



HAYS CONSOLIDATED INDEPENDENT SCHOOL DISTRICT
NEW ELEMENTARY SCHOOL #17
FEBRUARY 20, 2024

CONSTRUCTION DOCUMENTS PRESENTATION





HAYS CONSOLIDATED INDEPENDENT SCHOOL DISTRICT
NEW ELEMENTARY SCHOOL #17

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HAYS CONSOLIDATED INDEPENDENT SCHOOL DISTRICT NEW ELEMENTARY SCHOOL

District Leadership

Dr. Eric Wright	Superintendent
Marivel Sedillo	Chief Academic Officer
Max Cleaver	Chief Operations Officer
Tim Savoy	Chief Communication Officer
Dianne Borreson	Chief Technology Officer
Jeri Skrocki	Chief Safety & Security Officer
Randall Rou	Chief Financial Officer
Nathan Wensowitch	Director of Construction & Planning
Austin Daywood	Project Manager
Vic Arevalo	Project Manager
Dr. David MacRoberts	Principal at Sunfield Elementary School

District Board Members

Will McManus	Board President
Raul Vela, Jr.	Vice President
Courtney Runkle	Secretary
Johnny Flores	Board Member
Esperanza Orosco	Board Member
Vanessa Petrea	Board Member
Byron Severance	Board Member

Project Design Team

Jason Andrus, AIA
Principal, Huckabee
Casey Smith, AIA
Project Architect, Huckabee
Michael Hall, AIA
Design Director, Huckabee
Darrick Jahn, RID
Interior Designer Director, Huckabee
Mark da Cunha
Architectural Associate, Huckabee
Hannah Earle, RID
Interior Designer, Huckabee

Civil Engineering & Surveying

Kimley-Horn

MEP Engineering

Hendrix Consulting Engineers

Structural Engineering

Huckabee

Technology/Security

True North

Geotechnical

Alpha Testing, LLC

Food Service

Foodservice Design Professionals

Roofing Consultant

WJE

A SPECIAL THANKS TO THE FACILITIES AND BOARD OVER-SIGHT COMMITTEE, CHAIR JESSICA BEDWELL, SECRETARY ALAN KELLER, AND ALL OF THE ESTEEMED MEMBERS WHO HAVE PROVIDED INVALUABLE INPUT INTO THE DESIGN OF THIS PROJECT





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New Elementary School #17

Introduction

The New Elementary School #17 is a new stand-alone facility designed to serve 900 students in grades Pre-Kindergarten through 5th grade. Grade level alignment, the program of spaces, and the project budget were discussed and developed during pre-bond planning. Huckabee worked with HCISD’s building committee to confirm and refine the program and design intent. The current design is consistent with planning efforts and subsequent school tours and design charrettes.

Site and Topography Map

The site is approximately 11.09 acres, located on currently vacant land near Gristmill Road and Granary Drive in Kyle, TX. The site is bound by Gristmill Rd. to the East and Proposed I drive to the west, all land currently being developed into single-family residential housing. The site has previously been platted and will require re platting concurrently with the surrounding single-family development. The site slopes to the north and south due to a high point in the center of the site. The site is generally flat with minimal elevation change averaging less than 0.5% slope throughout the site.

Access and Site Circulation

The proposed site will have 2 entrances, one from Gristmill Road and one from a proposed drive on the north side of the site. The entrance off Gristmill Road is intended to be used for bus drop-off/pick-up while the other entrance is intended to be used for parent drop-off/pick-up. Visitor parking is proposed along Gristmill Rd, while staff parking is proposed on I drive.

Pavement

In accordance with HCISD preferences, all on-site drives and parking lots will be rigid concrete paving. A geotechnical report will be provided for proper recommendations of pavement and subgrade thickness.

Utilities

There is an existing water main located adjacent to the site, along Granary Drive. Additionally, an existing sanitary sewer main is located along Granary Drive. With respect to this site, this line flows from the northeast to the southwest. At this time, there are no electric lines identified on the survey. Electric along with additional water and sanitary sewer mains will be installed concurrently as the incoming single-family homes adjacent to the site are built out.

There are no existing gas lines in proximity to the site and will be installed with the new development.

Drainage

There is existing drainage infrastructure located along Granary Drive. This includes curb inlets and an underground storm line. This storm line connects to a perpendicular storm line that appears to run along Gristmill Road, carrying storm runoff from the southwest to the northeast. The line intercepts a manhole at the intersection of Gristmill Road and Granary Drive, continuing to flow to the east. Similar to utilities, further development of the single family lots surrounding the site is anticipated to include additional storm lines. Additionally, the single-family development will provide an offsite detention pond to detain for the proposed school.

Building Design

The compact building plan is designed with the two-story high library space as its hub. The two-story classroom wing surrounds and looks onto this central library space. The library’s learning stair provides opportunities for presentations and collaboration and creates a strong visual and physical connection to the second floor. Flexible instructional spaces are located between grade-level wings, presenting the opportunity for enhanced learning opportunities. The classroom wing configuration also maximizes opportunities for natural light.

A one-story wing consisting of the gym, cafeteria and Music room is on the east side of the floor plan. The gym, cafeteria and restrooms can be isolated from the remainder of the building for after-hours events and can be accessed from both the front and rear parking lots. The Music room is located directly behind the stage.

Students arriving on foot, by bike, or by car will enter next to the gym. Students arriving by bus will enter through the main front entrance. Visitors will enter through a secure vestibule and be directed through the office. Covered walkways are provided at both front and rear entrances to shelter students. The outdoor play slab can be accessed from the gym or classroom wing. The exact placement and configuration of outdoor spaces will be refined after the topographic survey is complete.

The exterior of the building will be primarily sandstone, with metal panel accents at upper areas and brick accents at the windows. Interior finishes are anticipated to be polished concrete, with

carpet tile and porcelain tile in select areas. Wall finishes in the corridors will be a durable finish wainscot metal panel.

Structure

Descriptive Specifications

- Concrete
Normal weight Portland cement concrete with 5” to 9” slump, depending on the application.
Minimum 28-day compressive strength:

Drilled Piers 3,000 psi
Grade Beams, Pilasters, and Pier Caps 3,000 psi
Slab over Crawl Space 4,000 psi
Elevated Slab 4,000 psi
Insulated Concrete Formed (ICF) Walls 4,000 psi

- Reinforcing Steel
Deformed Bars (typical) ASTM A615, Grade 60

- Structural Steel
Wide-Flange Shapes ASTM A992
Steel Angles, Channels, Plates ASTM A36
Steel Tubes (HSS) ASTM A500, GR B (46 ksi)
Field Bolted Connections ASTM A325 Bolts
Welding E70XX per AWS D1.1

- Steel Composite Deck
2” deep, 20 GA, 12” rib pattern; ASTM A653, G60 Galv. Finish.

- Steel Roof Deck
 1. 1.5” deep, 20 GA, G90 Galvanized finish where to receive cementitious fireproofing.
 2. 1.5” deep, 20 GA, Ungalvanized with coat of manufacturer’s standard primer paint over cleaned and phosphatized substrate where no cementitious fireproofing applied.
 3. 3 1/2” deep, 16 GA, Long Span Metal Deck.





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Concrete Masonry Units (CMU)
Masonry Wall Compressive Strength (f'm) 1750 psi
Mortar ASTM C270, Type N
Masonry Unit ASTM C90, 1900 psi net area compressive strength
Grout ASTM C476, f'm 2000 psi min.

Design Analysis

- Codes and Standards

The following codes and standards will be used for the structural design of the project:

International Building Code (IBC), 2018.

American Society of Civil Engineers (ASCE) 7, Minimum Design Loads for Buildings and Other Structures.

American Concrete Institute (ACI) 318, Building Code Requirements for Structural Concrete.

American Institute of Steel Construction (AISC) Specification for Structural Steel Buildings, AISC 360.

Concrete Masonry: Building Code Requirements for Concrete Masonry Structures, American Concrete Institute, (ACI) 530.

Design Loads

- Dead Loads

Design dead loads for the structural frame will include self-weight of the structural elements and the following superimposed dead loads:

Ceiling and Mechanical at Roof 10 psf
Roofing and Rigid Insulation 15 psf
Sprinkler Allowance 5 psf
Flooring Allowance 5 psf

- Live Loads

Based on the anticipated functions to be contained in the building, the following superimposed live

loads will be utilized in the design of the structural frame:

Ground Level public areas, corridors, lobbies	100 psf
Elevated Levels public areas, corridors, lobbies	80 psf
Mechanical rooms	150 psf
Storage (minimum)	125 psf
Roof (unreducible)	20 psf

- Wind Loads

Wind Loads will be determined per ASCE 7 using the following anticipated parameters:

Wind Speed	(3-sec gust) 120 MPH
Exposure Category	C
Enclosed Structure	

- Seismic Loads

Seismic loads will be determined per ASCE 7-16 using the following anticipated parameters:

Site Class	C
Seismic Design Category	A
Seismic Importance Factor	1.25

Building Superstructure

The superstructure of the building must be adequate to resist the applied design loading, satisfy the performance criteria for such items as deflection and vibration control, and accommodate the architectural design.

- Foundation

The expected foundation construction type is a structurally suspended slab over crawl space. It is anticipated that the ground floor will consist of an 8" formed structural slab with #6 bars top and bottom at 1'-0" on center. The void depth below the slab is estimated to be 30" minimum. Perimeter grade beams are anticipated to be 24" wide x 36" deep with 30 plf of reinforcing. Grade beams will be isolated from the subgrade with a 12" void space, and soil retainers on the exterior side to prevent soil from entering the crawl space. A mud slab below the structural slab and

perimeter grade beams will also be provided.

As discussed previously at the Geotechnical Review Conference, an additional 3" topping slab may be provided at the ground floor at the discretion of the owner. The 3" topping slab shall be placed at all locations where exposed concrete floors are present. It is anticipated that the ground floor will consist of a 3" topping slab with #3 bars at 12" on center over an 8" formed structural slab with #7 bars top and bottom at 6" on center.

Typical Roof Structure

The expected roof construction type is steel framing with steel and a metal deck with intermediate non-composite steel beams bearing on steel columns, as needed to accommodate span requirements. We will additionally include a conversion table to convert steel beams to open web steel joists at the Contractor's option for cost and schedule purposes.

Areas with second floor framing will have composite steel beams spaced at approximately 6' on-centersupporting a 2VLI 20 gauge composite steel deck with 5 total inches of concrete (3 inches above the flutes). The concrete deck will be reinforced with #3 bars at 12" on-center.

Lateral Stability

Lateral stability will likely be provided by braced frames, moment frames, insulated concrete formed (ICF) shear walls and CMU shear walls.





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Mechanical

The HVAC system shall be designed with energy efficient quality equipment, ease of maintenance and equipment accessibility in mind. The system will be designed to control the interior temperature and humidity to uniform comfort conditions. Large spaces may be zoned separately by exposure and space function. This will allow for controlling a specific area (zone) by temperature and run time to provide maximum energy efficiency.

Mechanical system shall consist of DX high-efficiency gas fired rooftop units and makeup air (MAU) units to pre-condition the outside air for humidity and temperature control. Larger areas will be conditioned using DX high-efficiency multi-stage rooftop units (RTU's). The space will be zones using separate units for exterior and interior to provide for better space comfort and control. These units will also be provided with hot gas reheat for humidity control as space type dictates. Classrooms shall have a separate RTU unit and thermostat for individual control. All rooftop units will be gas heat. All MDF and IDF data rooms will have separate air conditioning systems for 24/7 control.

Plumbing

A new underground domestic cold-water service will be provided to the building, supplied from a site water main. Where the domestic water service enters the building a shut-off valve will be provided. Throughout the building, domestic cold water will be routed to plumbing fixtures. The piping system will be sized based on the Plumbing Code requirements. The piping system will be insulated to prevent condensation from occurring on the exterior of the pipe. All of roof drainage is planned to be handled by collector and downspouts by Architect. There are no internal roof drains or associated piping.

Fire Protection Systems

The building will be provided with an automatic fire protection sprinkler system. A fire water service supply will be extended into the building. Dry type sprinkler systems will be provided for areas where the sprinkler heads and piping will be exposed to freezing condition external to the buildings. The dry type sprinkler systems will include air compressor, dry pipe valve, air maintenance device, etc. The wet and dry sprinkler systems will be hydraulically designed in accordance with the requirements of all agencies having jurisdiction. System will include piping, sprinklers, wet and dry alarm valve assemblies, tamper switches, flow switches, valves,

drains, inspector test, test drains, fire department connections, sprinkler heads, roof manifolds, etc.

Electrical

Power will be brought to the building from the local electric utility company. The service to the building will be 480Y/277V, 3-phase, 4-wire on the secondary of the building pad mount transformer. MSB is located in Main Electric Room. Lighting will be served at 277V and motors larger than 1/2 horsepower will be served at 480V, 3-phase. Energy-efficient, low voltage, indoor, dry-type transformers that are DOE 2016 compliant will be used inside the building electrical rooms to transform down to 208Y/120V for convenience receptacles and other small loads. LED lighting will be utilized throughout the building. All offices and classrooms shall be provided with dual technology occupancy sensors, and switches for a dimming lighting control system. Lighting control schemes will be further discussed with the Owner as the design progresses.

Technology & Security

The plan includes a main entrance and security vestibule that lead to a central hallway of the building from which one can go several directions to reach the cafeteria and gym wing or the two story classroom wings of the building. There are also outdoor play areas that could potentially be used as outdoor learning environments as well. In general, the technology scope is anticipated to follow the latest District technology standards that were established during the design of both the Lehman HS CTE and Hays HS CTE projects.

Structured Data Cabling

Structured data cabling includes data outlets for computers, wireless access points, phone instruments, data projectors, flat panel displays, and video surveillance cameras. Horizontal data cabling will be comprised of Category 6a unshielded twisted pair (UTP) copper for wireless access points and Category 6 UTP copper for all other devices.

The network rooms (MDF/IDF) will be placed around the building such that no data drop is more than 295 feet from the nearest network room. The MDF will be centrally located in the building with several IDFs located around the building. One IDF will serve the cafeteria and the classroom wings will have four IDFs, 2 on each floor and stacked on top of each other.





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Hays CISD Elementary School #17 Program Summary				
Program				
Category	# of Spaces	Area per space (S.F.)	Total Area (S.F.)	Remarks
ADMINISTRATION				PRINCIPAL/AP, COUNSELOR, WORK ROOM, VAULT, CONFERENCE, NURSE, PEIMS, BREAKROOM, BOOK ROOM
PRINCIPAL'S OFFICE	1	270	270	
SECRETARY	1	145	145	
BREAK AREA	1	225	225	
ASSISTANT PRINCIPAL	2	165	330	
GENERAL OFFICE	1	495	495	
WORKROOM	1	305	305	
RECORDS/STO (VAULT)	1	80	80	
COUNSELOR	2	150	300	
CONFERENCE	1	340	340	
TESTING STORAGE	1	130	130	
NURSE'S OFFICE	1	655	655	
NURSE'S TOILET	1	90	90	
ELECT. & IDF	2	185	370	
STAFF RESTROOM	2	75	150	
PEIMS	1	135	135	
VESTIBULE	1	365	365	
GUEST RESTROOM	1	80	80	
BREAKROOM	1	145	145	
BOOK ROOM	1	245	245	
COUNSELOR	1	295	295	
OFFICE	1	145	145	
RESOURCE CENTER				LIBRARY, MAKER SPACE, WORKROOM, GREEN ROOM
LIBRARY	1	3,520	3,520	
LIBRARIAN'S OFFICE	1	410	410	
AV & SOFTWARE STO.		W/ OFFICE		
MAKER SPACE	1	780	780	
WORKROOM		W/ OFFICE		
GREEN ROOM	1	325	325	

STUDENT SERVICES				DINING, STAGE, KITCHEN, PREP SERVICE, DRY STORAGE, COLD STORAGE, OFFICE, CUSTODIAN, LOCKERS, STAGE STORAGE
DINING	1	4,540	4,540	
STAGE/RAMP	1	1,300	1,300	
DINING STORAGE	1	340	340	
KITCHEN/PREP SERVE/WASH	1	1,910	1,910	
DRY STORAGE	1	195	195	
COLD STORAGE	1	225	225	
OFFICE	1	80	80	
STUDENT RESTROOMS	2	345	690	
STAFF RESTROOM	1	55	55	
MECHANICAL/ELECT.	1	300	300	
CUSTODIAN	1	340	340	
LOCKERS	1	60	60	
UTILITY	1	75	75	
STAGE STORAGE	1	170	170	
SPECIAL CLASSROOMS				COMPUTER LAB, LIFE SKILLS, CONTENT MASTERY, INTERVENTION, SCIENCE LAB, RESOURCE, ARD CONFERENCE, OT/PT,SPED, SENSORY, SPEECH
COMPUTER LAB	2	950	1,900	
LIFE SKILLS	1	1,155	1,155	
LIFE SKILLS RESTROOM	1	105	105	
INTERVENTION (MATH & READING)	2	405	810	
CONTENT MASTERY	1	355	355	
SCIENCE LAB	1	995	995	
SCIENCE PREP	1	255	255	
RESOURCE	1	725	725	
OUTDOOR CLASSROOM	1	2,155	2,155	
LIFE SKILLS KITCHEN	1	220	220	
LIFE SKILLS STORAGE	1	225	225	
LIFE SKILLS LAUNDRY	1	105	105	
LIFE EQUIPMENT STO.	1	120	120	
LIFE SKILLS DESCALATION	2	100	200	
ARD CONFERENCE	1	270	270	
OT/PT	1	605	605	
SPED	1	605	605	
SENSORY	1	400	400	
SPED RESTROOM	1	150	150	
SPEECH	1	250	250	
INSTRUCTIONAL COACH	1	375	375	

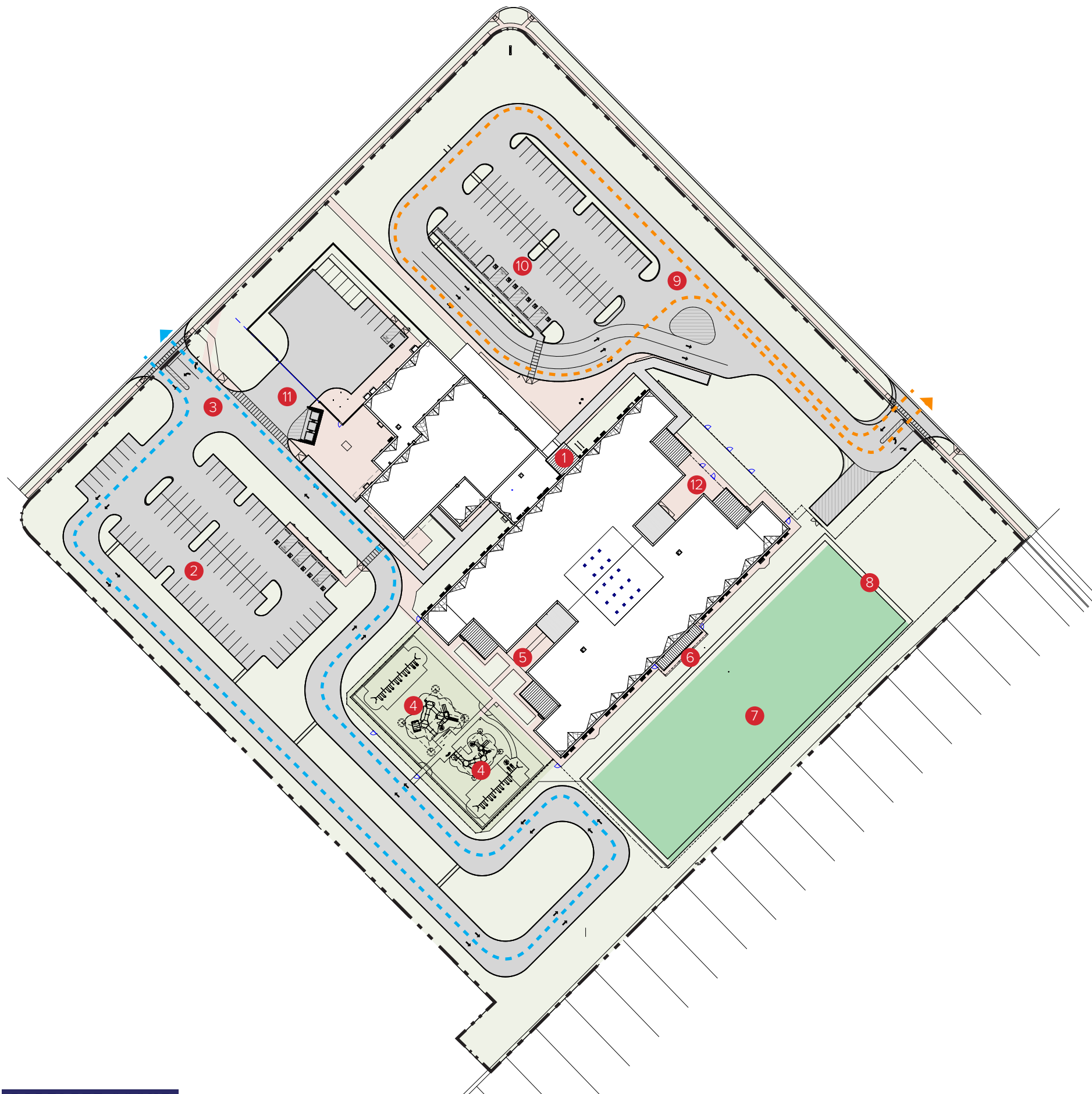




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ACADEMICS				PRE-K, FIRST GRADE - FIFTH GRADE, STUDENT RESTROOMS, ELECTRICAL
PRE-K	5	800	4,000	
KINDERGARTEN	7	800	5,600	
FIRST GRADE	7	800	5,600	
SECOND GRADE	7	760	5,320	
THIRD GRADE	7	760	5,320	
FOURTH GRADE	7	760	5,320	
FIFTH GRADE	7	760	5,320	
FACULTY WORKROOM	1	345	345	
FACULTY RESTROOM	7	75	525	
STORAGE	5	110	550	
MDF	1	160	160	
IDF	3	65	195	
ELECTRICAL	3	65	195	
ELEVATOR	1	60	60	
CUSTODIAN	2	110	220	
CUSTODIAN OFFICE	1	490	490	
STUDENT RESTROOMS	6	205	1,230	
PRE-K RESTROOMS	3	80	240	
KINDERGARTEN RESTROOMS	4	80	320	
1ST GRADE RESTROOMS	4	80	320	
TEACHER PLANNING	7	240	1,680	
COLLABORATION SPACE	6	1,165	6,990	
RISER ROOM	1	80	80	
COLLABORATION LANDING	1	335	335	
MUSIC/ART				MUSIC, MUSIC STORAGE, ART ROOM, KILN, ENSEMBLE
MUSIC	1	1,040	1,040	
MUSIC STORAGE	1	160	160	
ART ROOM	1	965	965	
ART KILN	1	115	115	
ART CLASSROOM STO.	1	255	255	
ENSEMBLE	1	150	150	
PHYSICAL EDUCATION				GYM, PE OFFICE, PE STORAGE
GYM	1	4,785	4,785	
PE OFFICE	1	150	150	
PE STORAGE	1	325	325	
CIRCULATION				CIRCULATION, WALLS & CHASES
CIRCULATION			26,661	
TOTAL PROGRAM			117,611	





SITE PLAN KEY

- 1 MAIN ENTRY
- 2 VISITOR/STAFF PARKING
- 3 PARENT DRIVE
- 4 PLAY AREA
- 5 OUTDOOR LEARNING
- 6 ART PATIO
- 7 PLAY FIELD
- 8 WALKING TRAIL
- 9 BUS LOOP
- 10 STAFF PARKING
- 11 SERVICE DRIVE
- 12 SPECIAL NEEDS / LIFE SKILLS PLAYGROUND

LINE TYPE LEGEND

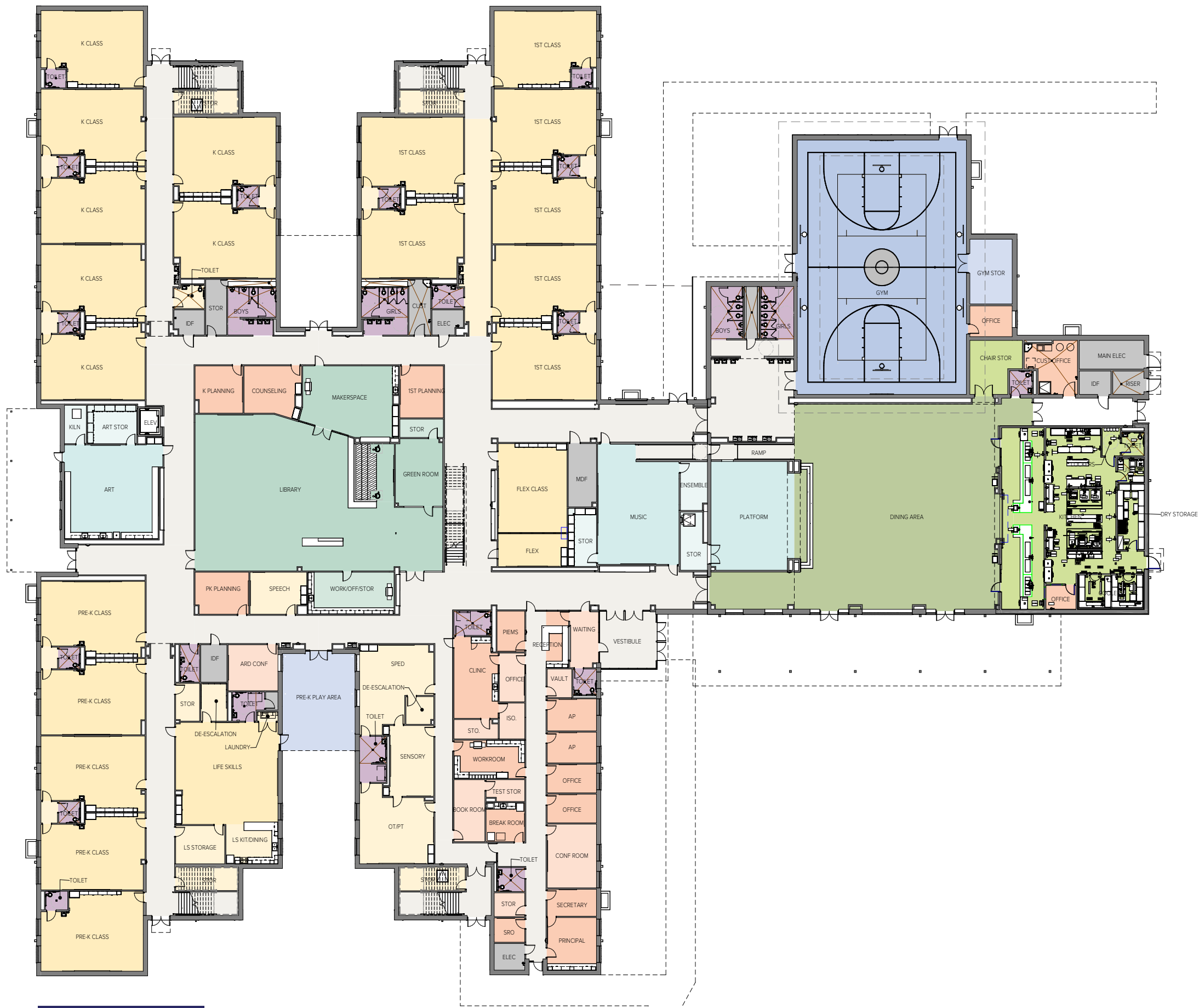
- PARENT DRIVE
- BUS DRIVE
- PROPERTY LINE

0 100



SITE PLAN

04



COLOR LEGEND

- Administration
- Academic
- Library
- Dining
- Athletics
- Fine Arts
- Circulation
- Restroom
- Support Spaces



FLOOR PLAN - LEVEL 1

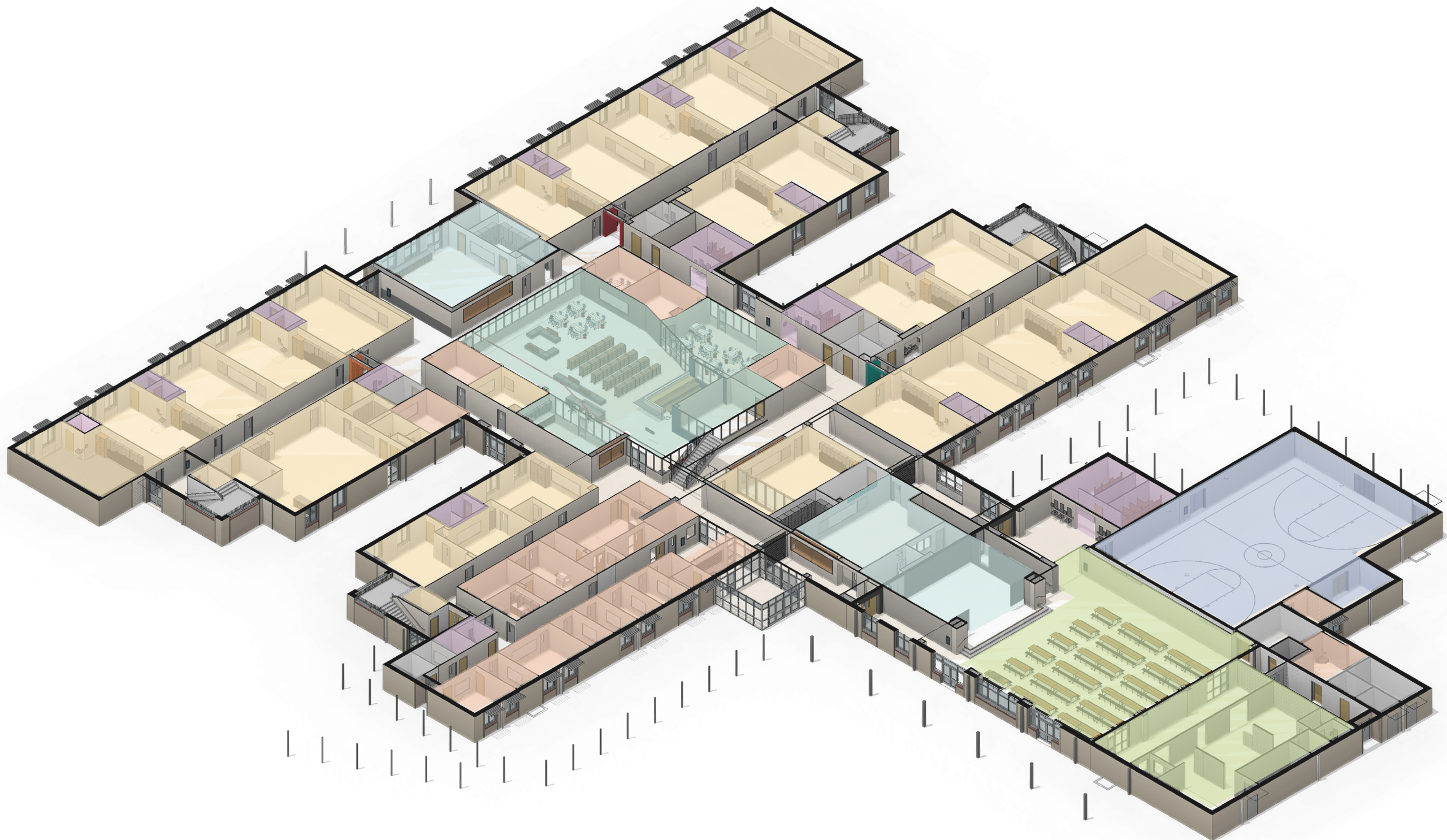
COLOR LEGEND

- Administration
- Academic
- Circulation
- Restroom
- Support Spaces



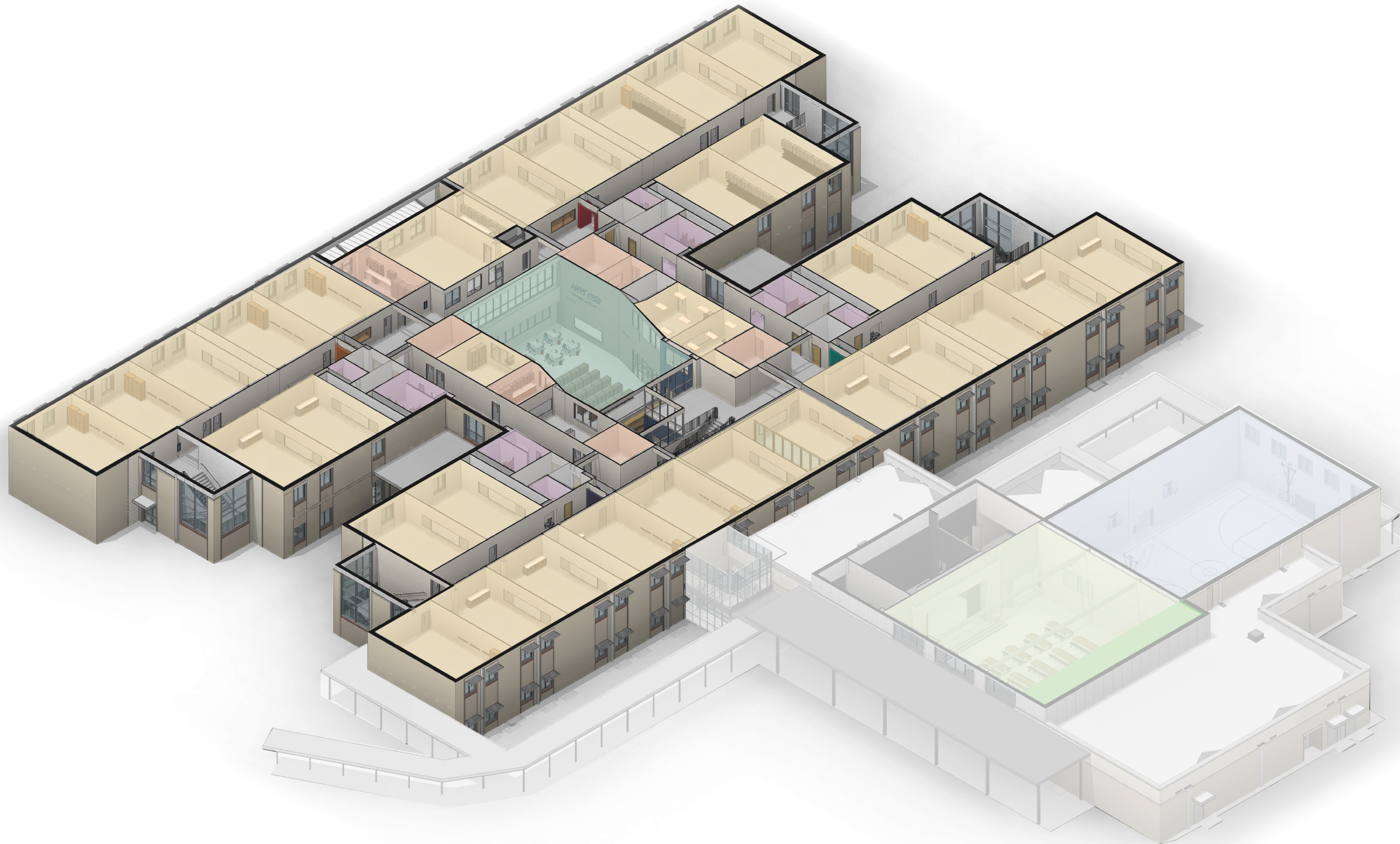
COLOR LEGEND

- Administration
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COLOR LEGEND


- Administration
- Academic
- Circulation
- Restroom
- Support Spaces









CLASSROOM / CORRIDORS



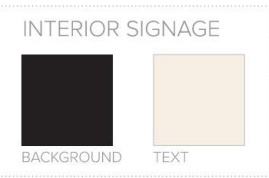
WOOD DOOR & LEARNING STAIR WOOD FINISH




CLASSROOM CASEWORK
BASE CABINET
PL01




CLASSROOM CASEWORK
UPPER CABINET
PL02



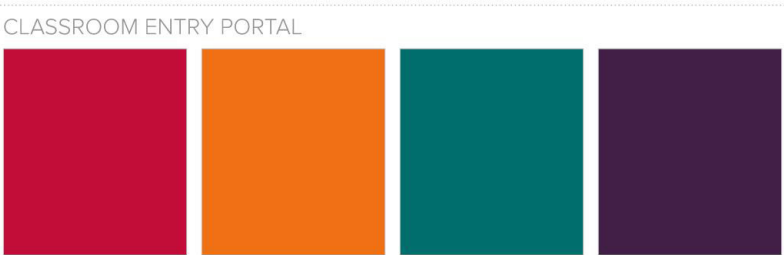
INTERIOR SIGNAGE
BACKGROUND TEXT



DOOR FRAME PAINT
PNT02



TACK BOARD
TB01




CLASSROOM ENTRY PORTAL

KINDER & 2ND GRADE PL03


PRE-K & 5TH GRADE PL04

1ST GRADE & 3RD GRADE PL05


4TH GRADE PL06



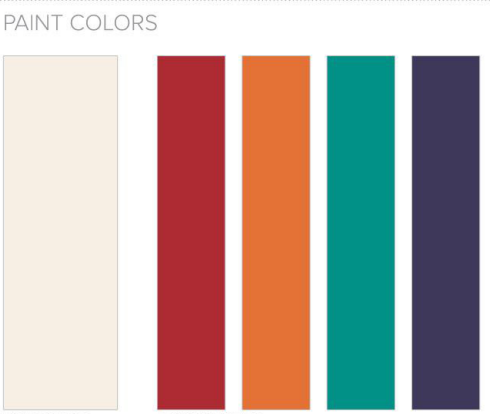
EXPOSED CEILING DECK PAINT
PNT08



CASEWORK COUNTERTOP
SPS01 (WITH SINKS)




INTERIOR WINDOW SILLS
SPS02




PAINT COLORS

FIELD PAINT PNT01


ACCENT PAINT PNT03, PNT04, PNT05, PNT06




WALL BASE
RB01




WALL WAINSCOT



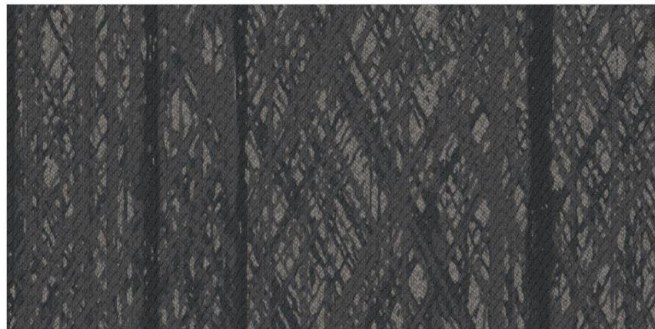
EXPOSED COLUMN PAINT
PNT07



ROLLER SHADE FABRIC & FASCIA



CARPET FIELD: INSTALLATION PHOTOGRAPH



CARPET FIELD - SAMPLE

GYM / DINING



VINYL WALL PADDING



STAGE CURTAIN & PAINT ABOVE
PNT10



FIELD PAINT
PNT01



ACCENT PAINT



ACOUSTIC PANEL



RUBBER ATHLETIC FLOOR TILE
RAFT01



RESINOUS FLOORING




KITCHEN SERVING LINE



STAGE PROSCENIUM


RESTROOM



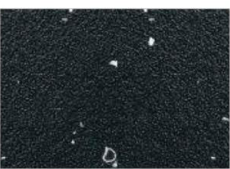
DRINKING FOUNTAIN

TC01 TC02

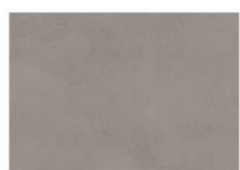
TC03 TC04



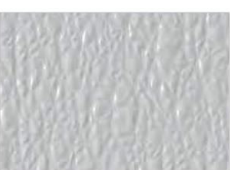
WALL TILE




TOILET PARTITIONS




FLOOR TILE



FRP



ACCENT WALL TILE



WALL TILE

RECEPTION / ADMIN




RECEPTION DESK

CABINETS PL01


COUNTER TOP QTZ01

FIELD PAINT PNT01

ACCENT PAINT



PRIVACY CURTAIN FABRIC
OVERALL PATTERN

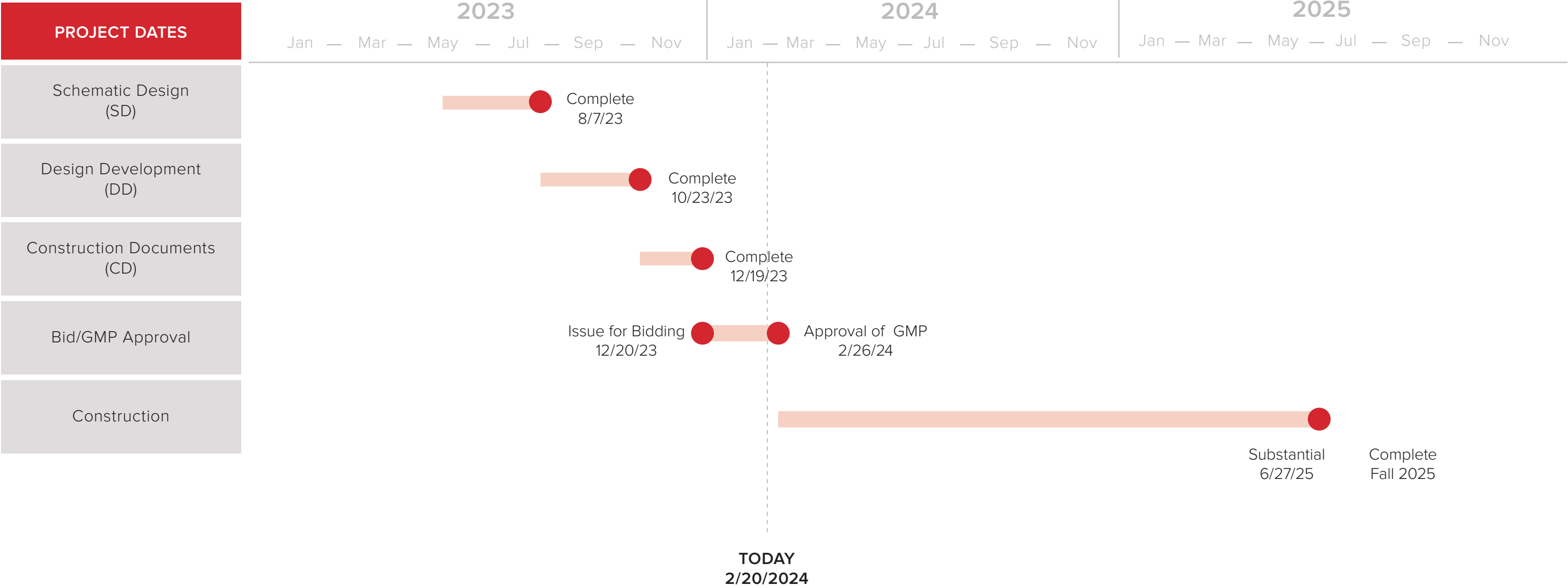


PRIVACY CURTAIN

PENDING FINAL MATERIALS
REVIEW. TO BE UPDATED TO REFLECT FINAL FINISH
SELECTIONS.









MORE THAN ARCHITECTS