

JARRELL INDEPENDENT SCHOOL DISTRICT
NEW MIDDLE SCHOOL #2
JUNE 21, 2023

SCHEMATIC DESIGN PRESENTATION



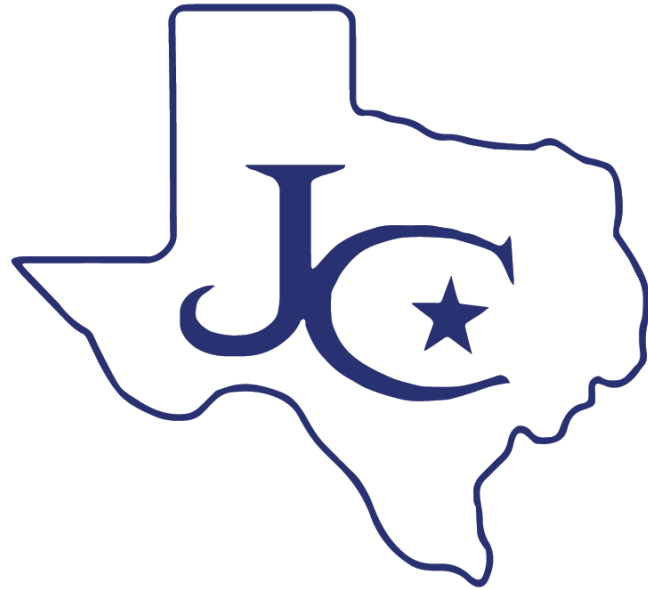


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SPORTS FIELD DESIGN

Sports Design Group
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TECHNOLOGY

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Foodservice Design Professionals, LLC
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JARRELL INDEPENDENT SCHOOL DISTRICT

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Introduction

In May 2023, the citizens of Jarrell, Texas, passed a bond that included the planning and design for a new middle school. The new Jarrell ISD middle school will be located at 2401 E FM 487, east of the city of Jarrell. During the spring of 2023, Huckabee led a pre-design process which included visioning, programming, design charrettes, and planning sessions with district leaders, faculty and staff, parents, and community members.

Using information gathered during these visioning meetings, Huckabee worked with district stakeholders to create the program of spaces required to support and enhance the district's education goals for the new middle school. A meeting was then held with district stakeholders to discuss appropriate adjacencies of rooms combined with the vision and defined program, to create a floor plan that would best serve the Jarrell ISD.

Pre-Design Meetings:

- **3/2/23** Preliminary Review of Educational Vision per LRP Document
Attendees: Core Leadership Team
- **3/9/23** Group (Macro) Vision Discovery kick off meeting with design vision committee: Yesterday. Today. Tomorrow
Attendees: Design Vision Committee, included leadership, Faculty and Staff, Students, Parents, Community Members, Business Owners
- **3/10/23** Tours of relevant and precedent educational facilities/environments
- **3/23/23** Group (macro) Vision Discovery follow up meeting/exploration: Vision Boards
Attendees: Design Vision Committee, included leadership, Faculty and Staff, Students, Parents, Community Members, Business Owners
- **3/29/23** Departmental meetings on Middle School instructional needs
Attendees: Middle School faculty and staff, included MS and District Administration
- **4/6/23** Visit and Review Feedback with District Leadership
Attendees: Core Leadership Team
- **4/13/23** Design Charrette and Site layout
Attendees: Core Leadership Team, and select MS faculty and staff



CHARRETTE MEETING



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Site

The selected 114 acre site is located on the north side of FM 487, east of the city of Jarrell. The new middle school will develop roughly the front 1/3 of the property, leaving the remainder of the site available should Jarrell ISD need a new high school in the future. The front door of the middle school will face the road to the south and will be served by the school bus loop and visitor entrance. For events and competitions, fine arts and athletics (including the athletic fields) can be accessed at the west side of the building from parking in the front.

Vehicle stacking for the car loop was carefully considered to provide maximum stacking on site. The car loop will pick up and drop off students at the north side of the building, with students entering directly into the dining area. Additional parking is provided on the north side of the building. Students will not have to cross an active drive to access the sports fields from the locker rooms.

The football stadium, track, grandstands, and concessions building will sit north and west of the school building, near the gymnasiums and locker rooms.

Main Building

In establishing the organization of the school, the design goals and program planning guided the design team in recognizing user friendly and required academic adjacencies both within the building and on the site. In establishing the organization from which the floor plans could be developed, Huckabee and the district were able to arrange the layout of the middle school.

Public and Visitor Utilization

An important factor in creating the arrangement of the school is access by the public and visitors to the school. By locating Athletics, Fine Arts, and the school's entry at the public facing side of the facility, direct access by the public is granted to events and the secured main entrance, while the learning environments can remain secured from public access.

School Community

During the pre-design process with the district and community, the desire for a secure outdoor space that would connect and serve the many uses of this campus would become a secure courtyard.

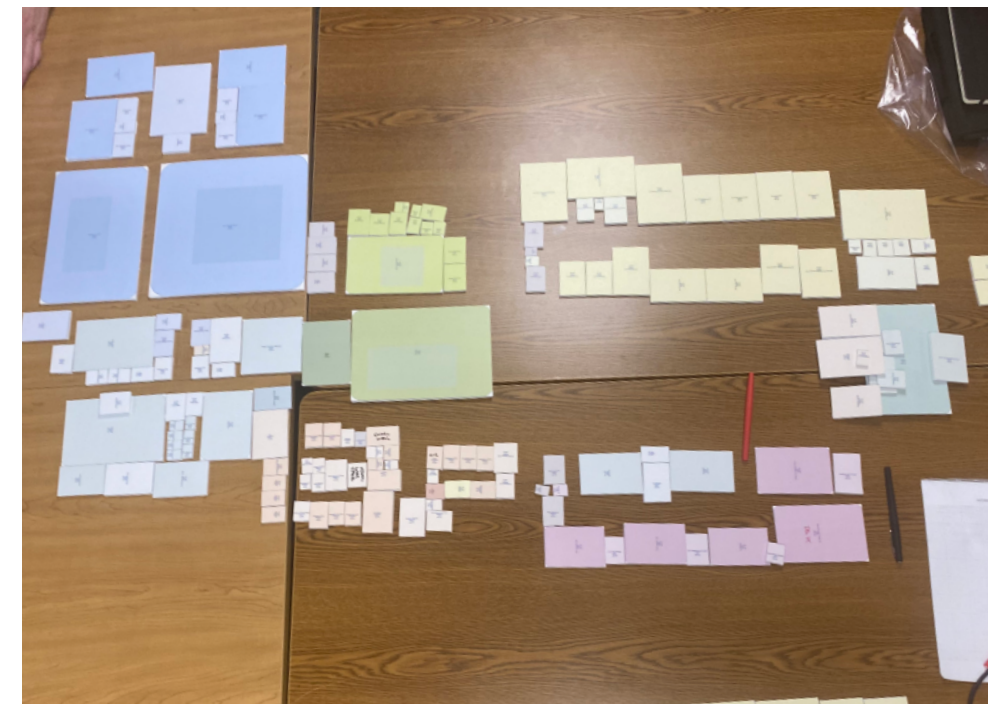
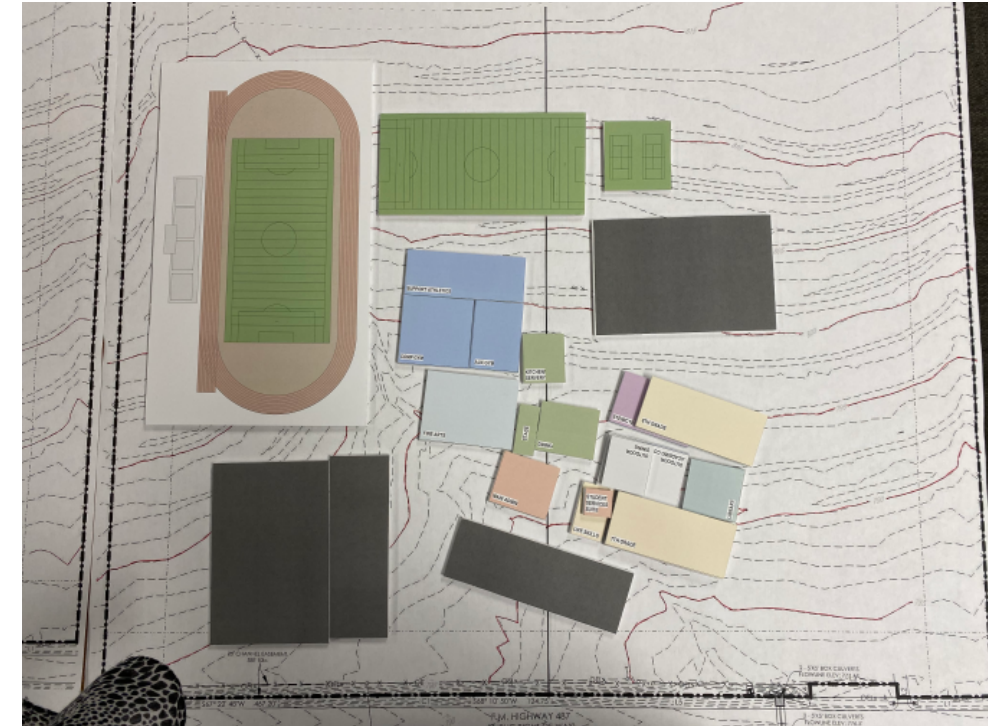
Spaces such as the Dining Area, Library, Fine Arts, and CTE have a direct connection to a outdoor courtyard used for socializing, dining, lectures, art, and small productions. These shared areas act as the critical features within the school to establish the social and cultural character of the school and enhance the wellbeing of the individual student and teacher. The immediate population needs for the middle school are 700 students with an expectation that the school will grow to accommodate 1200 students. Core spaces, such as athletics, dining, and library will all be sized for future growth.

Educational Spaces

The two-story classroom wings are designed to sit along the north and south faces of the courtyard with views into the courtyard and out to the north and south sides of the property. This provides for the most ideal solar orientation for lighting conditions and energy use within the classrooms. The current design will provide classroom space for 700 students, with a master design to allow for each two-story wing to grow to the east in a future phase to expand the student body to the 1200 person capacity.

The classroom wings are situated between the library and dining with science classrooms facing the courtyard. The first floor of the south wing will house visual arts classrooms, CTE, STEM, and special education. Art will have north facing windows and direct access into the courtyard with their own art patio. Special Education will have its own secure area with direct access to the south with a bus loop, and adjacency near the main administration.

Fine arts sits west of the main entrance with a separate public access point to the west. Band, Dance, Choir, and Theater Arts (including a performance platform facing the dining space and a black box theater) have all found a home in the building design. After hours access and security have been thoughtfully considered and provided for both fine arts and athletics. Athletics spaces within the building include a practice gymnasium with seating for 300, a competition gymnasium with seating for 900, locker rooms for both physical education and athletics, coaches offices, a training room and a weight room. The locker rooms also feed out to the nearby athletic fields.



DESIGN CHARRETTE



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Materials and Finishes

The following is a break-down of the typical interior materials proposed for the Interior Design of the new Jarrell Middle School #2.

Interior Partitions

In general, interior partitions shall be 5/8" gypsum wall board finished to level 4, unless noted otherwise. 1-hour rated partitions to have 1 layer of 5/8" type X each side and 2-hour partitions to have 2 layers of 5/8" type X each side, typ.

Latex paint to be eggshell on gypsum board walls and flat on hard ceilings. Epoxy paint to be specified on CMU walls.

Other interior wall finishes may include: rolled tackable surface, dry erase wallcovering, vinyl wallcoverings at conference rooms, and green screen paint at Green Room. Walls receiving these interior wall finishes will require a gypsum wall board level finish of 5.

Rooms with acoustical considerations (e.g., Fine Arts, Gyms, Library, and Dining Commons) will receive fabric wrapped acoustical wall panels to help mitigate sound reflection and absorption.

Corridor Wall Protection

A 5'-3" tall porcelain tile corridor wainscot with a 4" rubber base shall be provided at all corridors of the building, unless otherwise noted.

Corridors not receiving a corridor wainscot shall receive stainless steel corner guards adhered to the outside corners of gypsum board walls.

Corridor Flooring

Corridors, Dining Commons, and typical Classrooms are to receive luxury vinyl tile flooring (LVT) and a 4" rubber base.

Carpet

Admin areas, Private Offices, Collaboration Zones and the Library are to receive carpet tile and a 4" rubber base. Entrance Lobbies to receive Milliken Obex Walk-Off Carpet Tile.

Sealed Concrete Flooring

All Custodial Closets/Rooms, IDF/MDF rooms, Science, Art, CTE Labs, and Athletic Locker Rooms shall receive sealed concrete flooring and a 4" rubber base.

Fine Arts

Quartz tile flooring and a 4" rubber base to be specified in Fine Arts rooms (Band Halls, Ensemble and Practice Rooms). In the Dance Studio, a wood athletic flooring will be specified with a 4" rubber base.

Athletics

Wood flooring and a 4" rubber base to be specified at Gyms and rubber flooring with 4" rubber base to be specified at the Weight Room.

Wet Area Finishes

Wet areas (e.g. drinking fountains, individual/group Toilet Rooms and Showers) are to receive full-height porcelain tile walls and floors with epoxy grout. At all wall to floor tile transitions, a Schluter aluminum cove trim shall be specified.

Athletics areas to receive epoxy paint on walls not receiving porcelain tile.

Toilet Partitions

All Toilet Partitions in Gang Toilet Rooms to be ASI Products that are NFPA 286 compliant.

Kitchen and Served

Kitchen and Served areas are to receive poured epoxy flooring and base. Kitchen walls to receive epoxy paint and Served area walls shall receive full-height porcelain tile walls and epoxy grout.

Interior Corridors

Typical Classrooms will receive an aluminum frame storefront system 4' - 0" above the finish floor to allow for visual transparency into the corridors. Wood doors into classrooms will be specified.

An acoustical operable partition will be specified between classrooms on the non-teaching wall to encourage team teaching and other collaborative classroom activities.

At other Admin, teacher, and learning spaces (e.g. Art, Science Labs, CTE, and Library) an aluminum frame storefront system of different heights and lengths will be specified.

Ceilings

In typical classrooms, a 2'x2' lay-in acoustical ceiling tile will be specified. In the Dining Commons and Library, a 4'x4' lay-in acoustical ceiling tile with a matte ceiling grid will be specified. Other specialty ceilings include wood panel ceiling at Main Entry and Dining Commons, suspended acoustical ceiling baffles at Dining Commons and Collaboration Zones.

Stair and Balcony Railings

A 48" tall custom guardrail with stainless steel handrails shall be provided at all stairs and balconies.

Interior Specialties

To add a sense of identity and community, large wall graphics will be specified at Dining Commons, Athletics areas, Library, CTE, and Fine Arts.

Window Treatment

All exterior facing window shall receive manual roller shades, unless otherwise noted. Interior facing windows at private offices to also receive manual roller shades for privacy.

At Library and other double volume spaces, motorized roller shades shall be specified.

Architectural Woodwork

Upper and lower cabinetry to be plastic laminate faced and receive solid surface countertops. At sink locations, sinks are to be under-mount to meet ADA accessibility requirements. Reception and Circulation desks to receive quartz counter tops.

Interior Lighting

All interior lighting to be LED and include interior ambient lighting, downlights (recessed linear), direct/indirect lighting, dimming systems in sensitive areas (e.g. Special Education classrooms, Clinic), 4" square cans, and decorative pendants and sconces in specialty areas (e.g. Dining Commons, Reception, Library, Fine Arts, and CTE).



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Civil

General

The proposed School property is currently undeveloped and consists of two tracts totaling 114.24 acres and is situated approximately 2.1 miles east of I-35 on the north side of FM 487. There are no structures on the property, so little or no demolition work will be required. The proposed middle school is intended to be limited to the south end of the site while the north will be preserved for a future high school development. Aspects of the development will be subject to review by Williamson County, JSWSC, The City of Jarrell and WCESD#5. We have received a topographic survey and are awaiting a site geotechnical report. The information presented should not be considered final or complete and will be updated as the design progresses.

Paving Improvements

Access to the new school site is expected to be from FM 487 at the south end of the site. Two drives are anticipated for circulation of parents, busses, and staff. The new site pavement is anticipated to be constructed using reinforced concrete pavement. The necessary subgrade treatment is unknown pending the geotechnical investigation.

Grading Improvements

The site topography contains a high point near the center of the site. For the south end of the property which will contain the middle school development, topography falls generally from 826' down to 782' near the southeast corner. It is anticipated that a step in the building finished floor may be beneficial to proposed grades. Cut / fill values will be monitored throughout the design process in an effort to provide a site balance. The pending site geotechnical report will determine foundation type and subgrade treatment, which heavily influences the site grading design.

Drainage Improvements

The site is anticipated to include an underground storm water drainage system consisting of curb inlets, grate inlets, and connections to the roof drainage system. The outfall point impacted by the development is an existing culvert at the southeast corner of the site, crossing under FM 487. On-site detention will be required to maintain existing runoff rates.

Water Quality

The site is not located within the Edwards aquifer, so water quality improvements will not be required.

Water Improvements

The design team is current in contact with the local water supply corporation to begin coordination of servicing the proposed development. We anticipate a private 10" on-site loop to service proposed fire hydrants and to connect to the riser room of the proposed building. A separate meter and 4" water line will be provided for the domestic connection. off-site improvements will be necessary although extent is not yet known.

Wastewater Improvements

Wastewater is anticipated to be a gravity system connecting at the south end of the property. Coordination efforts have begun with the City of Jarrell to determine a plausible off-site route to the existing City wastewater treatment plant.

Landscape & Irrigation Improvements

Plantings will be geared to satisfy District and governing requirements. Areas disturbed by construction will be turf stabilized with either sod or seed. Irrigation will be provided where necessary to support required plant material.

Sport Fields

The project will consist of a new 8 lane rubberized track and new synthetic turf football field stadium with a full-size natural grass practice field to the west. The 8-lane track will have a stabilized subgrade, with base aggregate, new 3.5 inch asphalt paving and ½ inch base mat structural spray rubberized surface. The synthetic turf field will have a stabilized subgrade, a 30 mil liner, a extensive underground drainage system, 6" of drainage aggregate, a 19 mil shock pad and new synthetic turf with field marking and logos. The track and field will be surrounded by a 4' security fence with gates. The field events shall consist of a dual runway long jump/ triple jump, a dual pole vault a high jump D area inside the track, a shot put and discus field events.

The natural grass field will have amended soil, limited perimeter drainage, a new full field irrigation system, new natural grass sodded surface and goal posts.



CHARRETTE MEETING



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MEP Design

All systems shall be installed in accordance with the following editions of the Codes listed below as approved by State Fire Marshal, NFPA, and NEC. The project will be designed and constructed with systems and materials appropriate for private development and good engineering practice.

Mechanical Design

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.

Summer Climatic Design: 100°F (DB)/ 78°F (WB)

Winter: 24°F

Indoor Design for Conditioned Spaces:

Summer: 75°F, 55% RH

Winter: 72°F

Calculation Method

Heat gain and loss calculations will be with factors from the ASHRAE Handbook of Fundamentals and ASHRAE 90.1 latest editions. The heating and cooling loads shall include building loads such as building envelope loads (wall, roof and glass), occupant loads, lighting loads, equipment and appliances loads, outside air (ventilation) loads in accordance with ASHRAE Standard 62. Component resistance values used in determining “U-factors” are taken from the ASHRAE Handbook of Fundamentals.

Mechanical Systems

Mechanical Systems will consist of High Efficiency Electric/Electric DX RTU’s. System will be multi-speed or variable speed high efficiency units. Zoned by usage and exposure.

Large Areas: Larger areas will be conditioned using high-efficiency multi-stage rooftop units (RTU’s). The spaces will be zoned 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: All new classrooms shall have a separate unit and thermostat for individual control. An individual RTU will be used for each classroom.

Various Spaces: Training room, break room, lobby, locker rooms and front administration area will be handled by high efficiency rooftop units / VRF units for additional control.

Gas: There is no gas available at this time.

Technology Rooms: All MDF and IDF data rooms will have separate air conditioning systems for 24/7 control. Mini-Split – 2-ton Base Bid: Daikin

Stairs: Each stairwell will have separate air conditioning systems. Mini-Split – 2-ton Base Bid: Daikin

School Admin areas shall have VRV systems to provide more control points in smaller zones.

Locker rooms to be exhausted per International Mechanical Code using exhaust fans or energy recovery units.

Mechanical tonnage SD estimate: 350 sqft per ton per zone rounded to nearest unit tonnage available, minimum.

Basis of Design:

- RTU’s – Base Bid: Lennox or Alternate Bid: Trane
- VRF – Base Bid: Daikin or Alternate Bid: Mitsubishi
- EF – Greenheck or Cook
- MAU/ERV – Valent

Ventilation Requirements and Pressure Relationships

All floors of the building will have ventilation rates per IMC 2018 and ASHRAE 62.1 and the building will be under positive pressure. IAQ procedure will also be used for outside air requirements.

Outside Air: Makeup air units (MAU) shall be used to provide neutral ventilation air to classrooms. Large spaces and low occupant load space may have raw OA through damper, less than 10% of unit load. Classroom Wings in schools will typically have 3,000-4000 cfm OA machines per wing depending on number of classrooms and other factors.

Controls and EMS

Provide a direct digital electronic automatic temperature control system for the entire complex. The system shall consist of direct digital control (DDC) systems for the HVAC equipment, an operator’s terminal with keyboard for communication with and programming of the distributive memory in the direct digital controllers, and shall incorporate all equipment necessary to provide the sequence of operation. All digital equipment designed to

provide protection against interference by external voltages when operated in a commercial environment. This system shall use electronic temperature sensors, interfaced through standalone DDC controllers and unitary controllers. Control system shall have graphics indicating building floor plan, equipment identification and equipment indication and monitoring.

All temperature control devices shall be standard catalog products and shall essentially duplicate equipment which has been in satisfactory service for at least 3 years. A minimum of 90% of the control equipment shall be by the installing manufacturer.

Work to include a complete automatic temperature control system including any and all control devices, 120 volt (not provided by electrical contractor) and low voltage wiring and conduit, DDC controls, valves, dampers, relays, control modules, sensing devices, switches, and instrumentation necessary to obtain all functions and sequences.

Control System Software shall provide for monitoring and recording of after-hours operation of units.

Temperature Sensors: Space Temperature Sensors: Provide with blank institutional type locking cover, single scaled set point adjustment and zone bus jack for zone terminal connection. All space sensors shall have built-in override switch and local set point adjustment.

Brand Basis of Design for DDC shall be: Alerton/Climatec, other acceptable manufacture to Owner. Controls coordinate with Owner requirements.

Power Monitoring: Power Monitoring shall be provided for project on all new construction. CT’s by Veris or equal and all controllers, software and programming for owner to view power consumption in Total Building, HVAC, Lighting, Receptacles.

Bipolar Ionization (IAQ)

Bipolar Ionization device will be implemented throughout the new HVAC system. Based on the use of these devices ASHRAE allows as IAQ improvement we are allowed to adjust the HVAC system and Outside Air strategy to provide a more Energy Efficient and complete system. Additional benefits include lower first cost of system as well as lower energy cost ongoing for operations. Manufacturer also makes claims for effectiveness against odors, allergens, Covid-19 and many others. Please consult their literature for additional information on this topic direct from the manufacturer.



Mechanical Design (Continued)

COVID-19 Measures

The industry is still discovering the best method to protect building occupants from the spread of infectious disease. We are implementing the most common sense effective strategies known to protect the inhabitants with the most reasonable cost.

- Individual Unit per Classroom – Each classroom will have its own unit. So in the case an infected occupant occupies a classroom the air is contained to that classroom, not spreading to rest of building.
- Dedicated Outside Air – Fresh treated outside air ensures that IAQ levels are meet in each classroom.
- Filtration – Standard Specification is MERV 8. Filtration can be increased up to MERV 13 without changing out of standard filter sizes. MERV 8-13 is considered in the normal filtration range with 13 being on the cleaner side and also more expensive. This is Owner preference.
- Bipolar Ionization – Bipolar Ionization is being implemented with specific strategy from HCE for best protection. This means that if an infected person does come into spaces, in addition to other measures, this technology does its best to render viruses inert with enough exposure time. See manufacturer’s data for actual claims. These devices are a one time cost and last for many years without annual parts or maintenance. Once they reach end of useful life then they should be replaced.

Ductwork Construction

Ductwork, unless otherwise specified herein, shall be constructed of new, prime grade, continuous hot dip mill galvanized, lock forming quality steel sheets and shall have a galvanized coating of 1-1/4 ounces total for both sides per square foot. The gauges of metal to be used and the methods of duct construction shall conform to the requirements for the class of work involved as set forth in the latest edition of “Standard Practice in Mechanical Sheet Metal” as published by SMACNA. Each sheet shall be stenciled with the gauge and manufacturer’s name. If coil steel is used, coils shall be stenciled throughout on ten foot (10’) centers with the gauge and manufacturer’s name.

All dimensions are inside clear dimensions. Sheet metal size shall be increased to allow for duct liner where applicable.

Seal all transverse joints, seams and fitting connections with “KINGCO 11-376 Super Seal”, UL listed Mastic to prevent air leakage. Oil base caulking and glazing compounds are not acceptable.

Rectangular Ducts

- Where special rigidity or stiffness is required, construct ducts of metal two gauge numbers heavier.
- Ducts larger than 30” and larger to have Ductmate 35 slide on connections. Use metal cleats, metal corner cleats for non-breakaway joints, use plastic cleats for breakaway joints, ductwork 440 tape, #795 duct sealer and 5511M sealant. Fabricate and install per manufacturer’s instructions.

Ductwork shall be internally lined with acoustical liner with antimicrobial coating for sound attenuation at discharge of units.

Ductwork shall be externally insulated as follows:

- The Contractor may use a 3/4, 1 or 1-1/2 pound density product with a minimum thickness of two inches (2”) and a minimum installed R-value of 6.0. Density, thickness and installed R-value to be clearly indicated on submittal. Installed R-value must be 6.0 or higher.
- Fiberglass duct wrap insulation is to have a factory FSK or FRK facing which acts as the vapor barrier. Maximum permeability rating is 0.02 perms.
- Use only labeled Type UL181AP tape. Maintain a complete vapor barrier throughout all ductwork insulation applications.

All return air boots to be internally lined with acoustical liner.

Flexible Duct: Only above suspended or hard ceilings:

- Provide duct listed as UL-181 Class I air duct, and constructed in compliance with NFPA 90A. ATCO Series 36.
- Maximum length five feet (5’). Install with not more than one (1) 90 full radius degree bend.
- Make joints with Nashua brand UL181A-P duct tape and 1/2” wide positive locking panduit straps.
- Exterior skin is to be tough vapor barrier reinforced metalized polyester jacket, tear and puncture resistant.
- Airtight inner core with no fiberglass erosion into airstream.
- R-Value: 6.0 at 75 degrees F. mean temperature.

Air Filters

All air filters to be listed as Class 2 by Underwriters Laboratory, Inc., Building Materials Directory.

Media: Non-woven, lofted cotton bonded to 96% free area welded wire support grid. Not less than 6.6 square feet media area per square foot of filter face area. Arranged in radially pleated configuration and bonded continuously to inside perimeter of high wet-strength beverage board cell sides.

Cell Design: 2” deep with beverage board diagonal supports at entering air and leaving air faces of each cell.

Air Cleaning Performance: Minimum MERV 8.

Fire and Smoke Dampers

Provide and install all fire dampers in all ductwork which passes through any rated egress pathways, as required by Local Building and Fire Safety Codes.

All dampers UL approved and of type required by NFPA 90A.

Install all dampers per manufacturer’s instructions.

All dampers shall have a UL555S leakage classification of II.

Sleeves for fire dampers shall be of gauge as described in NFPA 90A and as a minimum of 18 gauge for dampers up to thirty-six (36”) wide and fourteen (14) gauge for dampers which exceed thirty-six (36”) in width.

Multi-Story duct penetrations, assume fire damper at each floor level penetration of ductwork.

Smoke Dampers: Assume Smoke Dampers at all Smoke rated walls. Specifically Science Rooms in Schools.

Manufacturers: Ruskin, Air Balance, Arrow, Nailor or approved equal.

Ductwork Supports

Support all duct work to prevent sag, undue play and swing. Provide a hanger within twelve inches (12”) from unit supply and return.

Low Pressure Ductwork:

- Ducts 40” and Less: Provide with 1” x 18 gauge straps fastened to ductwork and to building construction. Space not more than eight feet (8’) on center. Hanger straps shall lap under duct a minimum of one inch (1”) and have a minimum of one (1) fastening screw on the bottom and two (2) on the side.

Ducts Over 40” : Provide mild steel rods fastened to angle iron stiffeners with nuts and to building construction with appropriate inserts, flanges or clamps. Space not more than four feet (4’) on center with rods and angle supports.



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(mechanical continued)

Use minimum twelve (12) gauge wire with saddle for support of flex duct. Maximum permissible sag is 1/2" per foot of spacing between supports. Use one inch (1") strap (minimum) for all round sheet metal runouts; minimum 8'-0" o.c.

Plumbing Systems Design

Domestic Cold Water Supply System

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.

Service valves will be provided at each branch line serving two or more plumbing fixtures. All plumbing fixtures and equipment connections will be provided with local stop valves. Additional service valves will be provided, to isolate the system for maximum maintainability.

Access panels will be provided with adequate space to operate the valves in walls and non-accessible ceilings.

Shock arrestors will be provided on all water rough-ins serving plumbing fixtures.

Basis of Design: Copper Pipe, discuss PEX option with Owner.

Domestic Hot Water Supply System

Domestic hot water will be generated using two natural gas fired water heaters with integral storage tanks. The storage tanks will be constructed of unlined duplex alloy stainless steel. The units will be insulated, in compliance with ASHRAE 90.1 for thermal efficiency, and will have a minimum efficiency of 90%. The water heaters will generate and store hot water at 140°F. Point-of-use thermostatic mixing valves will reduce final delivery temperatures of hot water to the building plumbing fixtures to 110°F. The hot water piping system will have in-line circulation pumps to maintain the hot water temperature to within 10 degrees of the supplied temperature.

Water Heaters:

- Kitchen – 54 KW, 100 gallon tank (2-for kitchen) Basis of Design A.O. Smith
- Remote Water Heaters – 50 gallon electric. Basis of Design A.O. Smith

The domestic hot water piping system will be sized similar to the domestic cold water system. The hot water supply and return piping will be insulated to minimize heat loss.

Basis of Design: Piping Material - Copper Pipe, discuss PEX option with Owner.

Sanitary Waste and Vent Systems

A complete waste and vent system will be provided to collect sanitary waste from all plumbing fixtures, floor drains, and any other equipment, in accordance with the Plumbing Code, unless indicated otherwise.

The drainage piping system will be designed with a minimum slope of 1/4-inch per foot for pipe sizes less than 3-inch and 1/8-inch per foot for sizes 3-inch and larger.

The building will have sanitary sewer lines discharging to the site sanitary sewer system.

Floor and wall cleanouts will be strategically placed to avoid being located in sensitive areas.

Floor drains will be provided for each air handling device, equipment requiring drains, toilet rooms with water closets, and mechanical equipment rooms. A floor sink will be provided at each emergency shower unit.

Each floor drain will be provided with a p-trap and a trap primer.

Basis of Design: Waste and Vent Piping Material – Cast Iron, Tyler Pipe American Made. (vent also cast iron to maintain 20/50 flame/smoke rating in plenum)

Storm Drainage System (roof drains and overflow with piping or Downspouts and Gutters by Architect)

The roof drainage system shall be sized based on 6 inches per hour rainfall rate, according to the Plumbing Code.

Majority of roof drainage is planned to be handled by collector and downspouts by Architect.

Overflow drains (if required) will be provided to protect the roof in case of a primary roof drain blockage. The overflow drain lines will be piped separate from the roof drainage system extending to downspout nozzles on the exterior of the building.

The roof drainage system will be insulated to prevent condensation from occurring on the exterior of the pipe. Roof drain bodies, overflow drain bodies and the horizontal piping from each drain will be insulated,

extending to the first vertical drop and any horizontal offsets that occur (if needed).

Basis of Design: Rain Leader Piping Material – Cast Iron

Plumbing Fixtures

Plumbing fixtures will be Grade A commercial quality and will be low water consumption type fixtures. Water closets will be dual flush type with 1.28 gallon per flush fixtures. The urinals will be 0.125 gallon per flush fixtures. Lavatories will have 0.50 gpm faucets and the sinks will have a 1.5 gpm flow control devices. Water closets will be floor mounted and urinals will be wall hung and provided with concealed support carriers. Lavatories, mop sinks, laboratory sinks and kitchen sinks will be provided with domestic hot and cold water. All vitreous china fixtures will be white in color. Where applicable, fixtures will be in compliance with the Americans with Disabilities Act. Basis of Design: Sloan, Zurn, American Standard

Wall hydrants will be provided on the exterior walls to provide wash down of entries, and other exterior areas around the building. Hydrants will be freeze-proof recessed type with hinged door, integral vacuum breakers and loose key.

Fire Protection Systems Design

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.

Sprinkler heads in light hazard finished areas with suspended ceiling will be quick response, flush concealed with white cover plates. Heads in non-finished areas such as Mechanical Equipment Rooms, Electrical Rooms, etc., will be chrome-plated brass. (Verify for use in Electrical rooms).

The sprinkler systems will conform with all applicable provisions of the Owner's Insurance, NFPA Standards 13, 14 and other appropriate NFPA Standards, state and local codes.

A fire pump is assumed to be required.



JARRELL INDEPENDENT SCHOOL DISTRICT

NEW MIDDLE SCHOOL #2

Electrical Systems Design

Electrical Utilities:

Electric Service: 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 transformers. It is estimated that two (2) electrical services will be required to serve this building, requiring two (2) pad mount transformers. 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.

Building surge suppression systems will be installed in the building at the main switchgear, 480Y/277V distribution panels, and 208Y/120V branch circuit panelboards for protection of building loads from surges both from lightning and utility transients as well as building switching transients. Basis of Design: Current Technologies by ABB

Interior Electrical Distribution System

Furnish all labor, testing, supplies and materials, including but not limited to, installation of light fixtures, cutting and chasing, coordination with other trades on the job, etc, necessary for the installation of complete electrical systems. Include empty conduit as required for the telephone systems. Include temporary electrical power and lighting to satisfy OSHA requirements. Verify all conditions and measurements at site.

The building main electrical room shall house the building switchboard. The main electrical room personnel doors shall open in the direction of egress and shall be equipped with panic bars, pressure plates or other devices that are normally latched but open under simple pressure in accordance with N.E.C article 110.26 (c)(3).

Separate dedicated electrical rooms shall be provided as required. These rooms shall be strategically and centrally located within the building to minimize voltage drop problems. The electrical rooms will have branch circuit panelboards, DOE 2016 compliant dry type transformers and 208Y/120 Volt branch circuit panelboards. Separate dedicated 480Y/ 277 Volt panelboards for HVAC equipment and lighting branch circuits shall be provided.

DOE 2016 complaint, aluminum windings dry type transformers shall be provided to serve all non-linear load branch circuit panelboards. Basis of Design Transformers: Powersmith

Basis of Design Panels and Switchgear: Square D, ABB, Siemens, Eaton (confirm with owner)

Interior Lighting Systems

LED lighting will be utilized throughout the building. Building interior lighting control schemes shall comply with the requirements of the current edition of IECC. 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.

All lighting will be provided with a color temperature of 3500°K and a color rendering index of 85 (CRI = 85).

Emergency lighting and means of egress lighting shall be provided in accordance with NFPA Life Safety Code (NFPA 101), and shall all be served by battery packs.

All exit light fixtures shall be LED type.

Illumination levels shall comply with the requirements set forth by IES, allowable power densities, and the building program requirements unless otherwise indicated by the Owner. Footcandle levels shall be minimized in areas where task lighting is used.

All exterior lighting shall be LED type lighting in weatherproof fixtures mounted on poles, walls, or soffits as required to meet lighting requirements.

Exterior Lighting Control: Lighting contactor controlled by DDC

Provide life-safety lighting in all exit paths in accordance with IES minimum foot-candle recommendations and AIA guidelines. Provided by Frog-Eye type emergency fixture or Battery Back-up in LED fixtures. No Inverters are planned to be used. (confirm owner preference)

All requirements of the IECC will be adhered to during the design of the lighting, this will include the use of automatic shut-off via time of day schedule, occupancy sensors and/or dual level switching.

All specialty lighting will coordinated with Architect.

Basis Of Design: Light Fixtures - Acuity Brands - Lithonia

Basis of Design: Lighting Controls – Acuity nLight (wired controls)

Building Security System and Telecommunications Systems

Building security and telecommunication systems shall be provided in accordance with the Owner requirements. This system shall be designed by another consultant.

Fire Alarm System

A digital, addressable voice alarm closed circuit, electrically supervised automatic and manual fire detection alarm system shall be provided. The system will consist of manual pull stations and audio-visual devices at means of egress throughout corridors, area smoke detectors, heat detectors in equipment rooms and smoke detectors in storage rooms. Duct mounted detectors in supply and return duct of air handling equipment for air handling system shutdown as required by code. The fire alarm system design will comply with the Americans with Disabilities Act regulations, and Texas Accessibility Standards (TAS), and the National Fire Protection Association NFPA 101, and NFPA 72, and the International Building Code (IBC). FACP in MDF ROOM, FAAP in lobby and Fire Riser Room.

School shall be provided with Voice Evacuation system, 2 FAAP'S, 1 FACP, connect to Fire Sprinkler system.

Remote Buildings: Connect all remote building back to main building.

Basis of Design: Silent Knight 6820xl with Voice Evacuation



COLLABORATION



JARRELL INDEPENDENT SCHOOL DISTRICT

NEW MIDDLE SCHOOL #2

Structural Design

(Note: Information provided in this narrative is to be used as a guideline and budget pricing only and should not be construed as being exhaustive at this schematic phase of the project. Information shown on the construction documents may vary from that shown herein, based on final design.)

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.

The edition of the standard will be the edition referenced in the noted edition of the International Building Code.

Design Loads

Design Dead Loads

Assembly	Uniform Load (psf)
Ceiling & Mechanical @ Roof	15
Roofing & Rigid Insulation	15
Fire Protection	10

Design 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:

Occupancy	Uniform Load (psf)
Public areas, corridors, lobbies at ground level, and stairs	20

Mechanical rooms (minimum)	150
Storage (minimum)	125
Roof (unreducible)	20
Public areas, corridors, lobbies above ground level	80

Wind Loads

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

Wind Speed (3-sec gust)	115 MPH
Exposure Category	C
Enclosed Structure	

Seismic Loads

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

Site Class	B
Seismic Design Category	A
Seismic Importance Factor	1.25

Building Structure

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. For this project, there are two systems being looked at as follows.

Foundation

At this time, there is no Geotechnical information available. Once this information is received, a meeting with the owner will be requested to discuss the potential foundation types based on the Geotechnical Report's recommendations. Based on our previous experience, either a slab-on-grade system with perimeter grade beams supported by either drilled concrete piers or concrete footings; or, a structurally suspended slab over void-box with drilled concrete piers under the slab and other load bearing elements will likely be recommended.

Should a slab-on-grade system be used, it is anticipated that the ground

floor will consist of a 5" concrete slab reinforced with #3 bars at 16" on-center each way over a prepared subgrade. Subgrade preparation is anticipated to consist of removal of on-site expansive soils and replacement with select fill; or, a combination of moisture conditioned on-site soil and select fill. The slab-on-grade will be placed over a 15 mil, Class A vapor retarder. Perimeter grade beams are anticipated to be 18" wide x 24" deep with 20 plf of reinforcing. Grade beams are anticipated to be earth-formed with the vapor retarder wrapping to the outside face of the beam. Interior earth formed grade beams not supported by piers will be provided between metal building rigid frame supports.

Should a structurally suspended system be used, it is anticipated that the ground floor will consist of an 8" structural slab over carton void forms with 10 psf of reinforcing. The void depth is estimated to be between 8" to 12". The slab will be placed over a 15 mil, Class A vapor retarder. Perimeter grade beams are anticipated to be 18" wide x 24" deep with 30 plf of reinforcing. Grade beams will be isolated from the subgrade with 8" to 12" deep carton void forms, and soil retainers each side to prevent soil from entering the void space.

Typical Wall Structure

The structural walls will be a mixture of light gage cold formed metal framing (CFMF) and conventionally reinforced concrete masonry units (CMU). In general, the exterior CFMF wall framing will be supported by the foundation, elevated floor, and roof framing systems and designed by the contractor's CFMF engineer. Many portions of the exterior CFMF will have a veneer system attached. Additionally, CMU areas of this project may consist of interior and exterior reinforced load bearing CMU which will directly support the roof and floor framing systems.

Typical Elevated Floor Structure

For the 2-story classroom portion of the project, the second-floor framing will generally consist of 5" of normal weight concrete on 2" composite steel deck. The floor slab will be supported by steel beams with headed studs welded through the steel deck to the top flange of the steel beams and designed to act compositely with the concrete slab.

Typical Roof Structure

The roof framing consists of steel bar joists or wide flange (WF) beams typically spaced at approximately 6'-0" on center. The 1.5" deep, 20 gage (minimum) steel roof deck is supported by the bar joists/WF beams and serves as the roof diaphragm as part of the lateral support system.



JARRELL INDEPENDENT SCHOOL DISTRICT

NEW MIDDLE SCHOOL #2

(structural continued)

Lateral Stability

Wind and Seismic analysis are performed in accordance with the design codes listed above. The lateral force resisting design shall be based on the controlling load. Seismic resisting systems and special requirements as prescribed in IBC, ASCE 7, and AISC have been considered. Lateral loads are transferred from the roof and second floor diaphragms to the foundation by use of CMU shear wall, steel moment and/or steel brace frames.

Descriptive Specifications

Concrete

Normal weight Portland cement concrete with 5" to 6" slump, depending on the application.

Minimum 28-day compressive strength:

- Drilled Piers 3,000 psi
- Footings 3,000 psi
- Grade Beams, Pilasters, and Pier Caps 3,000 psi
- Slab-on-Grade 3,000 psi
- Slab-on-Void 4,000 psi
- Elevated Slabs 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)
- Steel Pipe ASTM A53, GR B or A500, GR B
- Field Bolted Connections ASTM A325 Bolts
- Anchor Rods ASTM F1554, GR 36
- Welding E70XX per AWS D1.1

Steel Composite Deck

- 2" deep, 20 GA, 12" rib pattern; ASTM A653,

Steel Roof Deck

- 1.5" deep, 20 GA, G90 Galvanized finish where to receive cementitious fireproofing.
- 1.5" deep, 20 GA, Ungalvanized with coat of manufacturer's standard primer paint over cleaned and phosphatized substrate where no cementitious fireproofing applied.

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.



JARRELL INDEPENDENT SCHOOL DISTRICT

NEW MIDDLE SCHOOL #2

Foodservice Design

Receiving Area

- One (1) door entering the kitchen, the door size is to accommodate the largest cart used for deliveries.
- Receiving door to include a glass view window panel, intercom, doorbell, sufficient lighting, and air screen located over the door.
- A time clock may be required at the receiving door.
- Security camera may be required and located outside the receiving door.
- The width of the receiving corridor is to be 6'-0" minimal.

Custodial/Chemical/Laundry Area:

- Residential washer/dryer-stack or side by side.
- Mop sink.
- Mop and broom holder.
- One (1) 48" long chemical shelf.

Restroom and Locker Room:

- To be located near the receiving door and office.
- One restroom to be provided with one (1) locker room.
- Number of lockers and coat hooks to accommodate total amount of employees within the kitchen.

Office:

- To be located near the receiving corridor to monitor all food deliveries into the kitchen area and the locker room/toilet.
- Vision panels to be located to allow the manager to view the kitchen and the receiving corridor.
- Size is to accommodate Two (2) people within this space.
- A safe to be provided per the Owner's direction.

Dry Storage Area:

- To be sized to accommodate one (1) delivery a week.
- Shelving to be 24" wide, height 86" maximum.

Cold Storage Assembly:

- To be size to accommodate 7-day inventory.
- To be located in the rear of the kitchen to accommodate a main receiving corridor.

- To be located across from the preparation and production area to minimize cross traffic from the other kitchen support areas.
- An alarm system to be provided to monitor the temperature.
- The refrigeration system to be located in the Service Yard within 75' of the assembly or on the roof above the kitchen.

Production Area:

- The production area is to be located across from the freezer assembly. To be located to minimize any cross traffic from the other kitchen support areas.
- Production equipment to be sized to accommodate the total student population.
- Exhaust hoods to be designed to accommodate all production equipment and will be designed per IECC 2018 code requirements.
- Production equipment to include the following-Quantities to accommodate the student population.
 - o Three (3) Double stack convection ovens
 - o One (1) Double stack combi oven
 - o One (1) Six burner range
 - o 40-gallon tilt braising pan
 - o One (1) Stacked pizza oven
 - o Support worktables with a meat sink and pot rack

Preparation Area:

- The preparation area is to be located across from the walk-in cooler assembly and to be located to minimize any cross traffic from the other kitchen support areas.
- The preparation area is to include the following equipment:
 - o Preparation table with two sinks and pot rack
 - o Support tables
 - o Disposer
 - o Slicer with stand
 - o Can opener
 - o Pan rack

Holding:

- Single door heated pass-thru cabinet and a single door pass-thru refrigerator to be located behind each serving line.

Servery Area:

- The servery area is to be located between the seating and the kitchen area. A store front glass wall or roll down door is to be provided between the serving line and the seating area.
- A full wall with the holding equipment to be located between the kitchen and the servery area.
- The entrance to the servery is to be located so that the queuing of the students does not interfere with the seating.
- The serving line to be designed to accommodate the Owner's menu as required.
- Beverages to be located near the Cashier or at the beginning of the serving line.
- Serving lines to be sized to accommodate the student population and number of periods. Each serving line to accommodate approx. 100 students per line per period. The serving lines are to and to include the following:
 - Silverware/tray dispenser
 - Refrigerated grab n' go merchandiser or milk dispenser
 - Five (5) hot food wells recessed to accommodate a sheet pan.
 - Heated merchandiser
 - Refrigerated cold pan or frost top
 - Flat top counter
 - Cashier station

Warewash Area:

- Full size warewash area located near the server.
- Layout to accommodate soiled and clean dishtable, tray drop window, disposer and dishmachine.
- Three compartment sinks sized to meet code requirements.
- Mobile drying racks.
- Electrical disconnect to be located as to not conflict with equipment.

COLLABORATING



JARRELL INDEPENDENT SCHOOL DISTRICT

NEW MIDDLE SCHOOL #2

Technology Design

Project Scope Of Work

The scope of work for this project includes a new system for the new middle school campus. This will include the implementation of new telecommunication spaces, premise distribution, classroom audio video, facility intercom system, local sound systems, physical security systems including access control and surveillance.

This section is intended to define the standards, criteria and assumptions used for the development of design documentation concerning the premise distribution, AV and security systems infrastructure.

The systems design and specifications are based on JISD Guidelines, client input, industry standards and best practices.

27 1000 PREMISE DISTRIBUTION SYSTEM (PDS)

Basis of Design

The scope of work for premise distribution shall include new fiber optic cabling and termination hardware utilizing Passive Optical Networking (PON) from Tellabs in the new classroom addition. The fiber network system design shall include passive fiber optic splitters located in the telecommunications space in the admin area, Optical Network Terminals (ONT's) installed in ceilings shall provide PoE and network connectivity to wireless access points, surveillance cameras, VoIP handsets and standard data cabling connectivity. The Optical Line Terminal (OLT) will be installed in the admin IDF room. The admin IDF shall also support the centralized power supply for the building.

Fiber Network Design

- All fiber shall be Single Mode, manufacturer is to be selected from a list of acceptable options in the specifications.
- Copper cabling shall be designed between all ONT devices and their supported connections to include all wireless access points, VoIP handsets, displays, projectors, computers, printers, access control panels, building management systems and surveillance cameras.
- The MDF shall support the OLT and fiber termination hardware and all power for the PON system shall be centralized in this space.

Copper Network

- Category 6 cabling will be used for all outlets except wireless access points.

- Category 6A will be used for all wireless access point outlets.

Termination support equipment, MDF and IDF rooms – One MDF and multiple IDF rooms will be used for this project. All racks, termination hardware etc. shall have capacity to support the new equipment.

Grounding – All equipment in the MDF and IDF(s) will be properly bonded and grounded per TIA standards and BICSI best practices. New secondary grounding bus bars will be used to ground any new equipment.

Area network requirements – New connectivity is required.

Backbone cabling – New backbones are required for MDF and IDF rooms for this project.

Digital signage locations will receive network cabling as-required for functionality.

Wi-Fi – General

- Wireless access point locations will receive network cabling.
- Wireless access points will be furnished and installed by Jarrell ISD IT.

Pathways

- Will consist of j-hooks and/or basket tray in corridors and accessible ceiling spaces.
- Conduits and sleeves will be required for locations with inaccessible ceilings such as clear story/high volume, hard lid/gypsum, etc.

27 2100 NETWORK ELECTRONICS, WIRELESS ACCESS POINTS AND UPS EQUIPMENT

Basis of Design

JISD IT shall furnish and install active electronics for network connectivity such switches, routers, bridges, and wireless access points.

27 3213 TELEPHONE SETS (PHONE SYSTEM)

Basis of Design

The complete phone system will be furnished and installed by JISD IT.

27 5116 PUBLIC ADDRESS SYSTEMS

Basis of Design

A facility-wide Public Address system shall be installed consisting of ceiling-mounted speakers in all classrooms, corridors, and common areas. Call buttons in classrooms TBD. All areas with open ceiling will

receive surface-mounted wall speakers recessed into the wall. Facility exterior will receive surface-mounted speakers for complete coverage of outdoor spaces (parking lots, drop-off/pick-up, courtyard, etc.). All integrated AV systems shall have a page sense override that will mute the AV system so that a page in that area can be heard clearly.

Manufacturer TBD.

28 1300 PHYSICAL ACCESS CONTROL SYSTEM (ACS)

Basis of Design

Access control and/or door monitoring shall be provided as follows:

- ACS system Manufacturer: Verkada
- Card reader Manufacturer: Verkada
- Door hardware Manufacturer: Allegion
- Door monitoring via DPS: Yes Request to exit (REX) devices: Yes, door hardware will have integrated REX wired into the panic hardware.
- Request to exit (REX) devices: Yes, door hardware will have integrated REX wired into the panic hardware.
- Credential readers shall be deployed to areas identified by the Owner including: The main entry and all staff entries identified by Owner.
- Controllers/Wall mounted panels shall be installed in the MDF and various IDF locations as needed to support the ACS.
- Lock down panic buttons: Yes
- Door release buttons: Yes
- Credentials and consumables: Shall be determined by the Owner during the Design phase..

28 2300 VIDEO SURVEILLANCE SYSTEM (VSS)

Basis of Design

- Video management server: Verkada
- Camera manufacturer: Verkada



JARRELL INDEPENDENT SCHOOL DISTRICT

NEW MIDDLE SCHOOL #2

(Technology Continued)

- Camera types (fixed, ptz, etc.): .): Fixed domes and bullet style cameras will be used. Dome cameras shall be installed in the interior, exterior cameras shall be wall mounted bullet style.
- Interior cameras shall observe the following: Corridors, entries/exits, gathering spaces and the main office and restroom entry points.
- Exterior cameras shall observe the following: Drop-off and pickup areas around the front office, exterior entry points on the new building. Other camera locations to be provided by the Owner.
- Pole mounted cameras: None
- Video programming requirements to match Owners standard.
- Storage Server: Storage is included on each camera and video footage is available via the Verkada cloud.
- VMS: Verkada
- Licenses: To be furnished by the contractor for each new camera in-scope.

28 3100 INTRUSION ALARM

Basis of Design

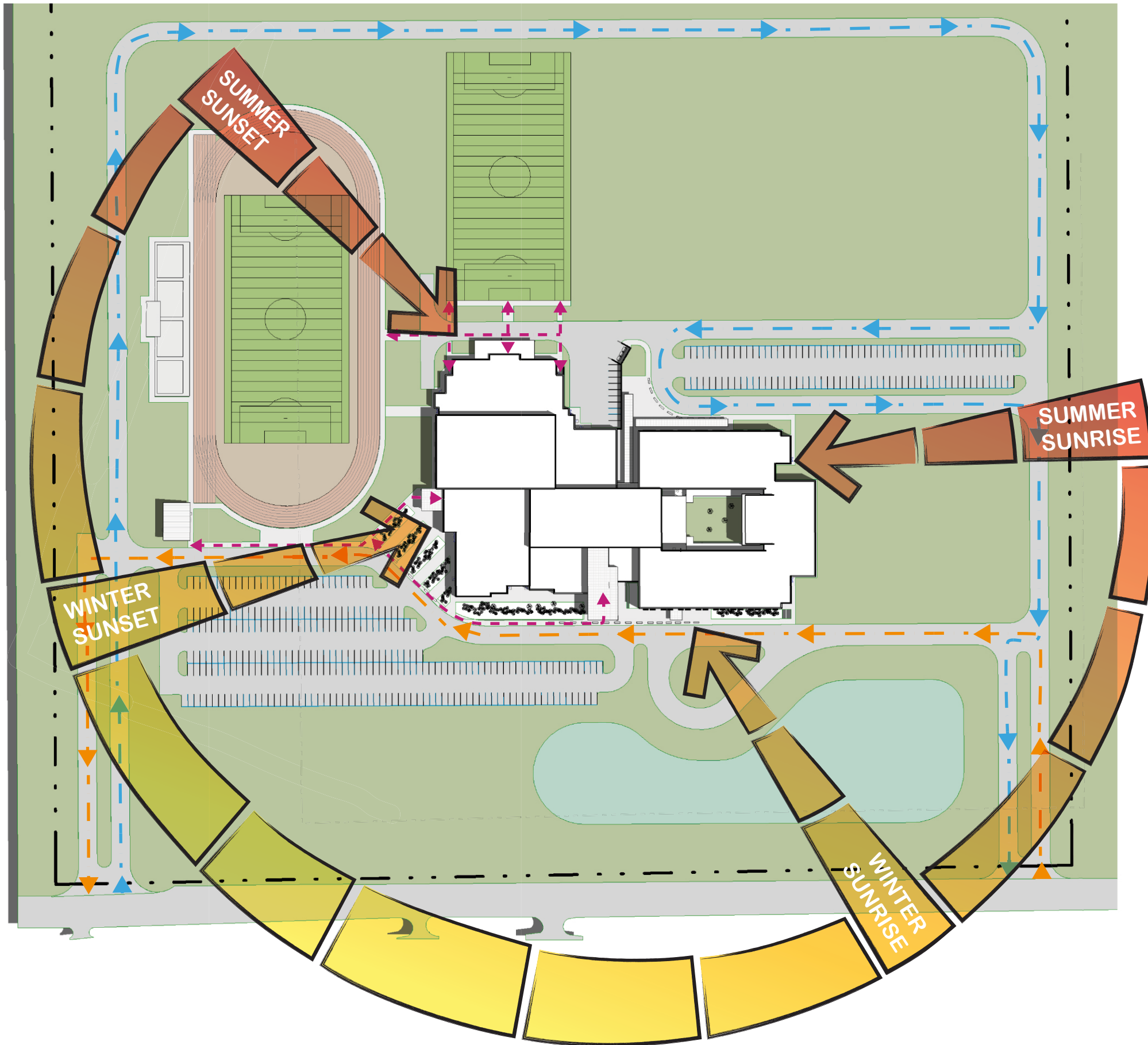
- Manufacturer: Verkada.
- There is no stand-alone intrusion system for this project. In areas where cameras are present, the cameras will serve as motion detectors in the Verkada system.

CHARRETTE COLLABORATION







JARRELL INDEPENDENT SCHOOL DISTRICT
NEW MIDDLE SCHOOL #2

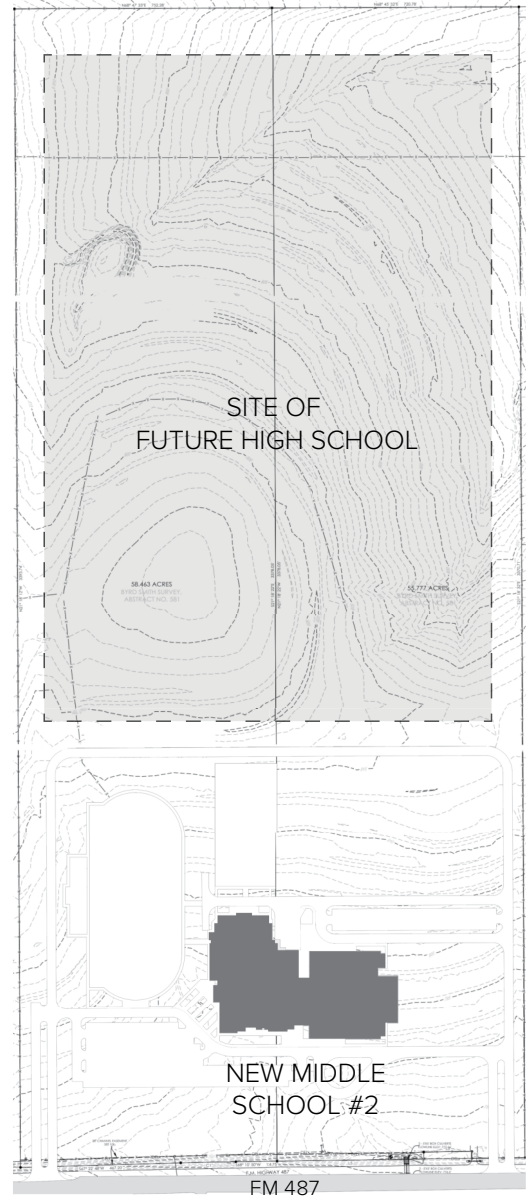
MAIN BUILDING	
ACADEMICS	46,270
ADMINISTRATION	9,290
ATHLETICS	27,683
CAREER, TECHNOLOGY, AND ENGINEERING	5,733
CIRCULATION	37,447
DINING AND FOODSERVICE	12,224
FINE ARTS	15,961
LIBRARY	5,568
SUPPORT	9,230
WALLS AND PARTITIONS	3,589
<hr/>	
GROSS SF TOTAL	172,995 GSF
CONCESSIONS BUILDING	1500 GSF
SUMMARY	
MAIN BUILDING	172,995
CONCESSIONS BUILDING	1,500
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GROSS SF TOTAL	174,495 GSF

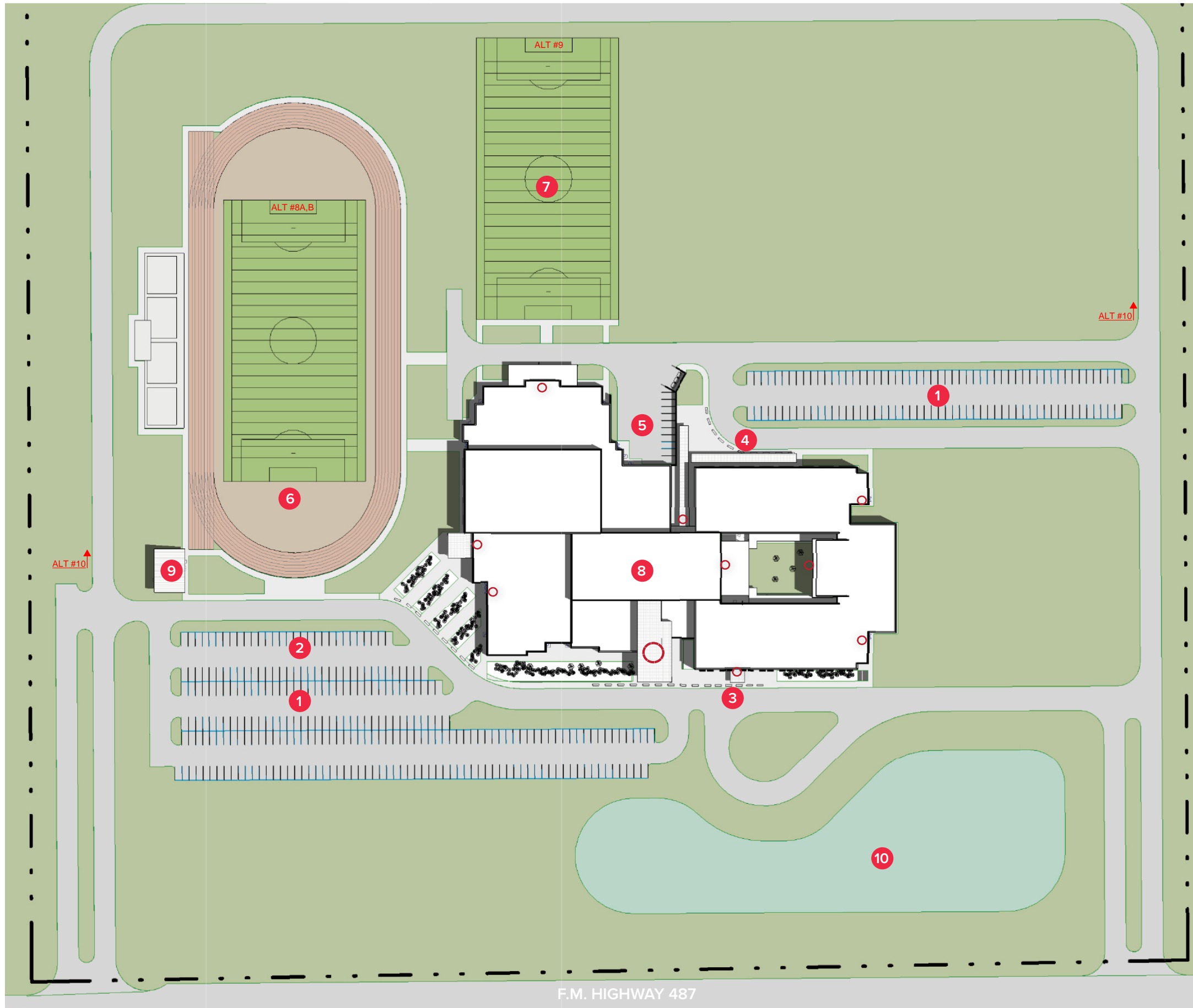


LINE TYPE LEGEND

-  NEW BUILDING
-  PARENT DROP-OFF
-  BUS DROP-OFF
-  PEDESTRIAN

SITE KEY PLAN





SITE COLOR LEGEND

- PAVEMENT / ROADS
- SIDEWALKS
- GRASS
- PLAYING FIELDS
- DETENTION POND
- TRACK/INFIELD
- BUILDINGS

SITE PLAN KEY

- MAIN ENTRY
- 1 STAFF/VISITOR PARKING
- 2 EVENT PARKING
- 3 BUS DROP OFF / PICK UP
- 4 PARENT DROP OFF / PICK UP
- 5 SERVICE YARD
- 6 TRACK AND FIELD
- 7 PRACTICE FIELD
- 8 MAIN BUILDING
- 9 FIELD HOUSE
- 10 DETENTION

SITE PLAN STATISTICS

ACREAGE
 SITE: 114 ACRES

PARKING
 SITE TOTAL: 380



PHYSICAL EDUCATION

SERVICE YARD

6TH GRADE CLASSROOMS

LIBRARY

EVENTS ENTRANCE

DINING

COURTYARD

FINE ARTS

ADMINISTRATION

VISITOR ENTRANCE

SPED CLASSROOMS

CTE CLASSROOMS

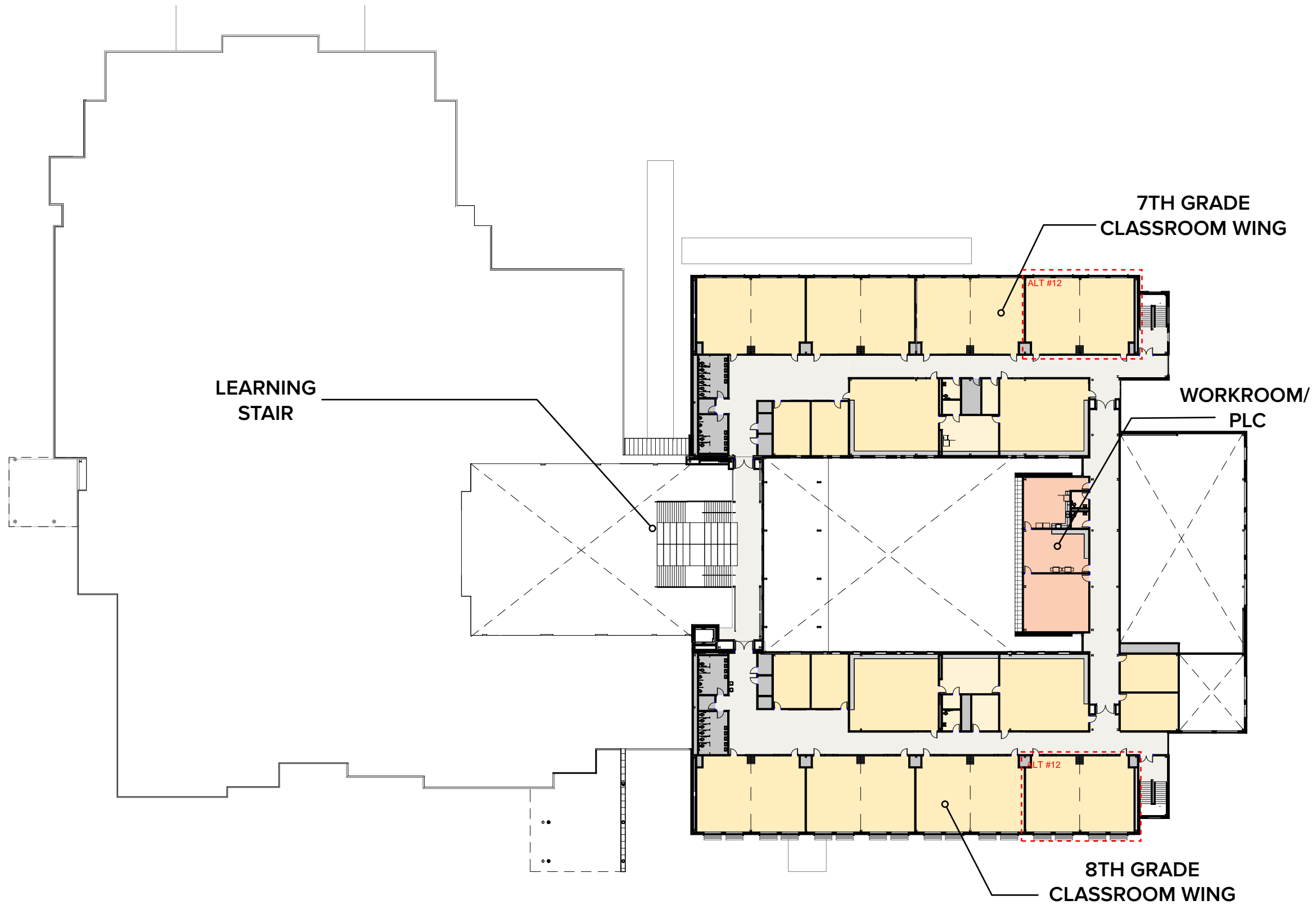
COLOR LEGEND

- ACADEMIC SPACE
- ACADEMIC SUPPORT
- ADMINISTRATION
- ADMINISTRATION SUPPORT
- ATHLETIC SPACE
- ATHLETIC SUPPORT
- CIRCULATION
- DINING
- DINING SUPPORT (KITCHEN)
- FINE ARTS
- FINE ARTS SUPPORT
- LIBRARY
- SUPPORT SPACE
- CTE CLASSROOMS



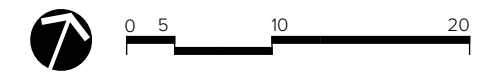
COLOR LEGEND

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- ACADEMIC SUPPORT
- ADMINISTRATION
- ADMINISTRATION SUPPORT
- ATHLETIC SPACE
- ATHLETIC SUPPORT
- CIRCULATION
- DINING
- DINING SUPPORT (KITCHEN)
- FINE ARTS
- FINE ARTS SUPPORT
- LIBRARY
- SUPPORT SPACE
- CTE CLASSROOMS



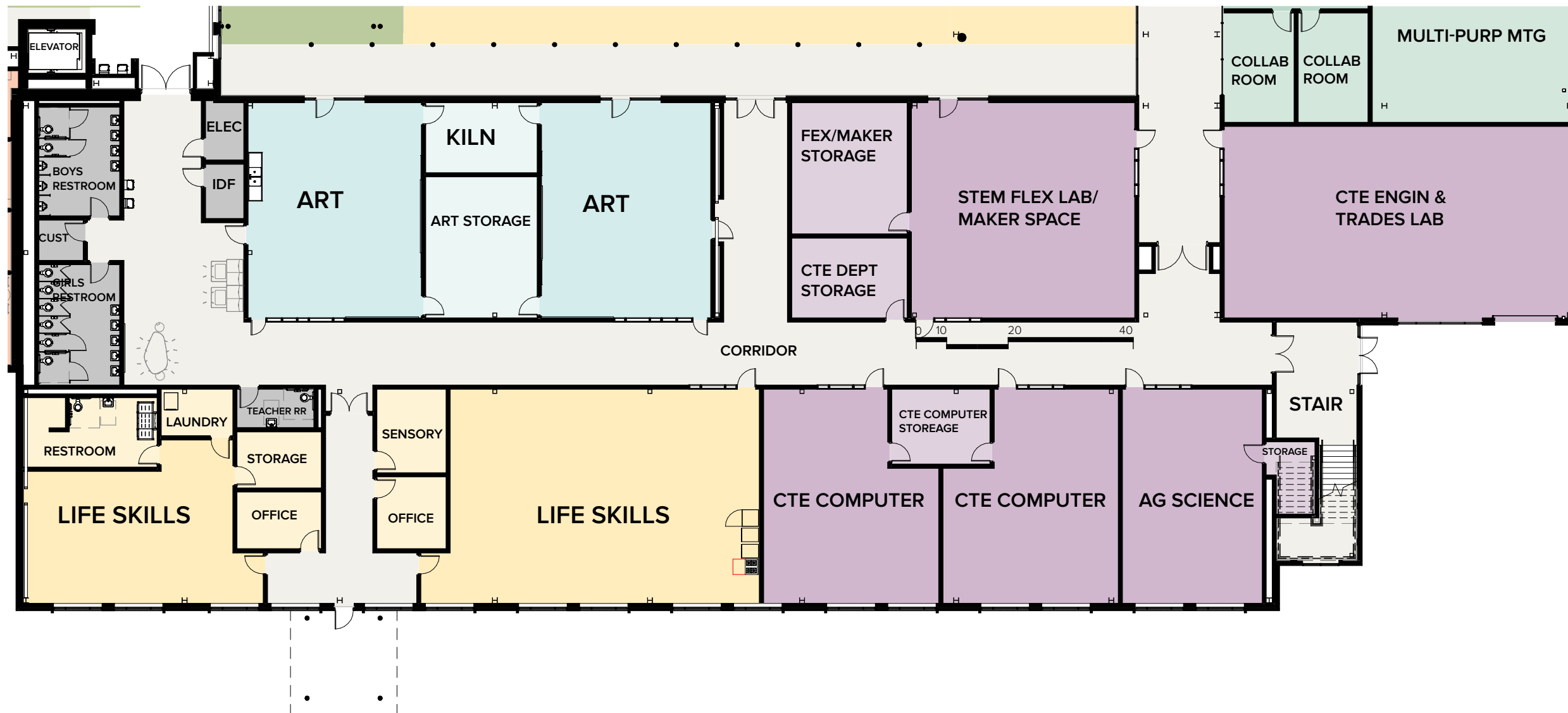
COLOR LEGEND

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- ACADEMIC SUPPORT
- ADMINISTRATION
- ADMINISTRATION SUPPORT
- ATHLETIC SPACE
- ATHLETIC SUPPORT
- CIRCULATION
- DINING
- DINING SUPPORT (KITCHEN)
- FINE ARTS
- FINE ARTS SUPPORT
- LIBRARY
- SUPPORT SPACE
- CTE CLASSROOMS



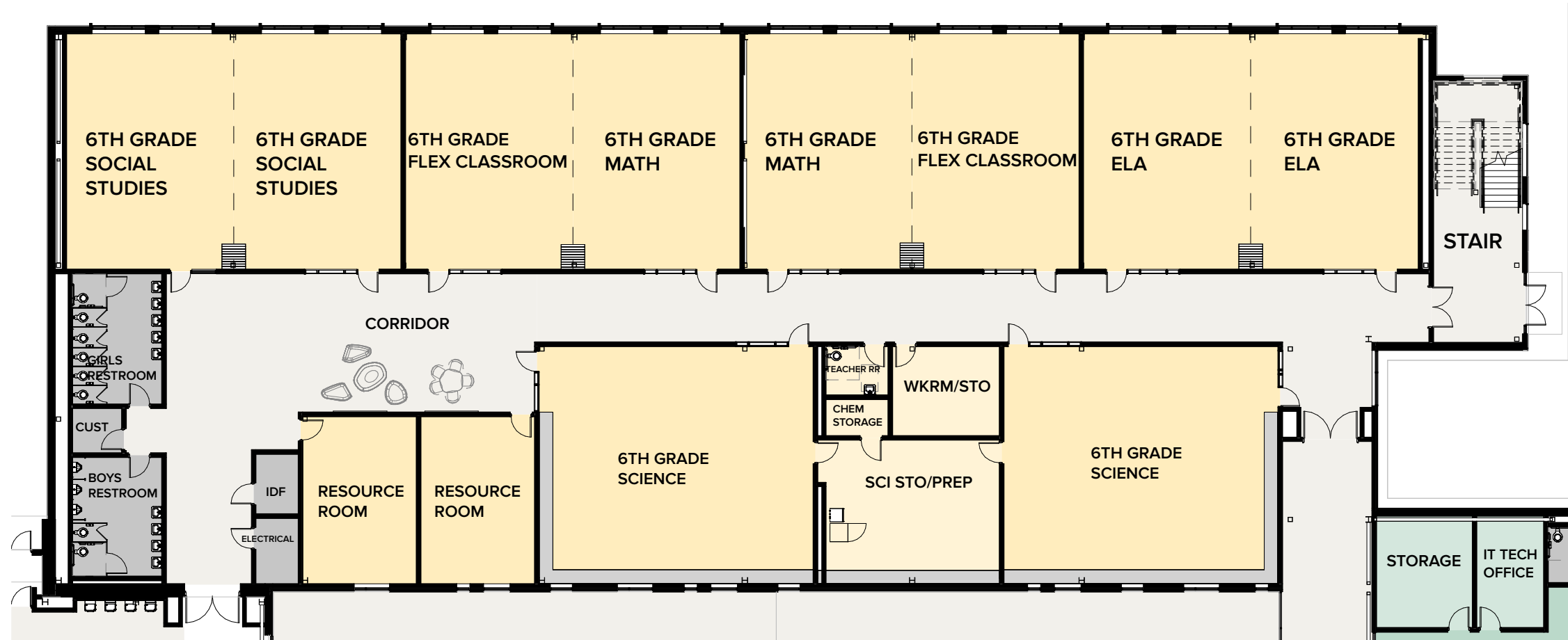
COLOR LEGEND

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- ACADEMIC SUPPORT
- ADMINISTRATION
- ADMINISTRATION SUPPORT
- ATHLETIC SPACE
- ATHLETIC SUPPORT
- CIRCULATION
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- FINE ARTS SUPPORT
- LIBRARY
- SUPPORT SPACE
- CTE CLASSROOMS



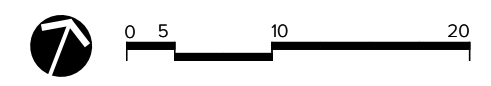
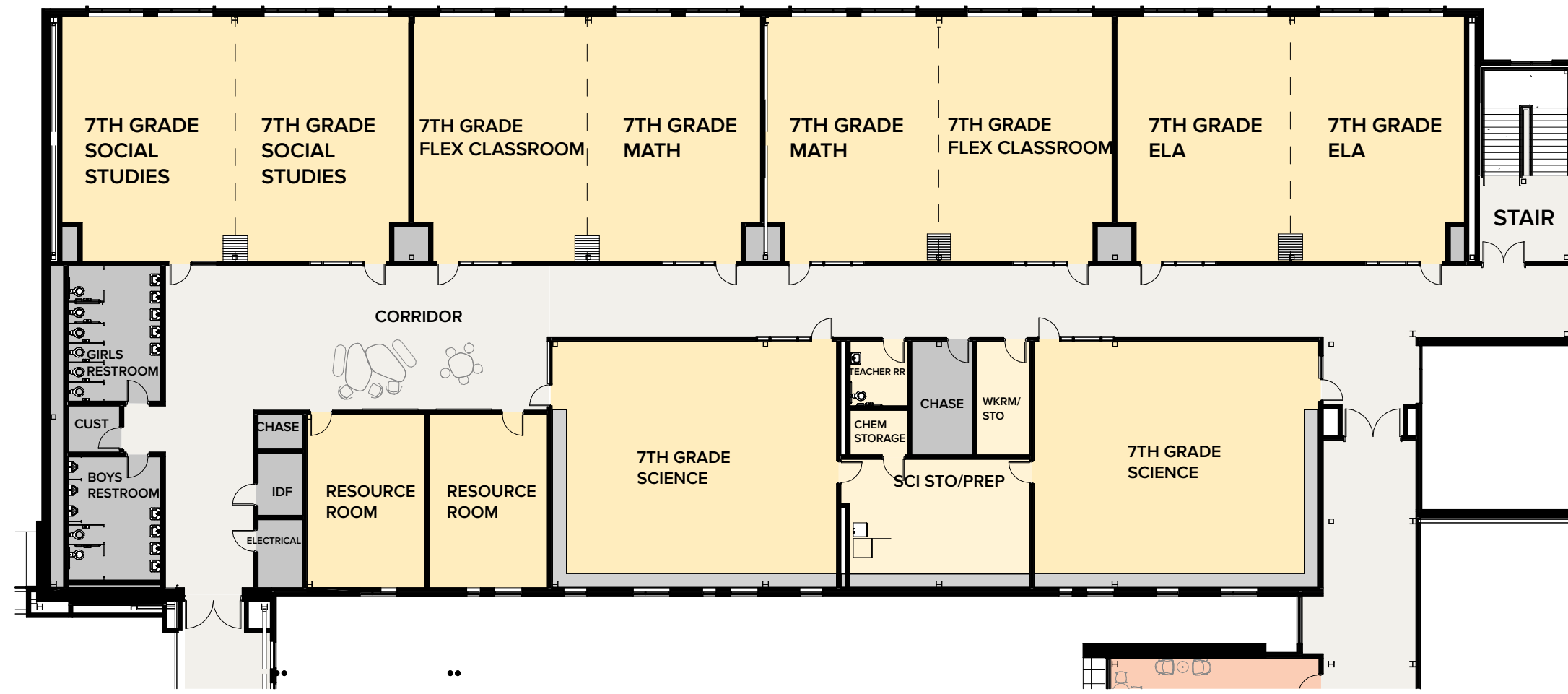
COLOR LEGEND

- ACADEMIC SPACE
- ACADEMIC SUPPORT
- ADMINISTRATION
- ADMINISTRATION SUPPORT
- ATHLETIC SPACE
- ATHLETIC SUPPORT
- CIRCULATION
- DINING
- DINING SUPPORT (KITCHEN)
- FINE ARTS
- FINE ARTS SUPPORT
- LIBRARY
- SUPPORT SPACE
- CTE CLASSROOMS



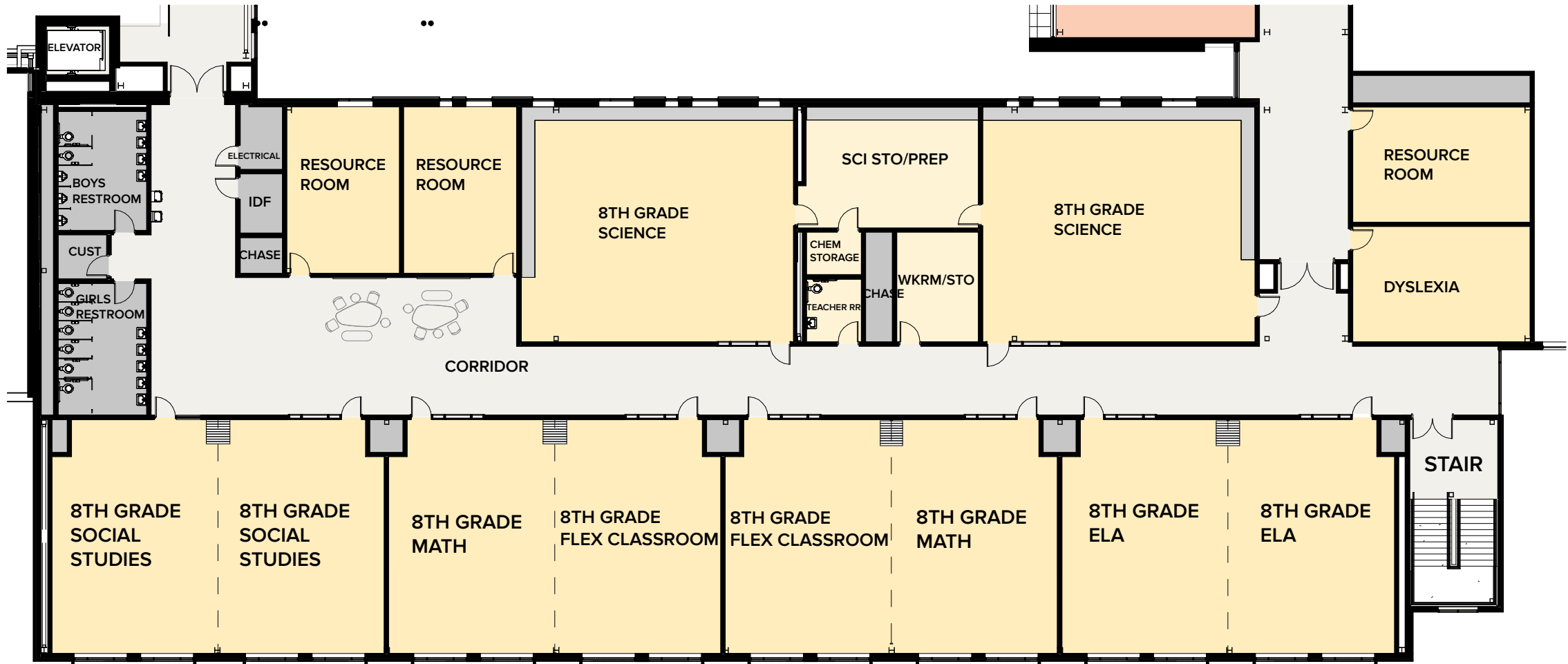
COLOR LEGEND

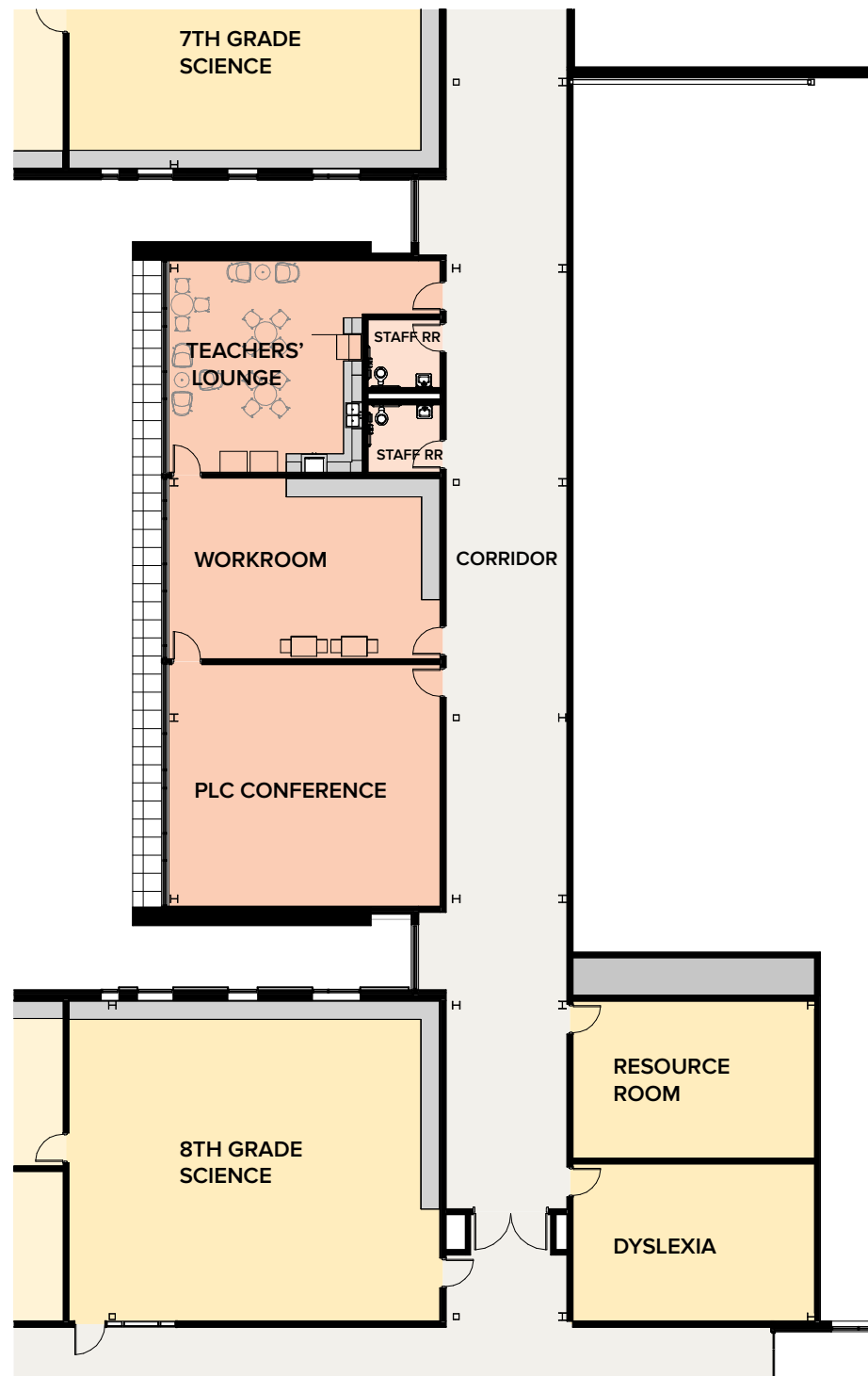
- ACADEMIC SPACE
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- ADMINISTRATION
- ADMINISTRATION SUPPORT
- ATHLETIC SPACE
- ATHLETIC SUPPORT
- CIRCULATION
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- DINING SUPPORT (KITCHEN)
- FINE ARTS
- FINE ARTS SUPPORT
- LIBRARY
- SUPPORT SPACE
- CTE CLASSROOMS



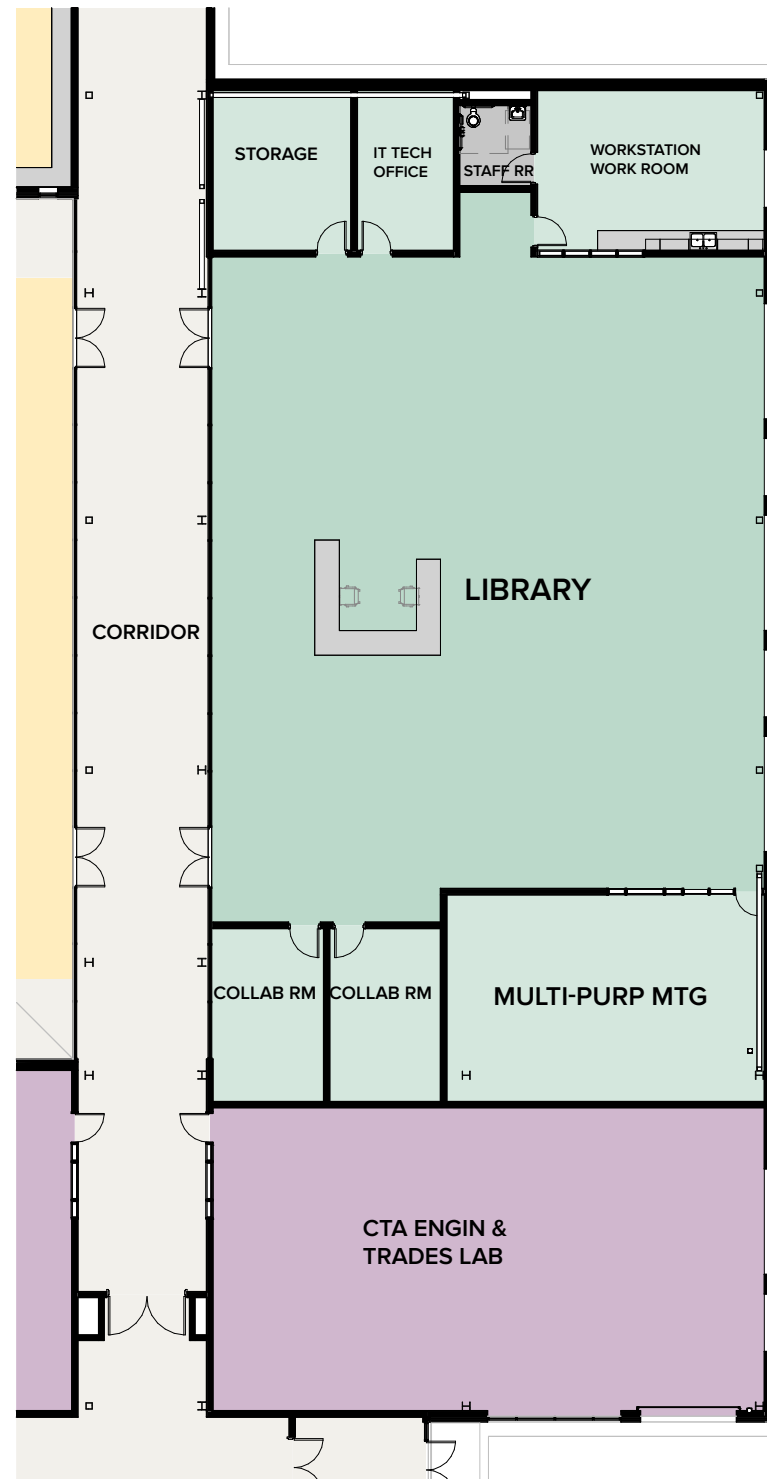
COLOR LEGEND

- ACADEMIC SPACE
- ACADEMIC SUPPORT
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- ADMINISTRATION SUPPORT
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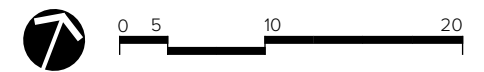
LEVEL 2



LEVEL 1

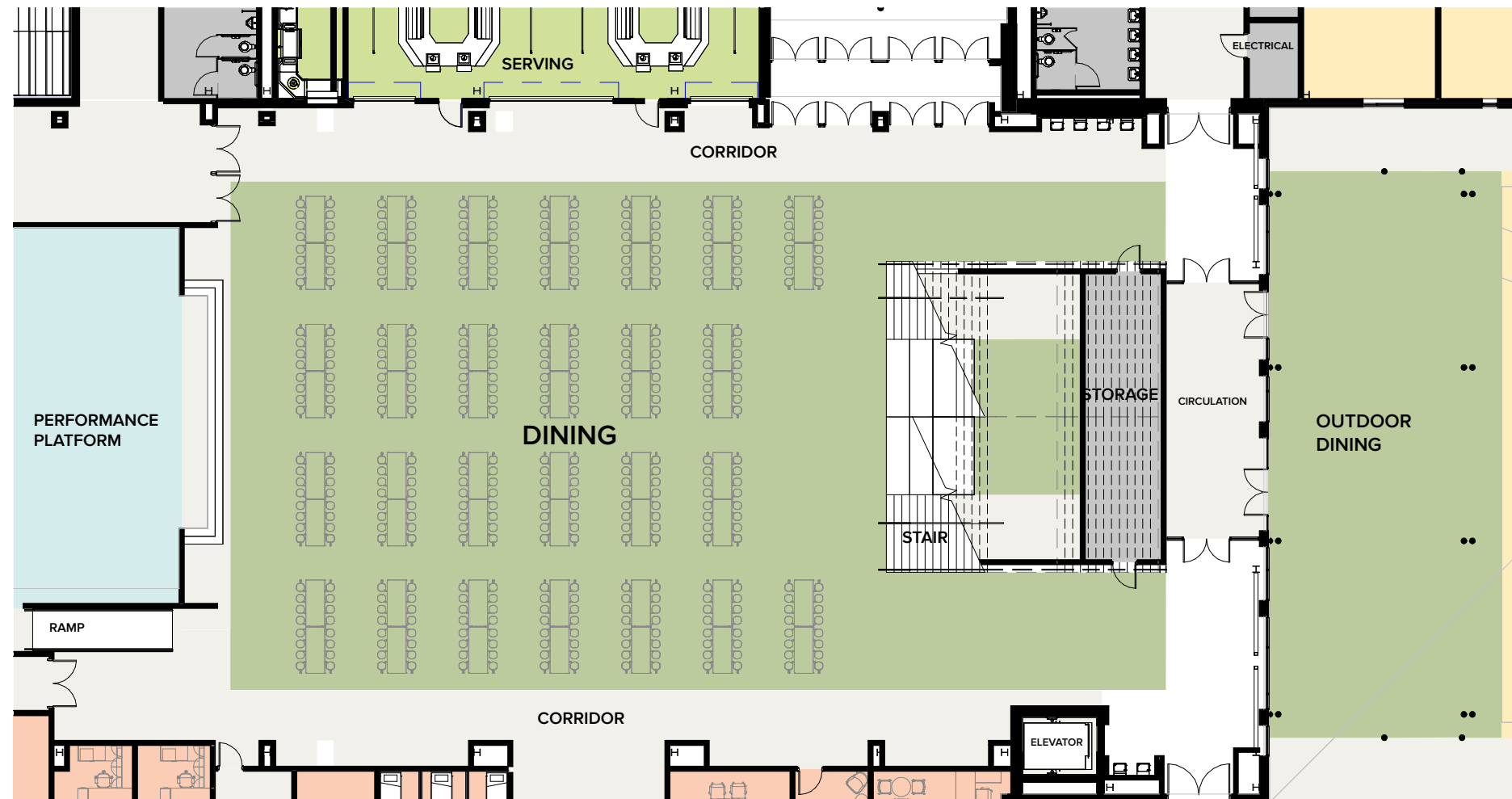
COLOR LEGEND

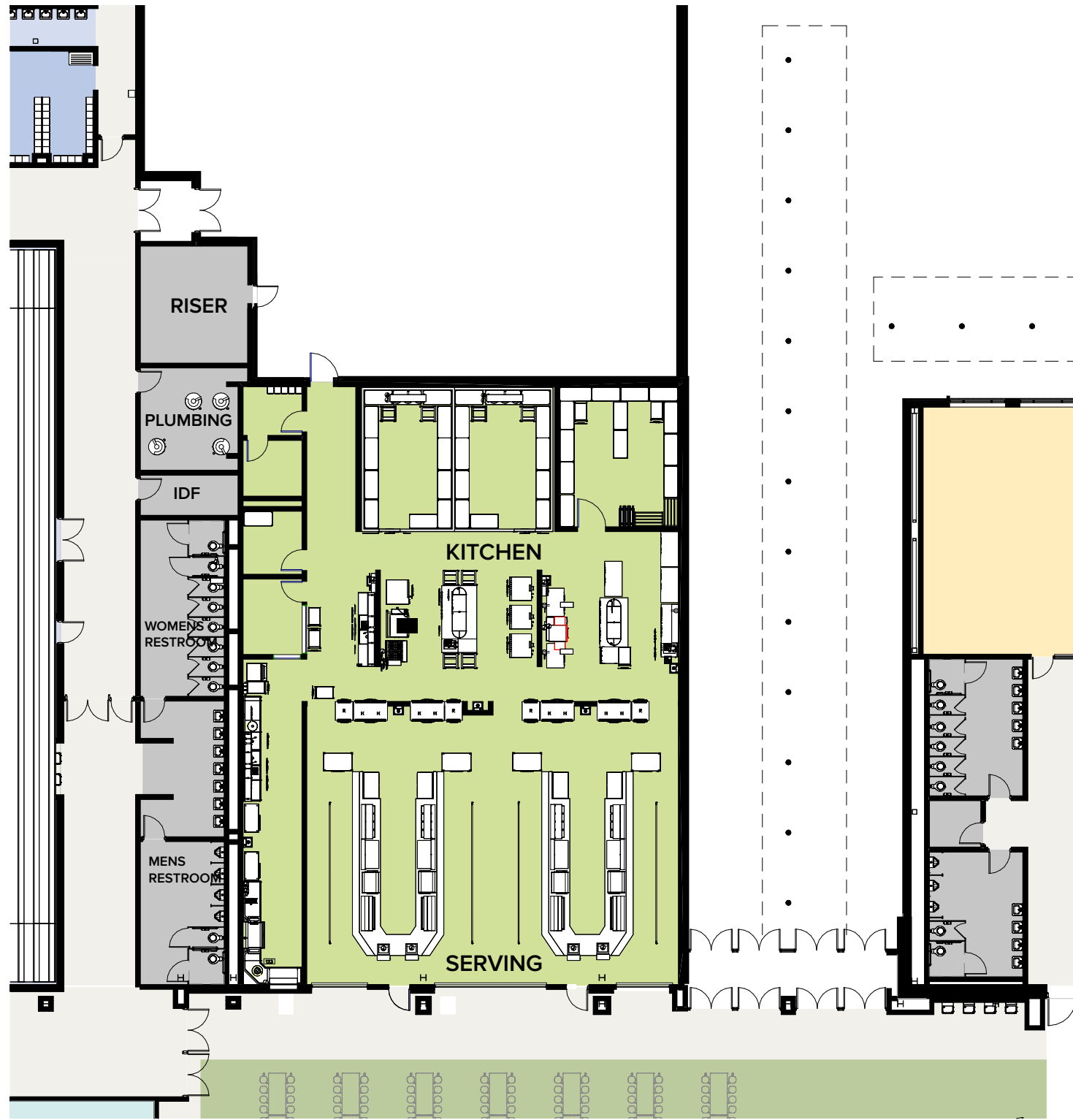
- ACADEMIC SPACE
- ACADEMIC SUPPORT
- ADMINISTRATION
- ADMINISTRATION SUPPORT
- ATHLETIC SPACE
- ATHLETIC SUPPORT
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- FINE ARTS SUPPORT
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- SUPPORT SPACE
- CTE CLASSROOMS



COLOR LEGEND

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COLOR LEGEND

- ACADEMIC SPACE
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- CTE CLASSROOMS





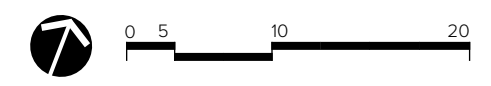
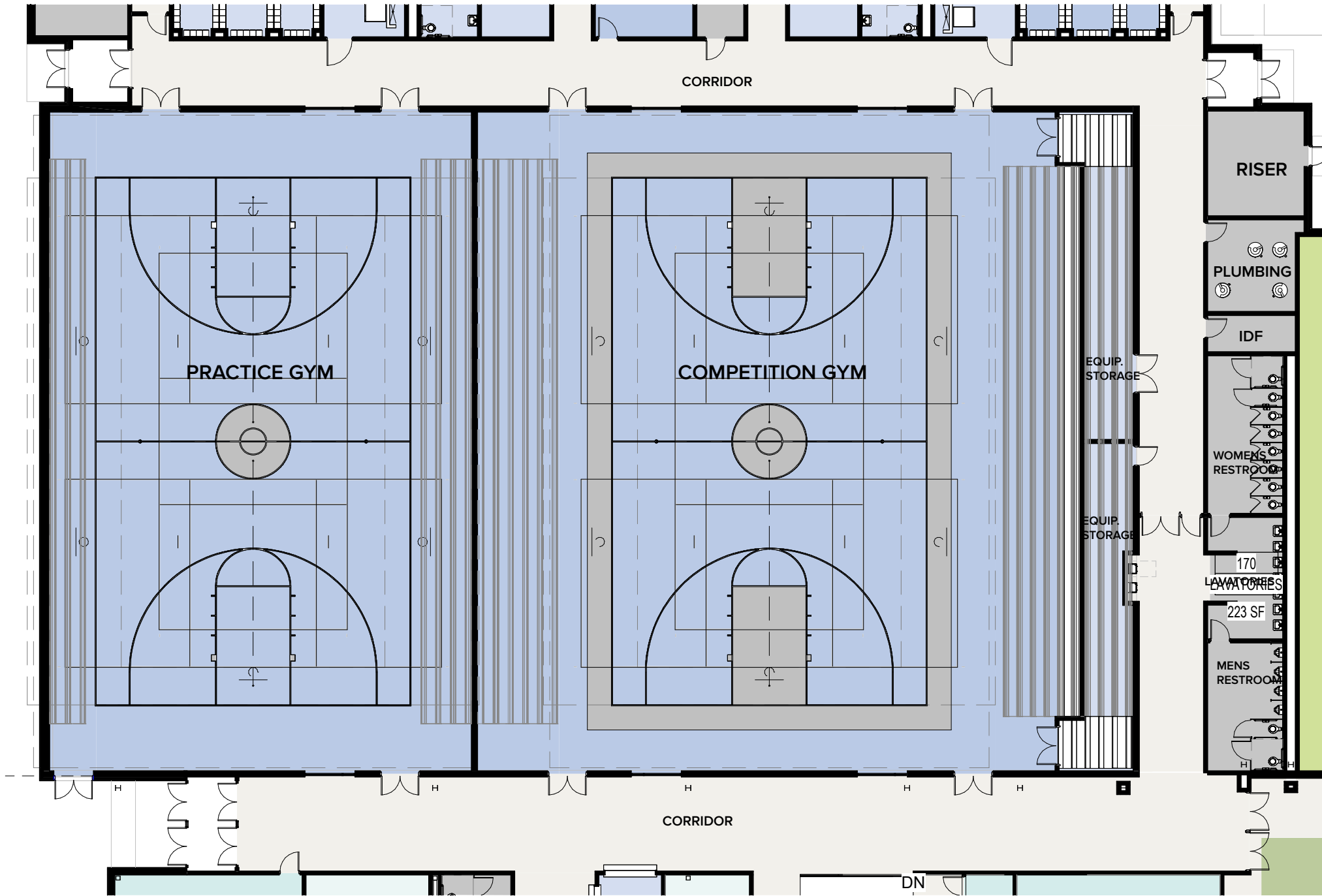
COLOR LEGEND

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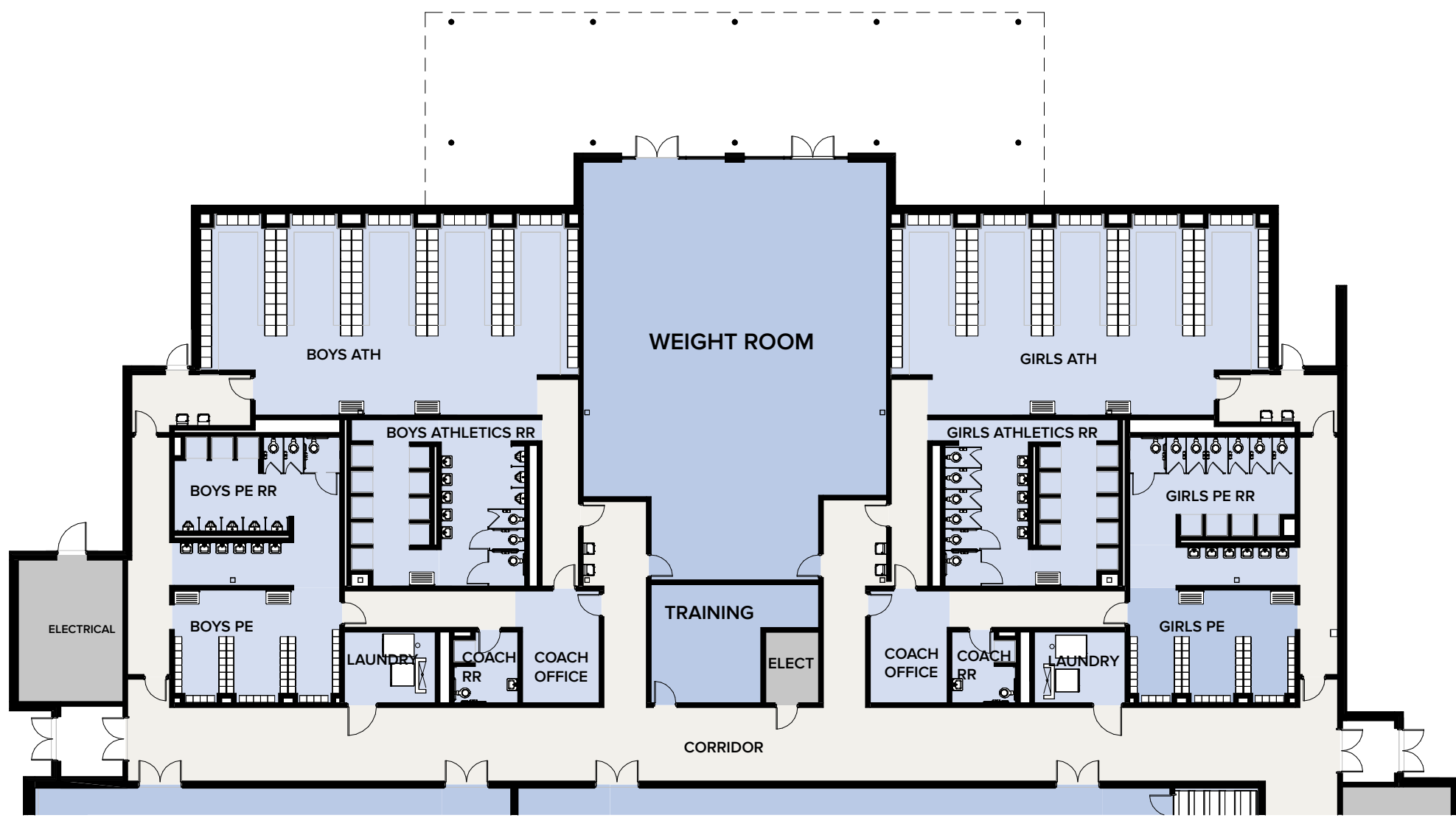
COLOR LEGEND

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Huckabee

NEW MIDDLE SCHOOL #2 | JARRELL INDEPENDENT SCHOOL DISTRICT
NOT FOR REGULATORY APPROVAL, PERMITTING OR CONSTRUCTION. MICHAEL A. MOROW TX #25557

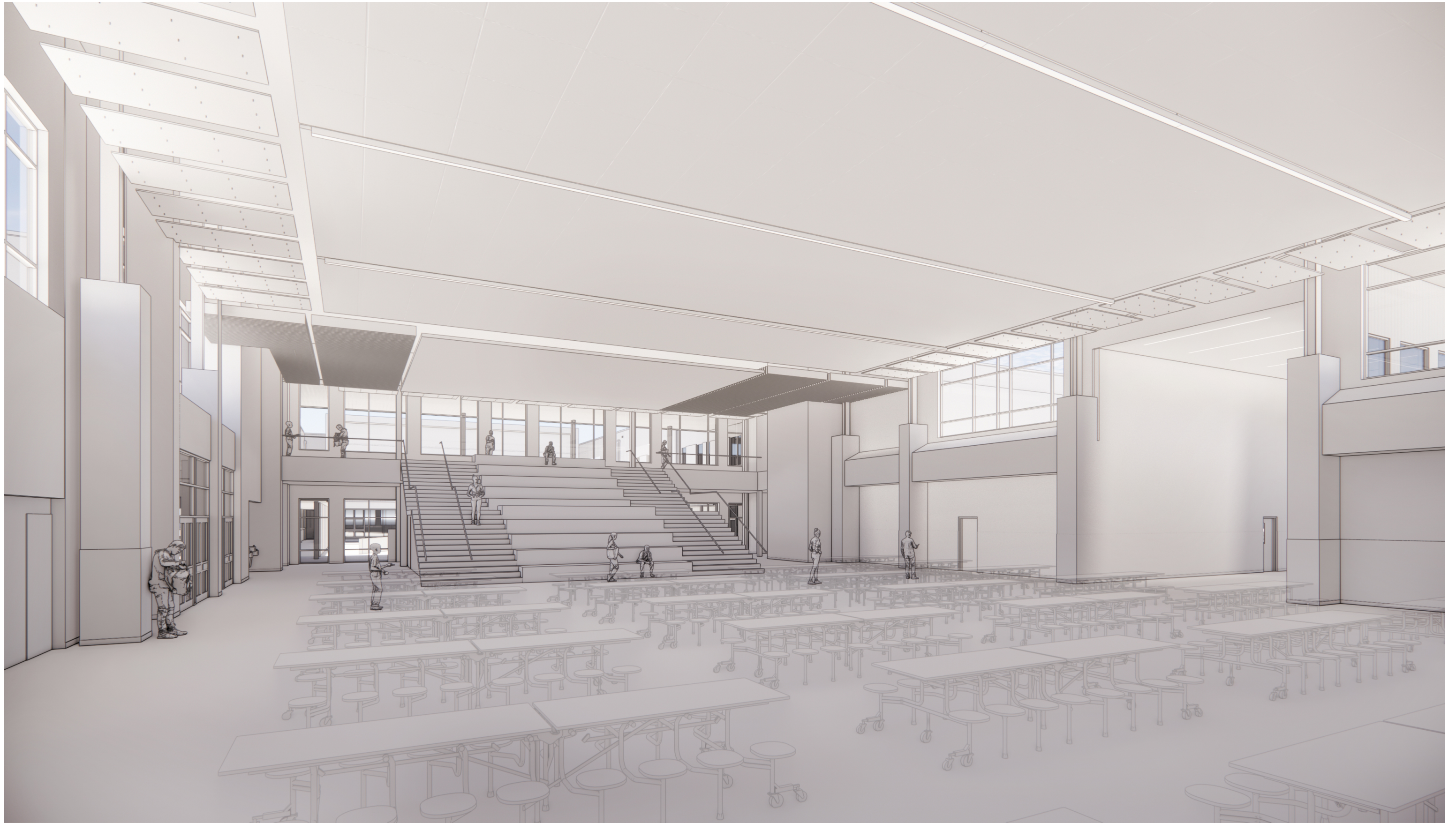
MAIN ENTRY
EXTERIOR PERSPECTIVES









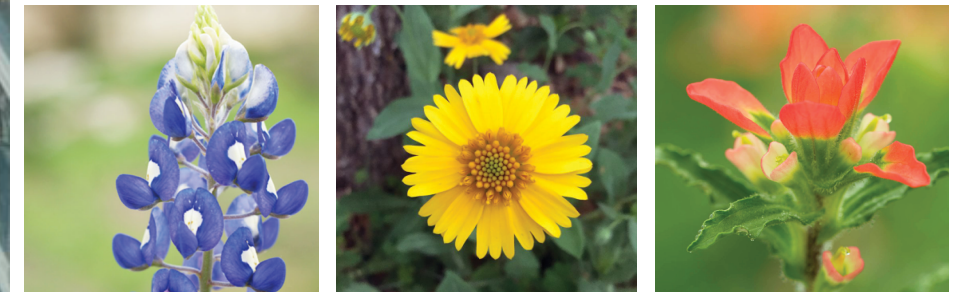


JARRELL NEW MIDDLE SCHOOL 2

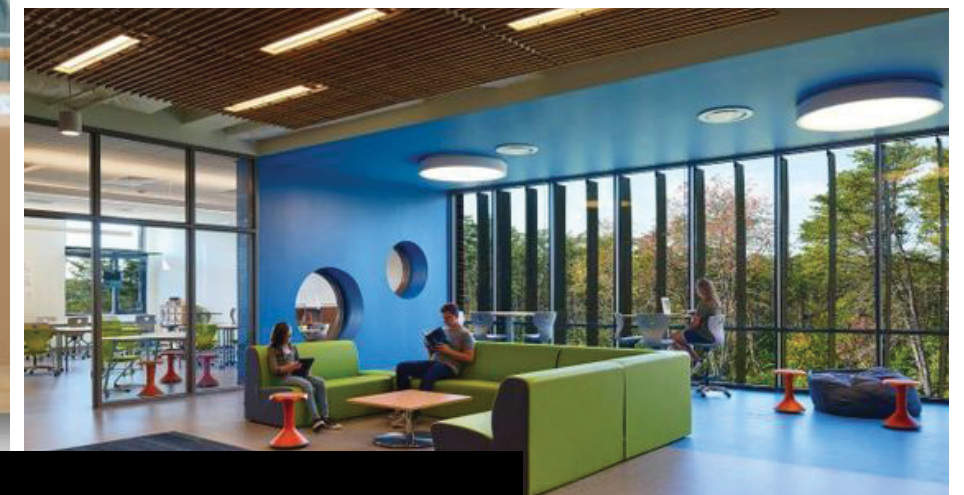
EMPOWERED



REGIONAL



CONNECTED



INSPIRED

Huckabee

NEW MIDDLE SCHOOL #2 | JARRELL INDEPENDENT SCHOOL DISTRICT
NOT FOR REGULATORY APPROVAL, PERMITTING OR CONSTRUCTION. MICHAEL A. MOROW TX #25557

INTERIOR DESIGN INSPIRATION + MATERIALITY

JARRELL NEW MIDDLE SCHOOL 2 VISION

ATHLETICS

CTE

FINE ARTS



BRIGHT & OPEN
ADAPTABLE



OUTDOOR ACCESS
SPACIOUS
FLEXIBLE
COLLABORATIVE
CONNECTED



VARIETY OF MATERIALS & TEXTURES
SPACIOUS GYM LOBBY
DIFFERENT LINES OF SIGHT

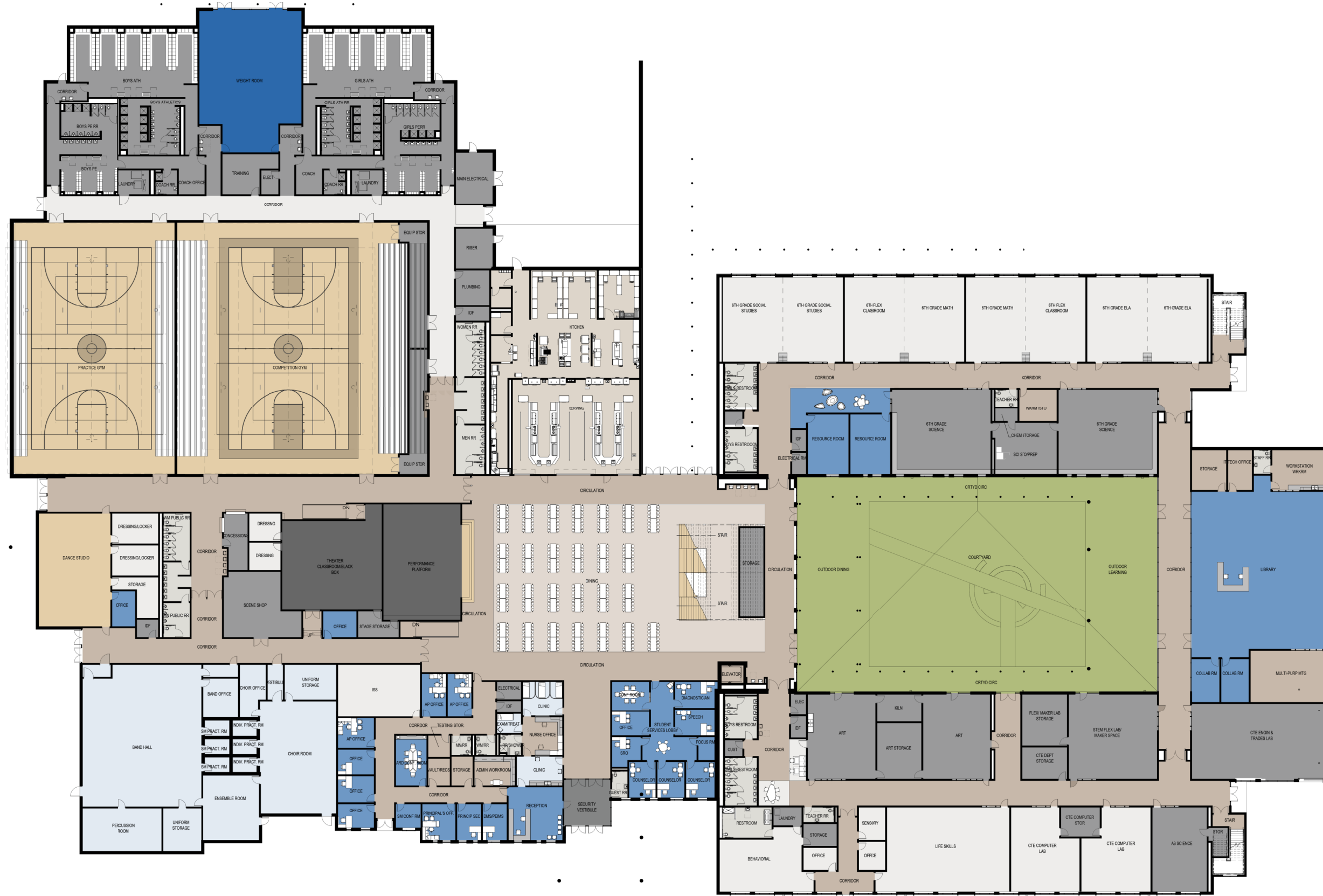
INTERIOR DESIGN VISIONING

Huckabee

NEW MIDDLE SCHOOL #2 | JARRELL INDEPENDENT SCHOOL DISTRICT
NOT FOR REGULATORY APPROVAL, PERMITTING OR CONSTRUCTION. MICHAEL A. MOROW TX #25557

FINISH PLAN - LEVEL 1

FINISH LEGEND



- WOOD LOOK LVT
- DINING LVT
- LVT (CLASSROOM)
- CARPET
- WALK-OFF CARPET
- WOOD FLOORING
- TURF
- QUARTZ TILE
- SEALED CONCRETE
- RESINOUS FLOORING (ATHLETICS)
- ATHLETIC FLOORING
- STAGE FLOORING
- TILE (RESTROOMS)
- RESINOUS FLOORING (KITCHEN)

FINISH PLAN - LEVEL 2

FINISH LEGEND



- WOOD LOOK LVT
- DINING LVT
- LVT (CLASSROOM)
- CARPET
- WALK-OFF CARPET
- WOOD FLOORING
- TURF
- QUARTZ TILE
- SEALED CONCRETE
- RESINOUS FLOORING (ATHLETICS)
- ATHLETIC FLOORING
- STAGE FLOORING
- TILE (RESTROOMS)
- RESINOUS FLOORING (KITCHEN)



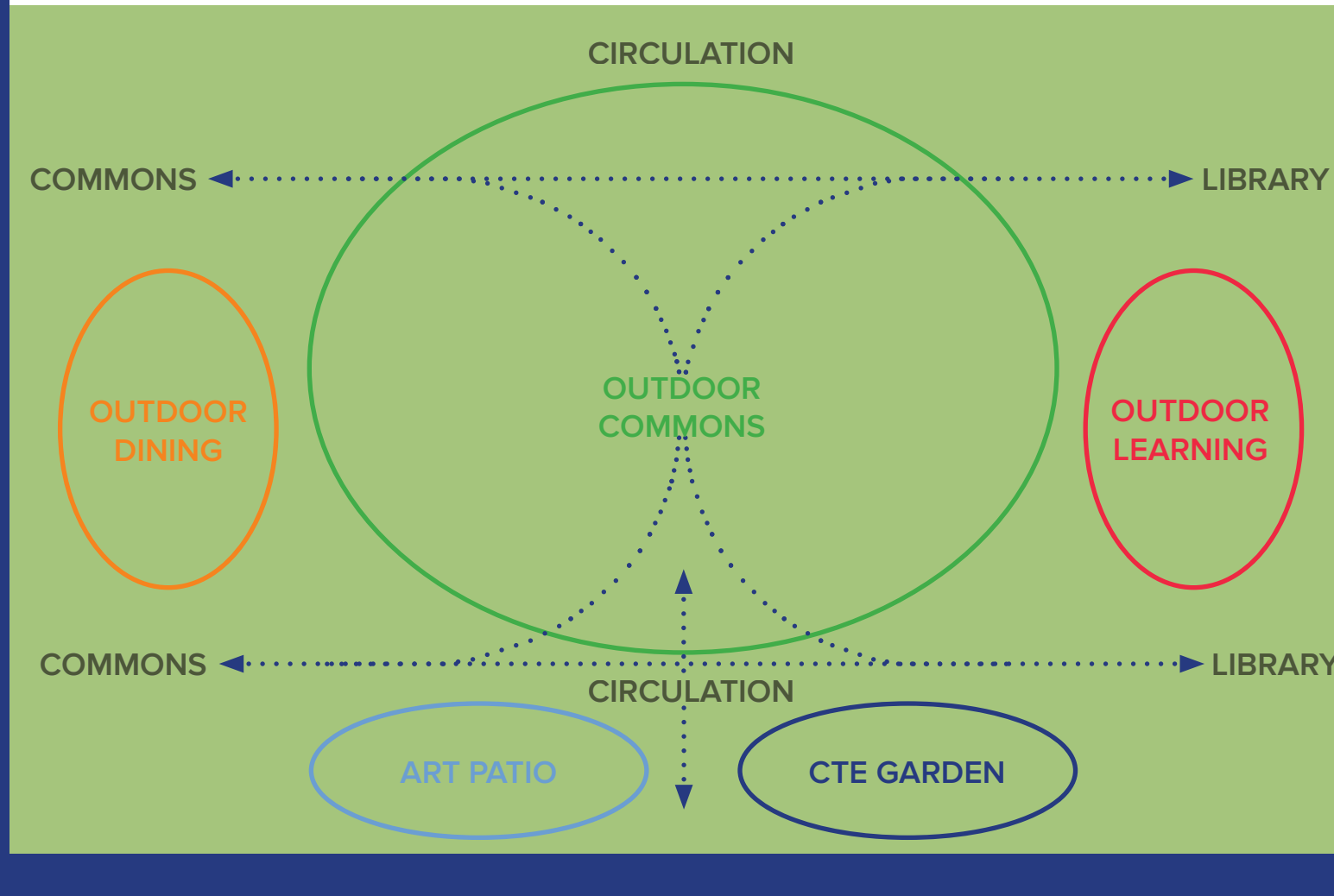
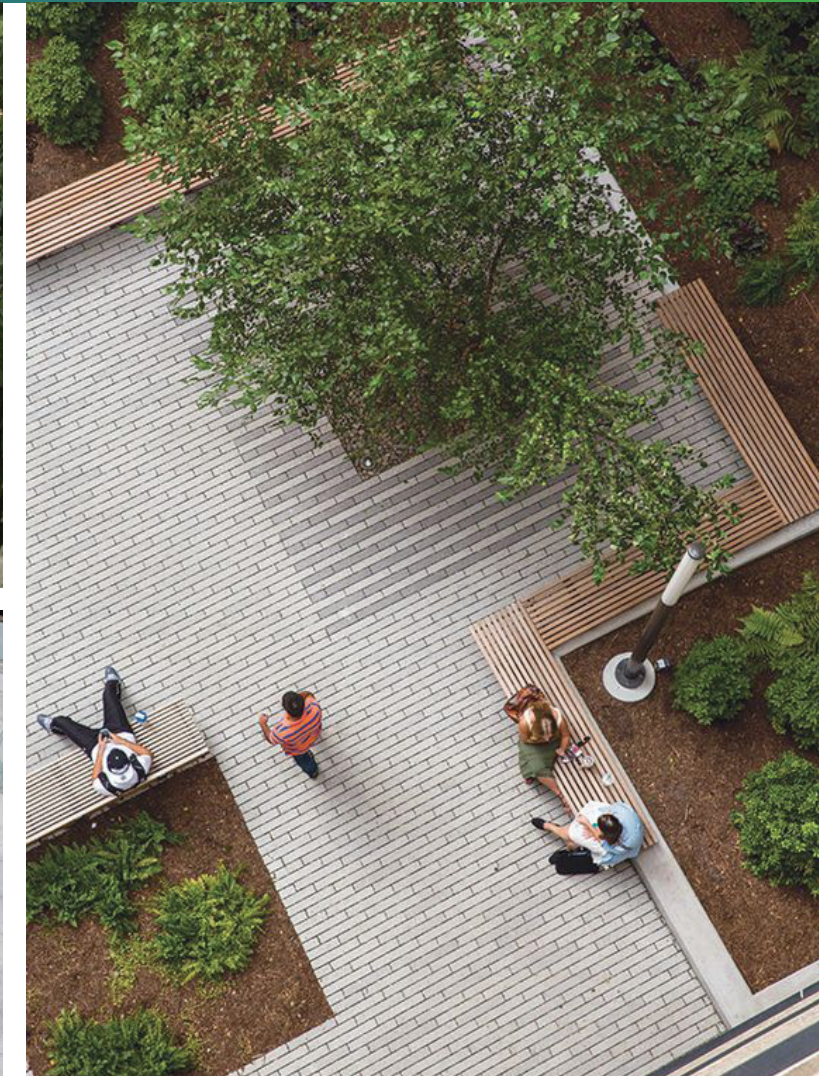
COURTYARD

COURTYARD CONCEPTS

OPEN
CONNECTION TO NATURE
SECURE
INVITING
EASY TO MAINTAIN
FLEXIBLE
ACCESSIBLE

COURTYARD PROGRAM

OUTDOOR DINING
OUTDOOR LEARNING
OUTDOOR READING AREAS
CTE RAISED GARDENS
ART PATIOS
RELAXATION AREAS
COMMUNITY MOVIE NIGHT





JARRELL INDEPENDENT SCHOOL DISTRICT
NEW MIDDLE SCHOOL #2

BOND CONSTRUCTION BUDGET + CONTINGENCY:

\$75,040,000

OPINION OF PROBABLE COST

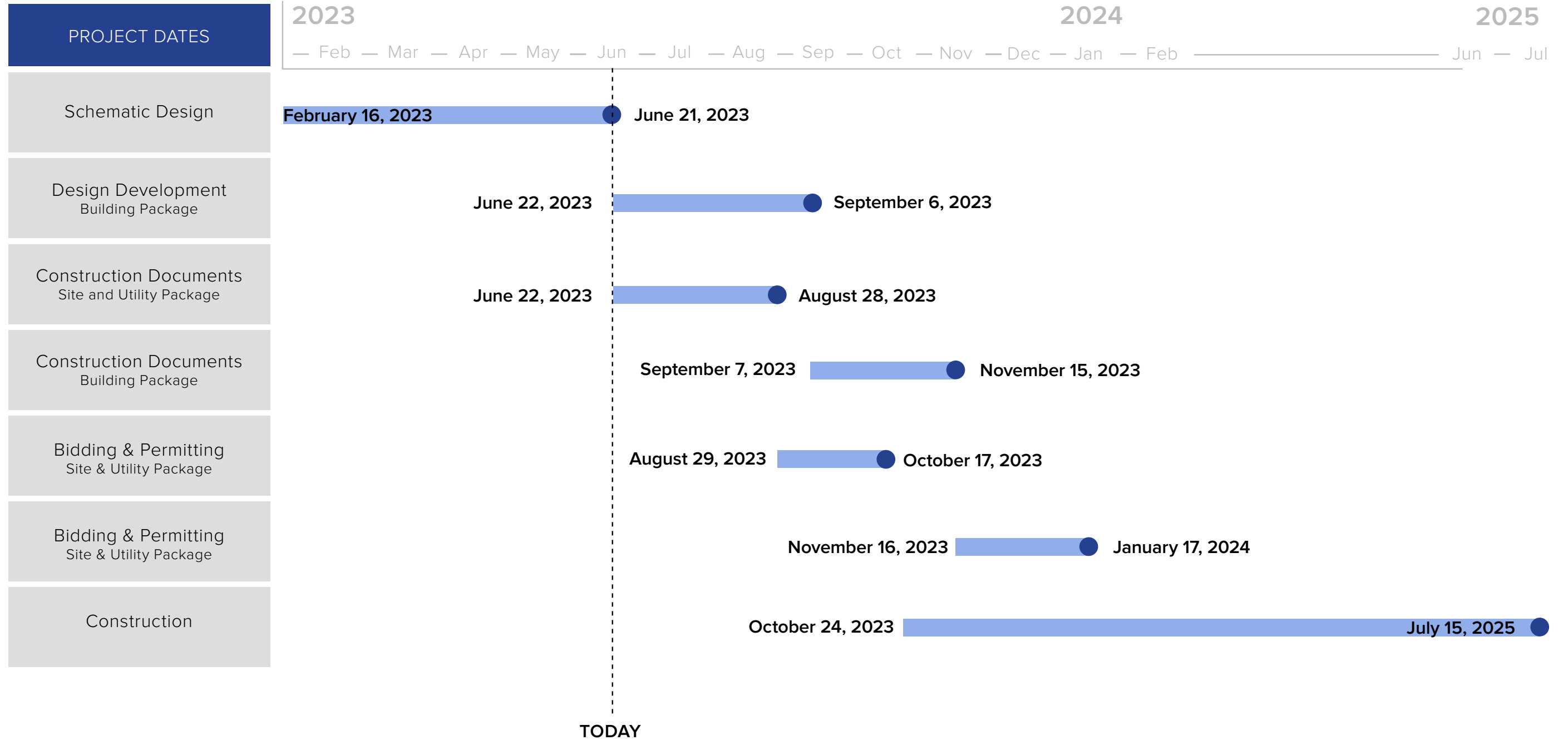
\$74,657,339

(BEGINNING CONSTRUCTION OCTOBER 2023)

ALTERNATE #1:	OPERABLE PARTITIONS AT CLASSROOMS.....	\$491,891
ALTERNATE #2:	PREMANUFACTURED CANOPIES AT CAR LOOP.....	\$287,027
ALTERNATE #3:	VISITOR BLEACHERS AT COMPETITION AND PRACTICE GYMNASIUMS.....	\$118,558
ALTERNATE #4:	100 18X18 ATHLETIC LOCKERS, 114 12X12 PE LOCKERS.....	\$53,461
ALTERNATE #5:	4TH SERVING LINE AND DOUBLE PIZZA OVEN FOODSERVICE.....	\$172,973
ALTERNATE #6:	PRACTICE GYMNASIUM.....	\$2,863,763
ALTERNATE #7:	SHELL SPACE FOR ONE ART ROOM AND ONE COMPUTER LAB.....	\$66,465
ALTERNATE #8A:	SHOCK PAD AT SPORT FIELD.....	\$162,162
ALTERNATE #8B:	TURF GRASS IN LIEU OF SYNTHETIC TURF AT COMPETITION FIELD.....	\$540,540
ALTERNATE #9:	PRACTICE FIELD.....	\$182,582
ALTERNATE #10:	PARENT LOOP DRIVE EXTENSION AT NORTH SIDE OF SITE.....	\$480,080
ALTERNATE #11:	DANCE STUDIO SUITE.....	\$621,304
ALTERNATE #12:	6 FLEX CLASSROOMS (2 PER GRADE LEVEL).....	\$1,449,711



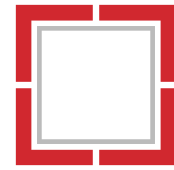
JARRELL INDEPENDENT SCHOOL DISTRICT
NEW MIDDLE SCHOOL #2





DISTRICT PROJECT MEETINGS TO DATE IN 2023

Month	Date	Meeting Details
MARCH	2ND	<ul style="list-style-type: none"> Preliminary Review of Educational Vision per LRP Document <i>Attendees: Core Leadership Team</i>
	9TH	<ul style="list-style-type: none"> Group (Macro) Vision Discovery kick off meeting with design vision committee: Yesterday. Today. Tomorrow <i>Attendees: Design Vision Committee, included leadership, Faculty and Staff, Students, Parents, Community Members, Business Owners</i>
	10TH	<ul style="list-style-type: none"> Tours of relevant and precedent educational facilities/environments
	16TH	<ul style="list-style-type: none"> JISD Weekly Meeting with Huckabee
	23RD	<ul style="list-style-type: none"> Group (macro) Vision Discovery follow up meeting/exploration: Vision Boards <i>Attendees: Design Vision Committee, included leadership, Faculty and Staff, Students, Parents, Community Members, Business Owners</i>
	29TH	<ul style="list-style-type: none"> Departmental meetings on Middle School instructional needs <i>Attendees: Middle School faculty and staff, included MS and District Administration</i>
APRIL	6TH	<ul style="list-style-type: none"> Visit and Review Feedback with District Leadership <i>Attendees: Core Leadership Team</i>
	13TH	<ul style="list-style-type: none"> Design Charrette and Site layout <i>Attendees: Core Leadership Team, and select MS faculty and staff</i>
	20TH	<ul style="list-style-type: none"> JISD Project Update
	27TH	<ul style="list-style-type: none"> JISD Weekly Meeting with Huckabee
MAY	4TH	<ul style="list-style-type: none"> JISD Weekly Meeting with Huckabee
	11TH	<ul style="list-style-type: none"> JISD Schematic Design Update
	18TH	<ul style="list-style-type: none"> JISD Weekly Meeting with Huckabee
	25TH	<ul style="list-style-type: none"> JISD Weekly Meeting with Huckabee
JUNE	1ST	<ul style="list-style-type: none"> JISD Weekly Meeting with Huckabee
	5TH	<ul style="list-style-type: none"> Materials and Finishes Design Meeting
	7TH	<ul style="list-style-type: none"> JISD Board Update



MORE THAN ARCHITECTS