilize either metal stud back up or insulated concrete form (ICF) construction, with masonry veneer and low-slope roof assemblies. Exterior windows will be shaded as needed to reduce glare and enhance energy savings. The interior material palette consists of solid vinyl tile (LVT) predominately throughout, excepting certain rooms/areas such as administration and the library which will be carpeted, with porcelain wall tile in circulation areas, and acoustic ceiling tile in classrooms and other occupied spaces. In developing the material palette, we adhered to the District's desire to specify materials that are both attractive and durable for ease of maintenance and cost-effectiveness.

Structural Design

A geotechnical investigation is in progress, so the foundation system cannot be determined. However, if soil conditions are favorable, KISD prefers a slab-on-grade foundation system with drilled straight shaft piers. Columns will support a second floor of steel beams with steel decking and concrete topping. The roof will likely consist of steel beams and joists with a metal deck

Mechanical Design
The HVAC system will be designed to provide cooling and heating to maintain space temperatures of 72 °F in cooling mode, 70 °F in heating mode, and space relative humidity no greater than 50%. The building's HVAC equipment will be controlled via a building automation system. Ductless split systems will provide heating and cooling for IDF and MDF closets. Option 1: Ground Loop Heat Pumps: Classroom units served by water loop heat pump served by a dedicated loop pump, and coupled with a ground loop heat exchanger. Outside air will be treated via an electronic air cleaning device set to a maximum CO2 Threshold, as well as demand control ventilation. Large volume spaces are to be served by multi-stage water loop heat pumps with economizers and demand control ventilation; also coupled with the ground heat exchanger. Option 2: Packaged Rooftop Units: Classroom units served packaged direct expansion rooftop equipment with economizers and CO2 sensor for demand control ventilation. Large volume spaces are to be served by multi-stage packaged rooftop units with economizers and demand control ventilation. Roof Mounted Exhaust fans will serve group and private restrooms.

Fire Protection Design
An automatic wet sprinkler system complete with flow and tamper alarms, meeting local and state requirements will be provided. Provision of such a system in additions and renovations should be reviewed by Killeen ISD before commencing design, since access by means of fire lanes and hydrants is the preferred solution.

Plumbing Design
New water closets will be floor mounted. Lavatories will be wall mount tempered water metered type. Electric water coolers with bottle fillers. Condensate for RTUs will be routed from the roof below the roof deck then collected and disposed of in an approved receptor.

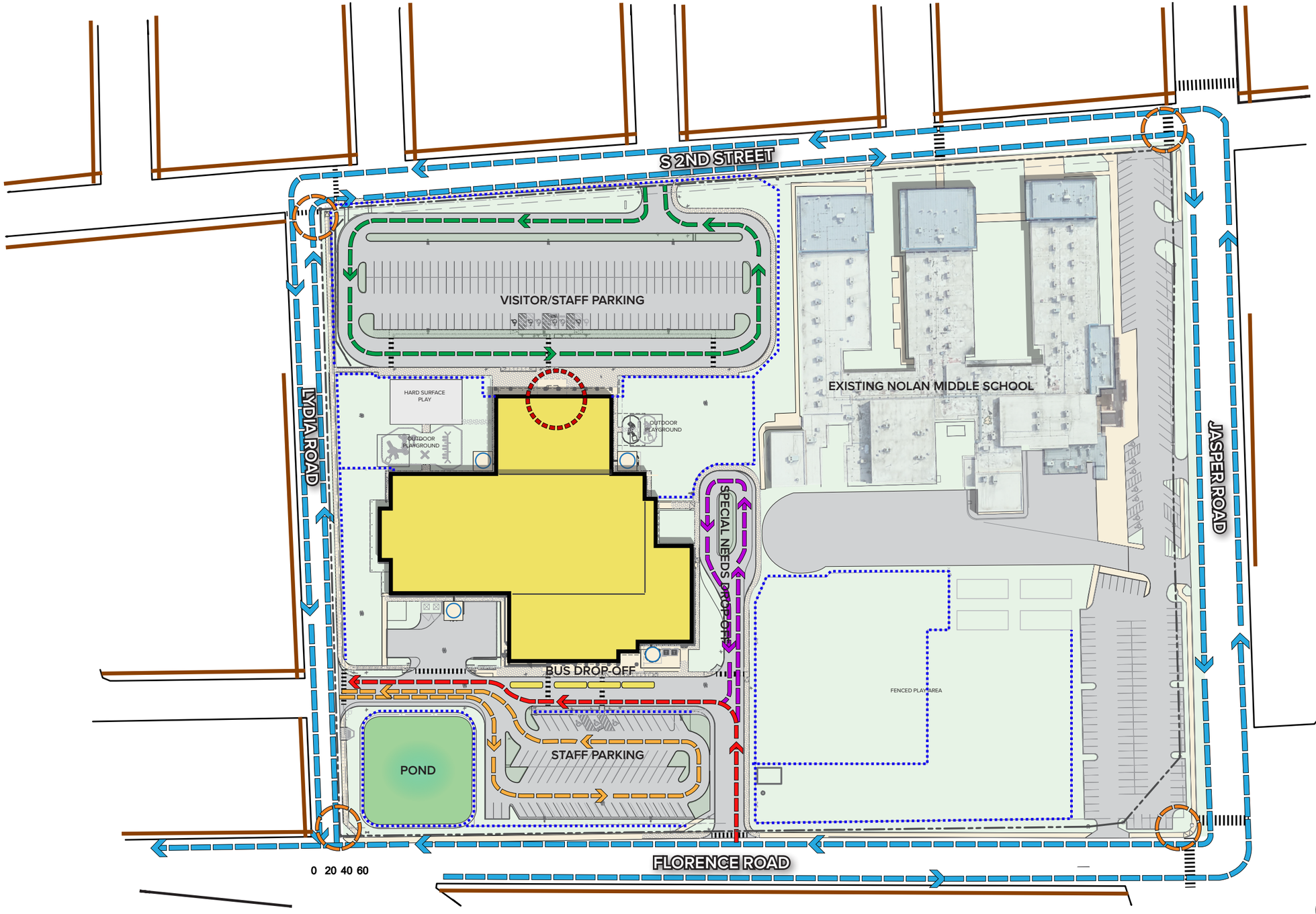
Electrical Design
New electrical service will be provided to a new main switch with 480/3-phase power. Typical Classrooms will be provided general receptacles located throughout the room, as well as a teacher's workstation (coordinated with KISD, Huckabee, IEG, and Crux) to provide data and power connections for the teacher's desk, computer, and other similar devices. All dedicated computer receptacles will have an isolated ground. Auxiliary Power systems will be provided for, and will be coordinated with all parties noted above. All interior and exterior lighting will be served with high efficiency LED luminaires. Lighting controls will allow dimming and daylight harvesting where required. Emergency lighting will be provided by normal fixtures powered from multiple centrally located emergency lighting inverters.

Fire Alarm Design
Provide new 'Silent Knight" addressable fire alarm system to cover the entire facility as required by code and meeting intelligibility requirements of 2015 IBC. Provide ceiling mounted devices, and fire alarm pull stations at all exits. Provide complete corridor smoke coverage.

Technology
Provide complete data and telephone cable plant including all horizontal cable, patch cable, face plate, fiber cabling between closets and equipment racks. Provide district standard audio-equipment for all classrooms and learning spaces. Provide complete sound reinforcement systems for all spaces as required. Provide complete intercom communication system per district standard. Provide emergency responder radio system and repeater. Provide complete district standard security system including building access control and video surveillance.

Air Barrier Design
Provide fluid applied air barrier system at all exterior surfaces of ICF, masonry backup walls, and exterior wall sheathing. Provide air barrier system that is continuous with roofing, perimeter sealants at window openings, and waterproofing. Coordinate air barrier system at open joint cladding systems with manufacturer accessories designed for long term exposure to ultraviolet radiation. Coordinate preparation of all substrates to comply with manufacturer requirements. Membrane shall be synthetic, fire resistant, vapor permeable fluid applied membrane with minimum 40 dry mil thickness and rated for high temperature applications where installed directly under metal cladding. Transitions and Flashings at Openings to be fiber reinforced fluid applied flashings (not self adhered rubberized asphalt membrane flashings). Sealants shall be liquid mastic and sealant materials provided by membrane manufacturer - provide as required by manufacturer at all angle changes in substrate, and at joints and fasteners in sheathing or ICF. Reinforcing is likely needed at block joints for proper performance as the building moves under loading. We recommend specifying a fluid applied air barrier system similar to Carlisle Barritech VP, that will adhere to the Styrofoam surface of the ICF.

Roof Design
Low Slope Roofs shall consist of 80 mil PVC-KEE single ply roof membrane, fully adhered. The substrate shall be unfaced gypsum roofing coverboard, ½" thickness, adhered in low rise adhesive to insulation in ribbons and around edges of each board. Rigid polyisocyanurate insulation board to be installed in layers of maximum two inches (2") thickness, to achieve a minimum LTTR thermal resistance rating of 25ci in accordance with 2015 IECC Table C402.1.3. First layer of insulation board shall be fastened to the metal deck, subsequent layers adhered in low rise adhesive. Tapered insulation shall be provided where required to provide ¼" per foot finished roof slope at flat decks, crickets around drains, and at the upslope sides of equipment curbs. Width of crickets shall be no less than one-third the length of crickets in accordance with National Roofing Contractors' Association (NRCA) Roofing Manual recommendations. Tapered insulation sumps shall be provided at primary roof drains (minimum 4'x4' size) and primary scuppers (minimum 4' x 2' size) to provide ½" per foot slope.
For Performance Criteria for Roofs, Wind Uplift shall be calculated with appropriate load factors in accordance with ASCE 7-10 for field, perimeter, and corner zones. Provide perimeter edges, copings, and other terminations of roofing with assemblies tested in compliance with ANSI/SPRI ES-1 to have resistances greater than calculated wind loads. Provide Two-Year Contractor's Warranty for materials and installation. Provide Roof Manufacturer's 30-Year No Dollar Limit (NDL) System Warranty. The Guarantee shall be transferable. Provide coverage for hail damage in specified warranty.



LEGEND

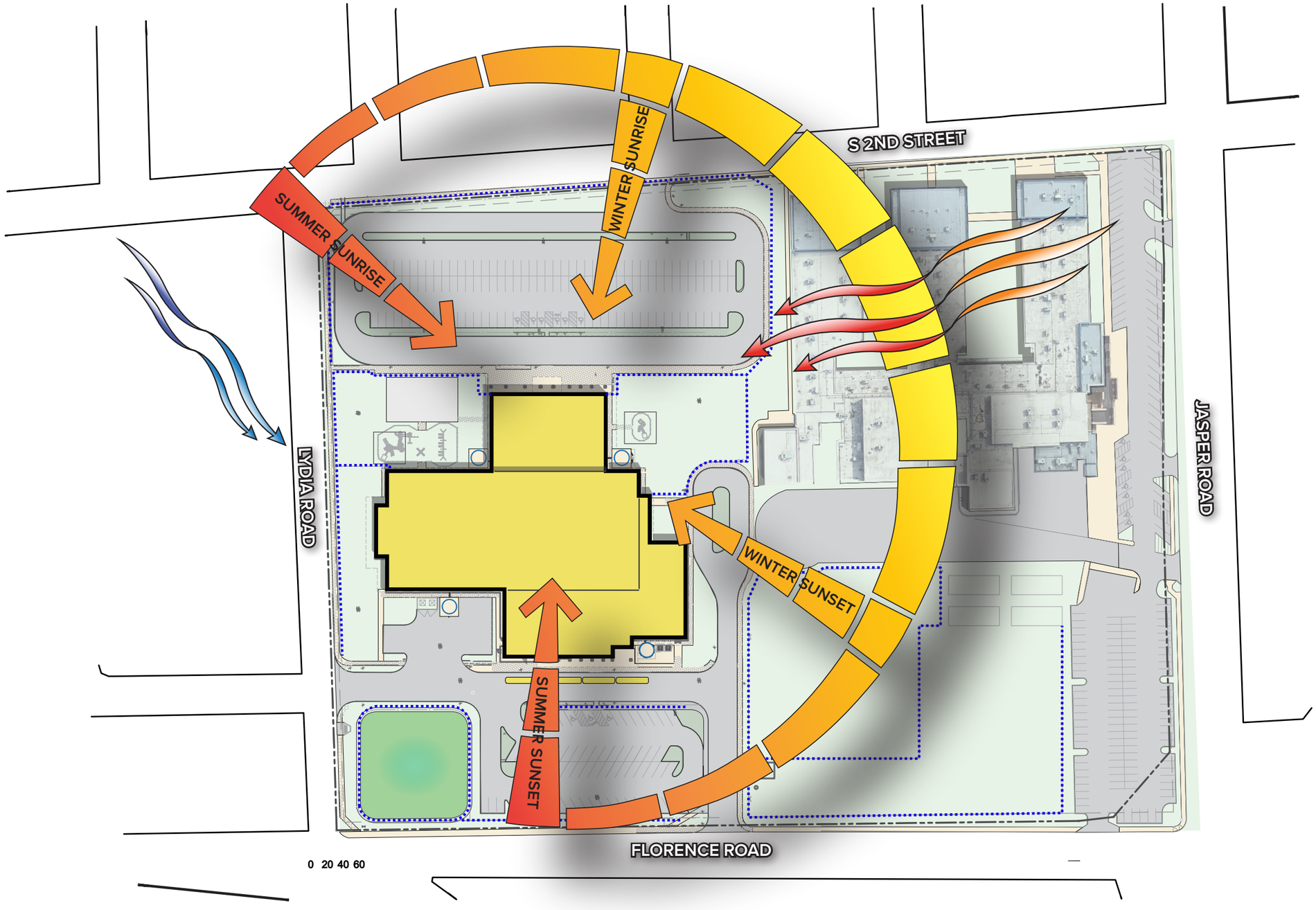
SITE

- NEW ELEMENTARY
- ENTRY

CIRCULATION

- PARENT ROUTE
- STAFF ROUTE
- SPED ROUTE
- SURROUNDING CIRCULATION
- BUS ROUTE
- SIDE WALK
- SITE FENCING
- NEIGHBORHOOD SIDEWALKS
- PEDESTRIAN ENTRY

VEHICULAR QUEUING (HIGH DEMAND)		
	On Site	S. 2nd ST
CP/B	68	33



LEGEND

SITE

BUILDINGS

EXISTING BUILDINGS

WIND

WINTER WINDS

SUMMER WINDS

SUN

SUN PATH

ACRES	
CP/B	19.8

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KILLEEN CLIFTON PARK / BELLAIRE ES SCHEMATIC DESIGN

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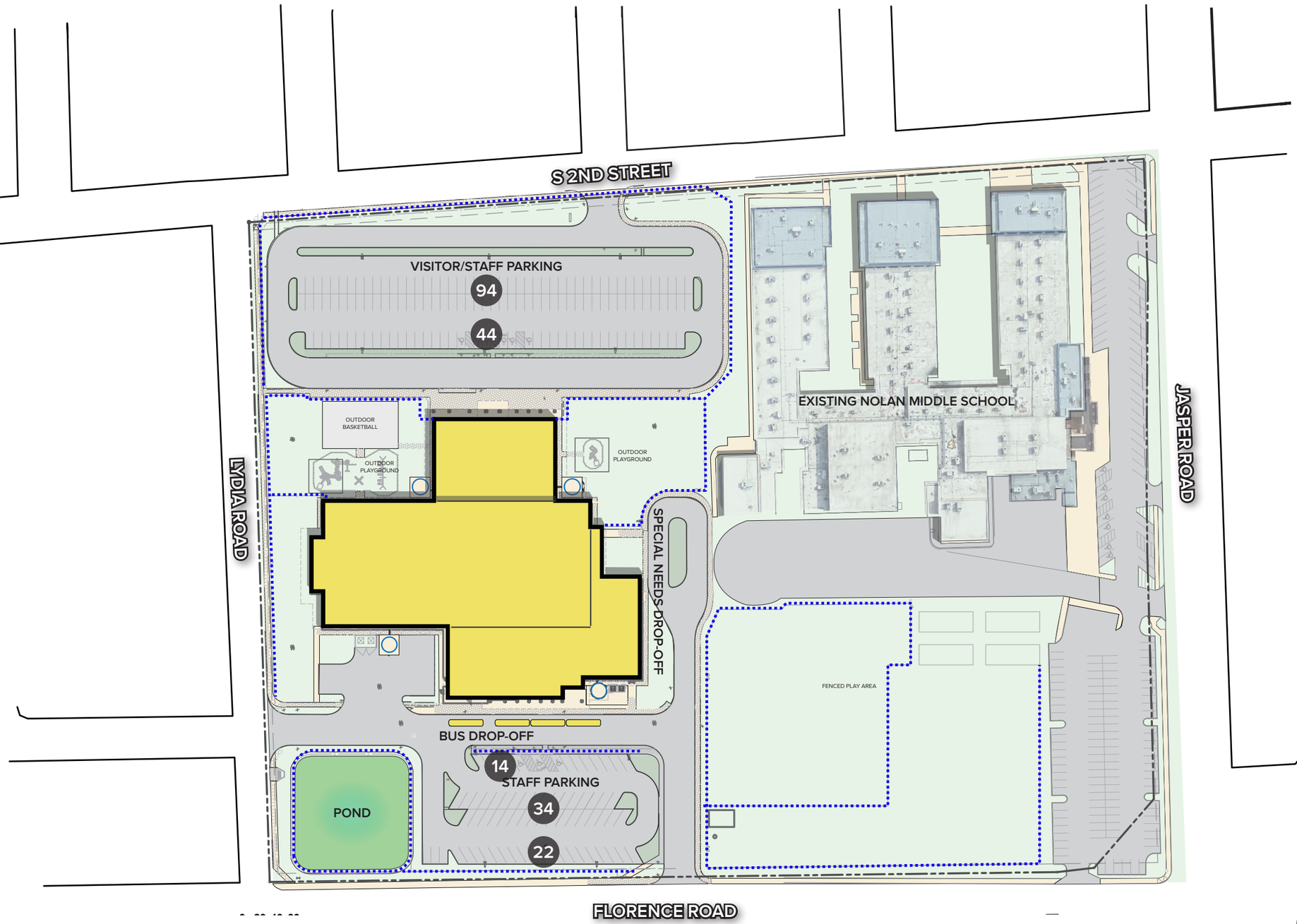

LEGEND

SITE

NEW ELEMENTARY

SIDE WALK

SITE FENCING

CISTERNS

VEHICULAR QUEUING (HIGH DEMAND)		
	On Site	S. 2nd ST
CP/B	68	33

PARKING COUNT		
	ES #35	CB/B
TOTAL	208	192

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KILLEEN CLIFTON PARK / BELLAIRE ES SCHEMATIC DESIGN

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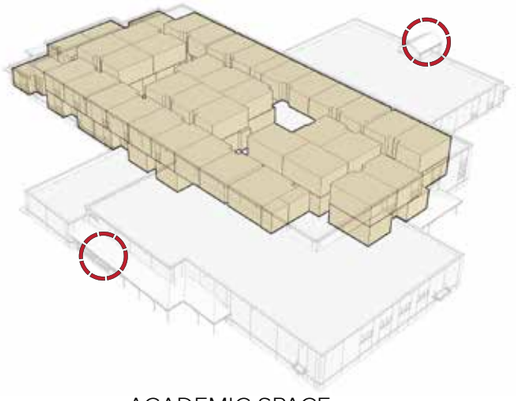
New Elementary School 1,050 Student Capacity *Based on a capacity of 22 students per classroom*	Consolidated Elementary School		
	Clifton Park / Bellaire ES Consolidation		
ACADEMICS			
PRE-KINDERGARTEN	6	850	5,100
KINDERGARTEN	9	850	7,650
FIRST GRADE	9	850	7,650
SECOND GRADE	7	750	5,250
THIRD GRADE	8	750	6,000
FOURTH GRADE	8	750	6,000
FIFTH GRADE	8	750	6,000
RESTROOMS IN EACH PRE-K – 1ST CLASSROOMS	24	50	1,200
COMMON AREA RESTROOMS	4	900	3,600
TALENTED & GIFTED CLASSROOM	1	750	750
Area Sub Total			**49,100**
SPECIAL USE CLASSROOMS			
SCIENCE	2	1,000	2,000
MUSIC	3	950	2,850
COMPUTER LAB	2	950	1,900
RESOURCE ROOM	1	757	757
SPECIAL RESOURCE ROOM	1	606	606
LIFE SKILLS (including shared tlt./laundry)	2	1,125	1,895
Area Sub Total			**10,008**
LIBRARY			
STACK AREA	1	3,881	3,881
READING AREA - 44 students			0
KIVA - 22 students			0
CIRCULATION DESK AREA			0
COMPUTER AREA - 12 workstations			0
OFFICE	1	258	258
WORK ROOM	1	224	224
AV STORAGE	1	287	287
Area Sub Total			**4,650**

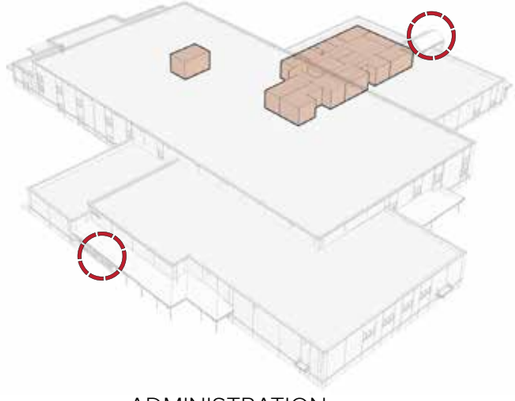
New Elementary School 1,050 Student Capacity *Based on a capacity of 22 students per classroom*	Consolidated Elementary School		
	Clifton Park / Bellaire ES Consolidation		
DINING			
CAFETORIUM - SEATING FOR 400	1	5,790	5,790
PLATFORM	1	1,195	1,195
FOOD SERVICES	1	3,726	3,726
SERVING LINE	3		0
FOOD PREPARATION AREA	1		0
SCULLERY	1		0
MANAGER OFFICE (MGR. & LUNCHROOM SEC)	1		0
DRY FOOD STORAGE	1		0
WALK-IN REFRIGERATOR	1		0
WALK-IN FREEZER	1		0
JANITORIAL	1		0
TOILET W/LOCKERS	1		0
Area Sub Total			**10,711**

New Elementary School 1,050 Student Capacity *Based on a capacity of 22 students per classroom*	Consolidated Elementary School		
	Clifton Park / Bellaire ES Consolidation		
PHYSICAL EDUCATION			
ACTIVITY CENTER/GYM	1	4,034	4,034
COACHES OFFICE (new space for 4 coaches)	1	410	410
PUBLIC TOILETS	2	85	170
STORAGE	1	344	344
Area Sub Total			**4,958**
ADMINISTRATION			
RECEPTION	1	532	532
PRINCIPAL OFFICE	1	256	256
ASSISTANT-PRINCIPAL	3	180	540
WAITING	1	138	138
SECRETARIAL AREA (new space for 4 FTE)	1	462	462
INSTRUCTIONAL SPECIALIST OFFICE	1	173	173
COUNSELOR OFFICE	2	172	344
COUNSELOR OFFICE/CONFERENCE	1	350	350
TECHNOLOGIST OFFICE	1	450	450
CENTRAL WORKROOM	1	392	392
VAULT - RECORD STORAGE	1	194	194
BOOK ROOM	1	580	580
CLINIC (2 BEDS w/TOILET)	1	300	300
TEACHER WORKROOM w/TOILET	3	400	1,200
CONFERENCE ROOM	1	299	299
TESTING STORAGE	1	170	170
STORAGE	1	68	68
OFFICE	1	188	188
ISS	1	264	264
RESTROOM	2	55	110
ITINERANT OFFICE (for 4)	1	400	400
Area Sub Total			**7,410**

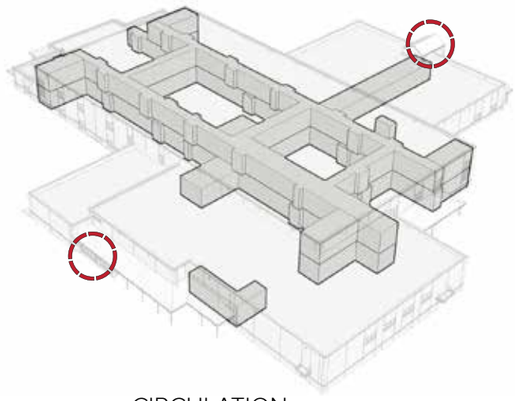
New Elementary School 1,050 Student Capacity *Based on a capacity of 22 students per classroom*	Consolidated Elementary School		
	Clifton Park / Bellaire ES Consolidation		
CUSTODIAL			
CENTRAL SUPPLY STORAGE/WORKROOM	1	441	441
CART STORAGE WORKROOMS	4	44	176
GROUNDS EQUIPMENT STORAGE	1	922	922
Area Sub Total			**1,539**
Total Net Square Footage			**88,376**
PLUS NON-ASSIGNABLE SPACES			
Walls, Storage, Electrical, Corridors, IDF			
Area Sub Total			**36,384**
Total Estimated Building Gross Area			**124,760**



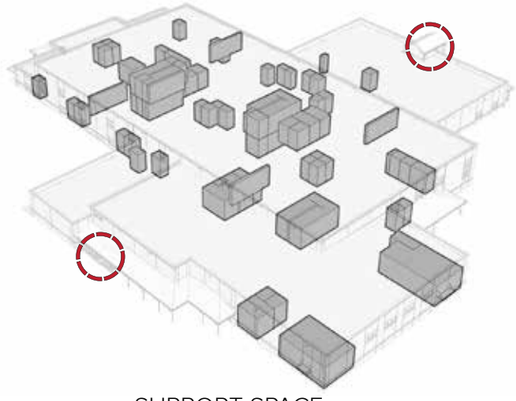
ACADEMIC SPACE



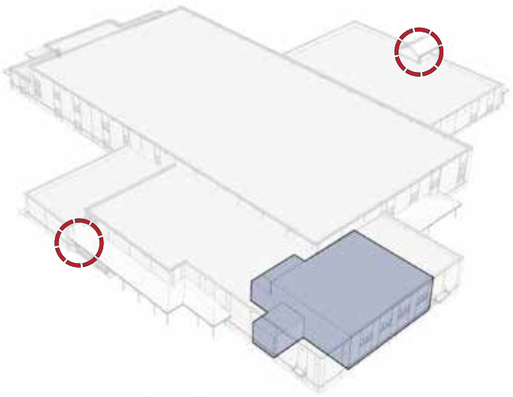
ADMINISTRATION



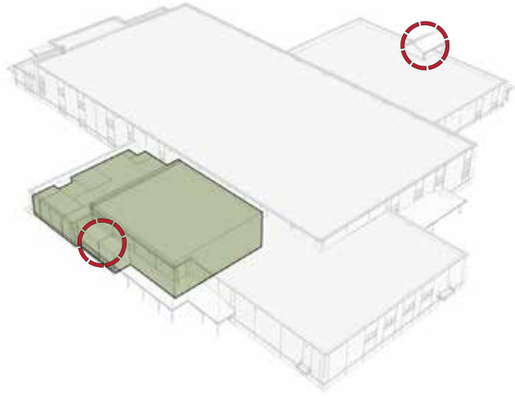
CIRCULATION



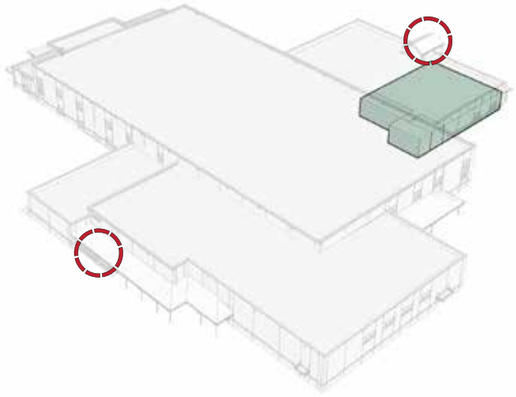
SUPPORT SPACE



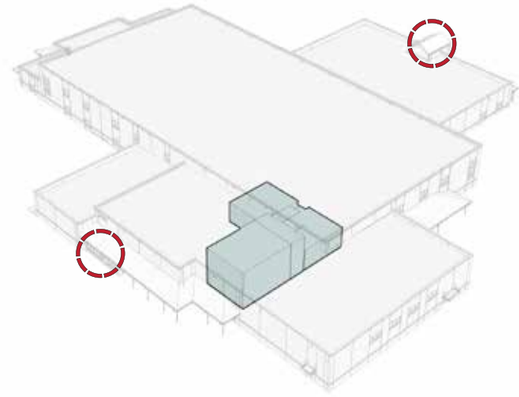
ATHLETICS



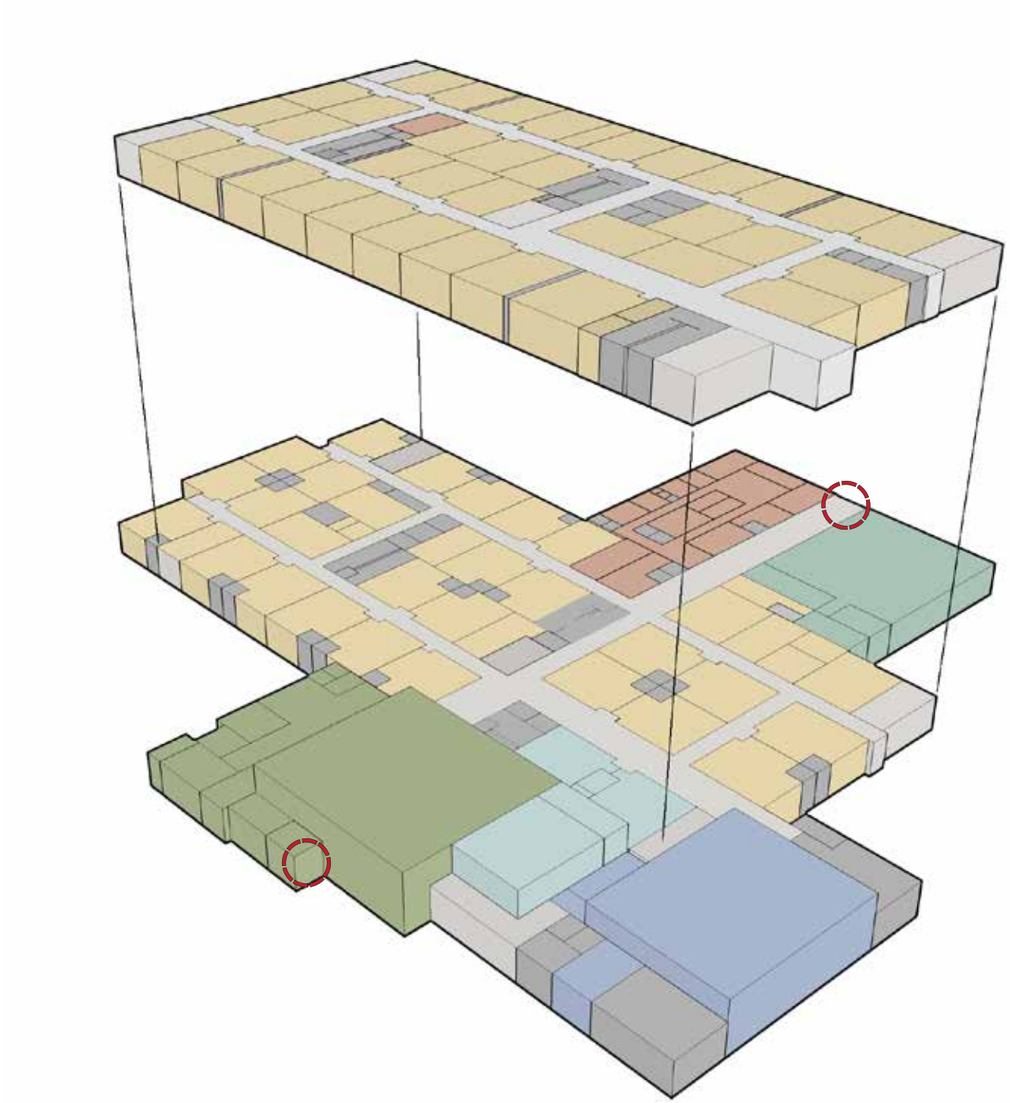
DINING



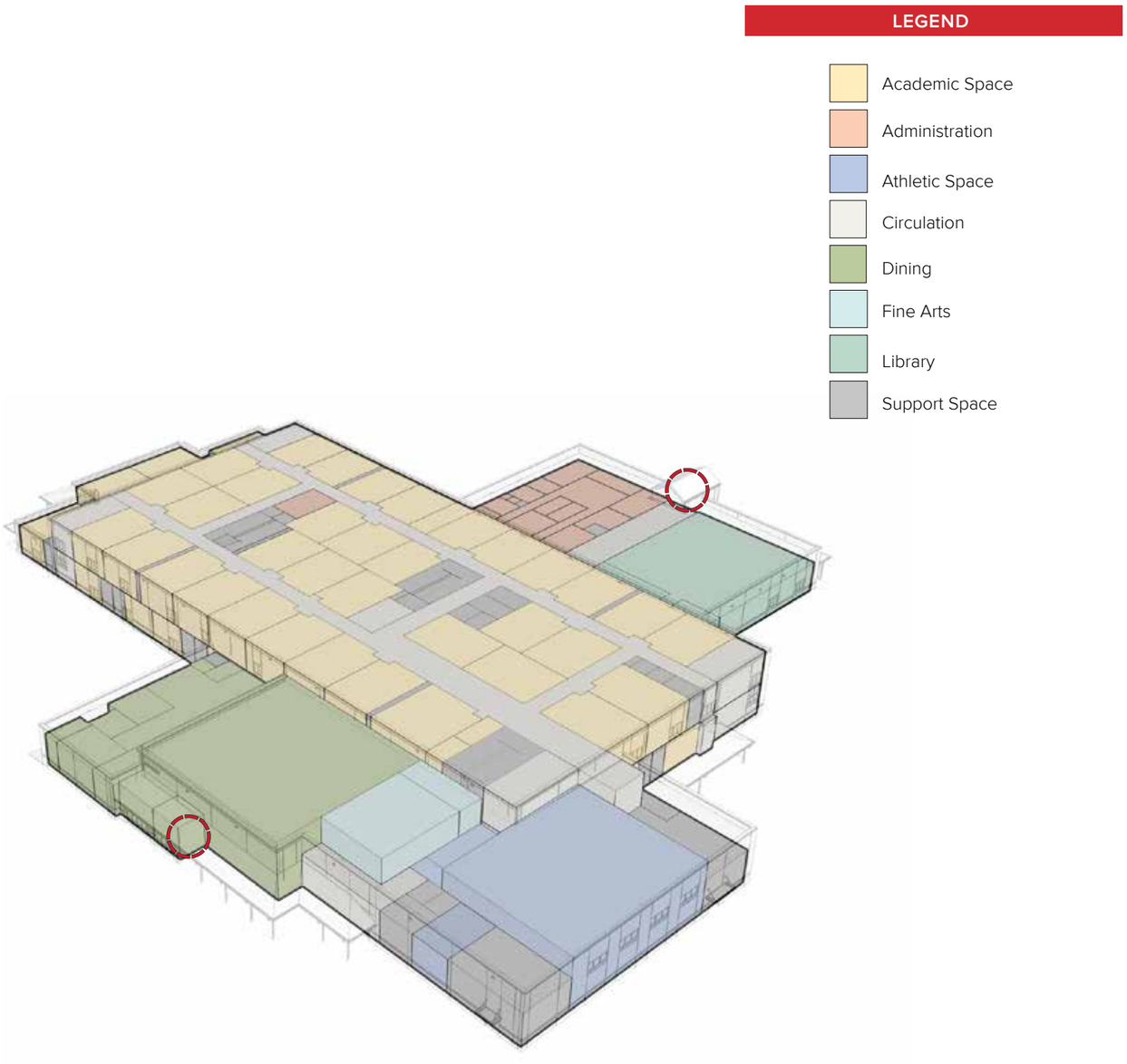
LIBRARY



FINE ARTS



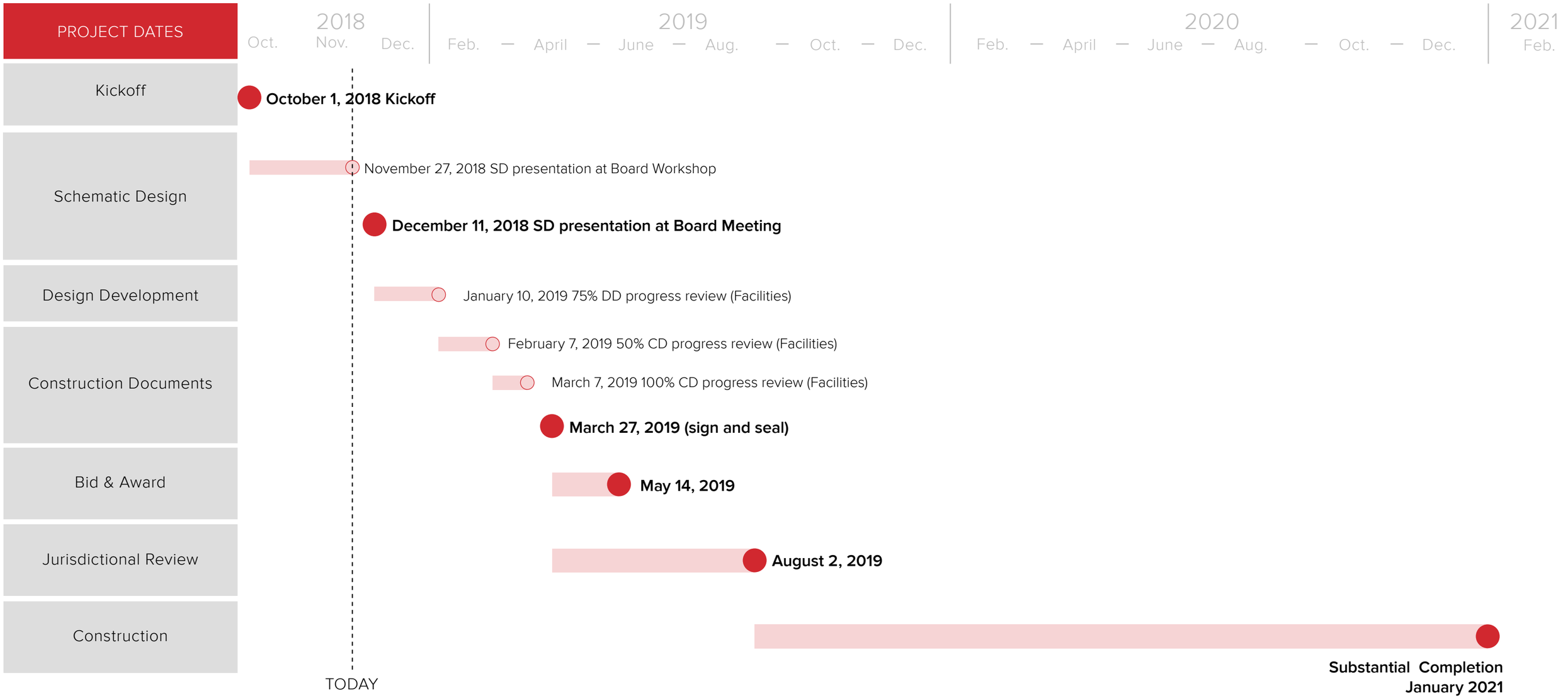
EXPANDED ISOMETRIC PROGRAM DIAGRAM



COMBINED 3D PROGRAM DIAGRAM


A NEW ELEMENTARY SCHOOL


L10


PROJECT DATES
2018
Oct.
Nov.
Dec.
2019
Feb.
April
June
Aug.
Oct.
Dec.
2020
Feb.
April
June
Aug.
Oct.
Dec.
2021
Feb.
Kickoff
Schematic Design
Design Development
Construction Documents
Bid & Award
Jurisdictional Review
Construction
TODAY
October 1, 2018 Kickoff
November 27, 2018 SD presentation at Board Workshop
December 11, 2018 SD presentation at Board Meeting
January 10, 2019 75% DD progress review (Facilities)
February 7, 2019 50% CD progress review (Facilities)
March 7, 2019 100% CD progress review (Facilities)
March 27, 2019 (sign and seal)
May 14, 2019
August 2, 2019
Substantial Completion
January 2021

MORE THAN ARCHITECTS