Huckabee

KILLEEN INDEPENDENT SCHOOL DISTRICT

ELEMENTARY SCHOOL #36

DECEMBER 10, 2019

SCHEMATIC DESIGN PRESENTATION

NOT FOR REGULATORY APPROVAL, PERMITTING OR CONSTRUCTION. NATALIE WELCH TX - 26186

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KILLEEN INDEPENDENT SCHOOL DISTRICT
ELEMENTARY SCHOOL #36

Superintendent

Dr. John Craft

District Board Members

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

District Leadership

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

Project Design Team

Huckabee - Austin, Texas

Jason Andrus, AIA	Natalie Welch, AIA	Michael Hall, AIA
Principal	Associate Principal	Design Director
Mike Vermeeren, AIA	Julia Sherr, AIA	Kelly Blackwell, AIA
Planning	Project Leader	Architect
Pooja Shetty	Caitlin Terwelp	
Architectural Associate	Interior Design Associate	

Civil Engineering & Surveying

Kimley-Horn

Austin, Texas

MEP Engineering

IEG

Westlake, Texas

Structural Engineering

Huckabee

Houston, Texas

Technology/Security

Crux Solutions

Fort Worth, Texas

Foodservice

FDP

San Antonio, Texas

Roofing

Engineered Exteriors

Austin, TX

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Project Introduction
Killeen ISD New Elementary School #36 will be located off Azura Way in Southwest Killeen west of Clear Creek Rd and North of Mohawk. This school will be within to the McGregor Estates master-planned neighborhood south of the Estancia West neighborhood. This school will serve 1,050 students and will consist of classrooms for Pre-K through 5th grades, Special Education, Library, Computer Labs, Science Labs, Music, Gym/Activity Room, and a Cafeteria with a performance platform.

Site
The site is approximately 12.945 acres within the planned McGregor Estates Subdivision and slopes moderately from north to south. The site is bound by McGregor Loop to the north, south, and west. Azura Way is located to the east of the site.

Access and Site Circulation
Elementary #36 will have three curb cuts. The curb cut off Azura Way will be dedicated for parent pick up and drop off. The second curb cut, south of the elementary school will be solely for pick up and drop off for special needs students. The third curb cut to the west of the school will be for bus loading and unloading. All queuing is anticipated to be contained within the school driveways with some potential overflow onto Azura Way. The three separate curb cuts will allow for smooth site circulation. The truck dock will be accessed by the same curb cut as the buses.

Drainage and Storm Water
The overall development will provide an offsite detention pond sized for the proposed school. Onsite stormwater will be captured in inlets and piped to the storm pipe stubbed-out to the property. City of Killeen requires stormwater Storm Water Best Management Practices (BMPs) to satisfy storm water quality requirements. The design team is coordinating with the developer regarding how these credits will be met for the overall development.

Pavement
Based on Killeen ISD's preferences, all onsite drives and parking lots will be concrete. A geotechnical report will provide recommendations for pavement and subgrade thickness.

Landscape Design
Based on Killeen ISD's preferences the project site will be landscaped meeting minimum City of Killeen ordinances while only using plant species from the approved KISD plant list. Based on the property having street frontage on all four sides, it is anticipated that a significant number of trees will be required by the City. The majority of the site is anticipated to be covered with drought tolerant sod with permanent irrigation.

Building Design
New Elementary School #36 will be a two-story plan sited near the middle of the site with generous space for site amenities such as parking, queuing, playgrounds, and playfield space.

The floor plan is similar to Pershing Park/ Sugar Loaf Consolidated ES with differences in structural systems, exterior wall types, and minor plan adjustments to accommodate structure. The walls will be clad in stone, brick, and wood look composite accent with dark bronze trim and frames. The interior palette consists of wood look LVT with accents throughout. Other materials include porcelain wall tile, carpet, acoustic ceilings, and wood ceiling accents.

Air Barrier Design
Fluid applied air barrier system will be provided at all exterior surfaces, including masonry backup walls and exterior wall sheathing. Air barrier system will be provided that is continuous at all intersections with roofing, perimeter sealants at window openings, and waterproofing. Fluid applied air barrier system shall be Carlisle Barritech VP or approved equal.

Roof Design
Low slope roofs shall consist of 80 mil PVC-KEE single ply roof membrane, fully adhered. The substrate shall be unfaced gypsum roofing coverboard, ½" thickness. Rigid polyisocyanurate insulation board to be installed to achieve a minimum LTTR thermal resistance rating of 25ci in accordance with 2015 IECC Table C402.1.3. Tapered insulation shall be provided where required to provide ¼" per foot finished roof slope at flat decks, crickets around drains, and at the upslope sides of equipment curbs.

Acoustical Design
Although not required, KISD has directed the design team to proceed with designing the building to meet FAA acoustical requirements. At this time, the project is being designed to meet the Fort Hood Installation Compatible Use Zone Study (November 2017) NZII 70-75 (30dba reduction) criteria.

An alternate roof system, that may be considered for increased acoustical properties, consists of cellular lightweight insulating concrete (LWIC) in lieu of the rigid insulation and gypsum roofing coverboard noted above.

Provide Two-Year Contractor's Warranty for materials and installation. Provide Roof Manufacturer's 30-Year No Dollar Limit (NDL) System Warranty. The Guarantee shall be transferable. Provide coverage for hail damage in specified warranty.

Structural
The building design is in accordance with the requirements of the following Construction Industry Codes and Specifications:

- o International Code Council, International Building Code (IBC) 2018
- o American Society of Civil Engineers. ASCE 7-16, Minimum Design Loads for Buildings and Other Structures
- o The structure will be designed in accordance with all applicable building codes associated with IBC 2018.

• Foundation System: Design is pending per recommendations provided in the geotechnical report as well as final decisions made in the geotechnical conference.
• Framing System: The building is comprised of a mix of load bearing masonry, cold formed metal framing curtain walls, and steel framing.
• Second-Floor Framing: The second-floor framing consists of 5" total thickness of normal weight concrete on 2" composite steel deck. The second-floor slab will be supported by steel beams designed to act compositely with the concrete slab.
• Roof Framing Systems: The roof framing consists of steel bar joists typically spaced at approximately 6'-0" on center. The 1.5" deep, 20 gage (minimum) steel roof deck is supported by the bar joists and serves as the roof diaphragm as part of the lateral support system.

Mechanical

• The HVAC system will be designed to provide cooling and heating to maintain space temperatures of 72°F in cooling mode, 72°F in heating mode, and space relative humidity no greater than 50%.
• The building's HVAC equipment will be controlled via a building automation system.
• Ductless split systems will provide heating and cooling for IDF and MDF closets.
• Ultra-High Efficiency Packaged Rooftop Units:
    o Classroom units are served by packaged direct expansion rooftop equipment with economizers and Co2 sensors for deman control ventilation or Bipolar Ionization based upon further conversations to be had with the district.
    o Large volume spaces are to be served by multi-stage packaged rooftop units with economizers and demand control ventilation. Basis of design: Lennox Energence LGH.
    o Alternate Mechanical System: Packaged Rooftop Heat-Pumps, with electric backup heat. Basis of design: Lennox KHB.
• Roof Mounted Exhaust fans will serve group and private restrooms.

Electrical/Lighting

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

Plumbing

• New water closets will be wall mounted, with manual flush valves.
• Student lavatories will be wall mount wash stations with tempered water metering type.
• Classroom sinks located in the teaching space will be cold water only, with fixture mounted to the side of the sink with an exception in the Life Skills classrooms.
• Classroom Restrooms will have tempered water.
• Electric water coolers with bottle fillers.
• Condensate for RTUs will be routed from the roof below the roof deck then collected and disposed of in an approved receptor.
• Interior roof drains will be used.
• A dedicated soft-water water heater will be used for the dish-machine in the kitchen.

Fire Protection

All portions of the building will be protected by an automatic, wet-pipe fire sprinkler system; designed by a licensed fire protection designer as required by code.

Food Service

The design includes a Receiving Area, Restroom/Locker Room, Office, Dry Storage, Cold Storage, Prodcution Area, Preperation Area, Bakery Area, Holding and Servery.

Technology

• The basis of design will be the design from Pershing Park/ Sugar Loaf Consolidated ES with the addition of cross-corridor doors for lockdown options.
• This scope will include the implementation of premise distribution, classroom audio video, intercom system, infrastructure for surveillance cameras, and an access control system.
• The systems design and specifications will be based on recent projects with the district, district guidelines and client input, industry standards, and best practices.

Outside Plant (OSP)

The local internet service provider (ISP) will bring fiber into the MDF. Crux shall design the conduit pathway system to provide connectivity from the right of way to the MDF.

Intercom Systems

New intercom speakers shall be installed in all classrooms and corridors and common areas. New intercom speakers shall be installed on the exterior of the building. Volume controls shall be incorporated into all office areas as per KISD standards. Each classroom will require a push-to-talk (PTT) device.

Local Sound Systems Activity Room and Cafeteria

Local sound systems in the cafeteria and Activity Room shall consist of devices and equipment based on the previous elementary school.

Mobile Two-Way Radio System

Crux will utilize the specifications that were created and utilized for the recent Clifton Park/ Bellaire Consolidated ES, Pershing Park/ Sugar Loaf Consolidated ES, and East Ward/West Ward Consolidated ES projects for this requirement.

Access Control

KISD Facilities group manages the District access control system. Card reader locations and quantities are based on the design of the Clifton Park Bellaire Consolidated ES and Pershing Park/ Sugar Loaf Consolidated ES schools.

Surveillance

Crux shall work with the Owner and the Owner's surveillance contractor on the location of all surveillance cameras to be used on this project.

Intrusion

There are no intrusion alarm system requirements for this project.

Assumptions:

• The elementary design is, at this time, based on the work performed in the previous Pershing Park/ Sugar Loaf Consolidated Elementary School, with no changes expected to room function, layout or technology requirements.
• Surveillance system installation including all cameras, mounts, licenses, software, etc. will be performed by the Owner in direct coordination with their contractor. Premise cabling and pathways will be designed by Crux and placed in the drawings. No specifications are provided.

Exclusions:

• All data network electronics including switches, routers, PCs, WAPs, etc. to be Owner-furnished and Owner installed.
• Access control software is assumed to be existing/ Owner-furnished.
• Video surveillance cameras, servers and software will be furnished by the Districts preferred contractor and is outside of the scope of this design.

*** The district standards dated 10.11.2018 Rev. 3 will be referenced for the design of Elementary School #36 and should be used as the basis of design for bidding and design purposes.**

New Elementary School #36 1,050 Student Capacity *Based on a capacity of 22 students per classroom*	Elementary School		
ACADEMICS	# OF SPACES	SQ. FT.	TOTAL SQ. FT.
FIRST FLOOR CLASSROOMS	22	850	20,400
SECOND FLOOR CLASSROOMS	31	750	23,250
RESTROOMS IN EACH PRE-K – 1ST CLASSROOMS	24	50	1,200
COMMON AREA RESTROOMS	5	900	3,600
TALENTED & GIFTED CLASSROOM	1	750	750
STAFF RESTROOMS	6	52	312
Area Sub Total			**49,512**
SPECIAL USE CLASSROOMS			
SCIENCE	2	1,000	2,000
MUSIC	3	950	2,850
COMPUTER LAB	2	950	1,900
RESOURCE ROOM	1	757	757
LIFE SKILLS (including shared tlt./laundry)	4	1,125	1,895
Area Sub Total			**9,402**
LIBRARY			
STACK AREA	1	3,881	3,881
READING AREA - 44 students	1	-	0
KIVA - 22 students	1	-	0
CIRCULATION DESK AREA	1	-	0
COMPUTER AREA - 12 workstations	1	-	0
OFFICE	1	258	258
WORK ROOM	1	224	224
AV STORAGE	1	287	287
Area Sub Total			**4,650**

New Elementary School #36 1,050 Student Capacity *Based on a capacity of 22 students per classroom*	Elementary School		
DINING	# OF SPACES	SQ. FT.	TOTAL SQ. FT.
CAFETORIUM - SEATING FOR 400	1	5,790	5,790
PLATFORM	1	1,195	1,195
FOOD SERVICES	1	3,726	3,726
SERVING LINE	3	-	0
FOOD PREPARATION AREA	1	-	0
SCULLERY	1	-	0
MANAGER OFFICE (MGR. & LUNCHROOM SEC)	1	-	0
DRY FOOD STORAGE	1	-	0
WALK-IN REFRIGERATOR	1	-	0
WALK-IN FREEZER	1	-	0
JANITORIAL	1	-	0
TOILET W/LOCKERS	1	-	0
Area Sub Total			**10,711**

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PHYSICAL EDUCATION	# OF SPACES	SQ. FT.	TOTAL SQ. FT.
ACTIVITY CENTER/GYM	1	4,034	4,034
COACHES OFFICE	1	410	410
PUBLIC TOILETS	2	85	170
STORAGE	1	344	344
Area Sub Total			**4,958**
ADMINISTRATION			
RECEPTION	1	532	532
PRINCIPAL OFFICE	1	256	256
ASSISTANT-PRINCIPAL	2	180	540
SECRETARIAL AREA (new space for 4 FTE)	1	462	462
INSTRUCTIONAL SPECIALIST OFFICE	1	173	173
TECHNOLOGIST OFFICE	1	450	450
CENTRAL WORKROOM	1	392	392
VAULT - RECORD STORAGE	1	194	194
BOOK ROOM	1	580	580
CLINIC (2 BEDS w/TOILET)	1	300	300
TEACHER WORKROOM w/TOILET	2	400	1,200
CONFERENCE ROOM	1	299	299
TESTING STORAGE	1	170	170
STORAGE	1	68	68
OFFICE	1	188	188
ISS	1	264	264
RESTROOM	2	55	110
ITINERANT OFFICE (for 4)	1	400	400
PRINCIPAL SECRETARY	1	176	176
MULTI-PURPOSE ROOM	1	289	289
MAIL	1	225	225
TESTING STORAGE	1	165	165
Area Sub Total			**7,333**

New Elementary School #36 1,050 Student Capacity *Based on a capacity of 22 students per classroom*	Elementary School		
CUSTODIAL	# OF SPACES	SQ. FT.	TOTAL SQ. FT.
CENTRAL SUPPLY STORAGE/WORKROOM	1	441	441
CART STORAGE WORKROOMS	4	44	176
GROUNDS EQUIPMENT STORAGE	1	922	922
Area Sub Total			**1,539**
Total Net Square Footage			**88,105**
PLUS NON-ASSIGNABLE SPACES			
Walls, Storage, Electrical, Corridors, IDF	-	-	
Area Sub Total			**36,758**
Total Estimated Building Gross Area			**124,863**

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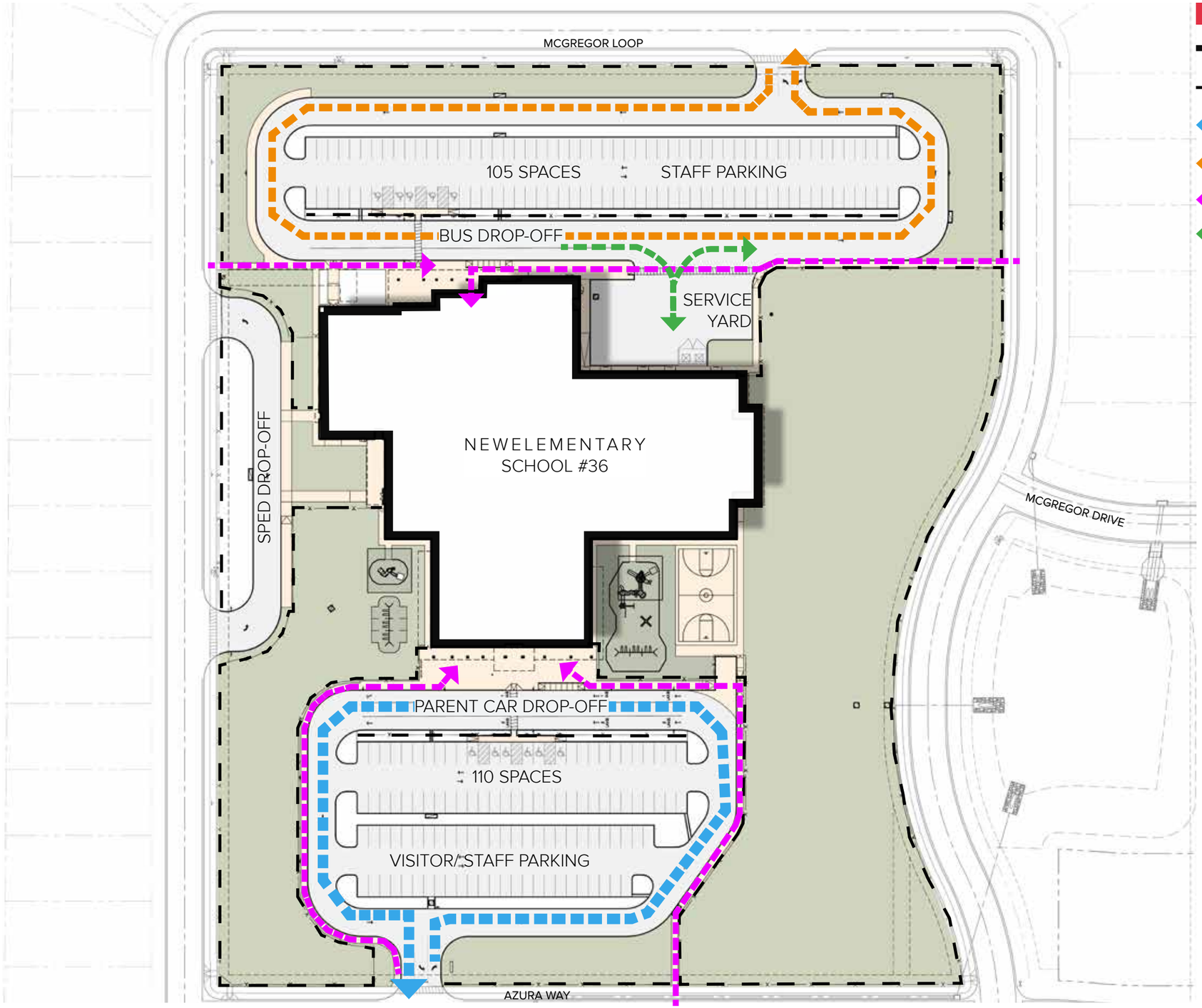
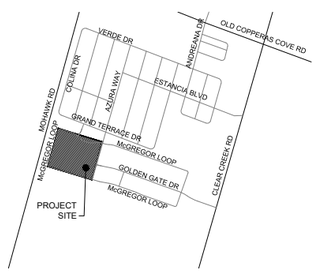


LINE TYPE LEGEND

- New Building
- Fencing
- Parent Drop-off
- Bus Drop-off
- Pedestrian
- Receiving



SITE LOCATION MAP

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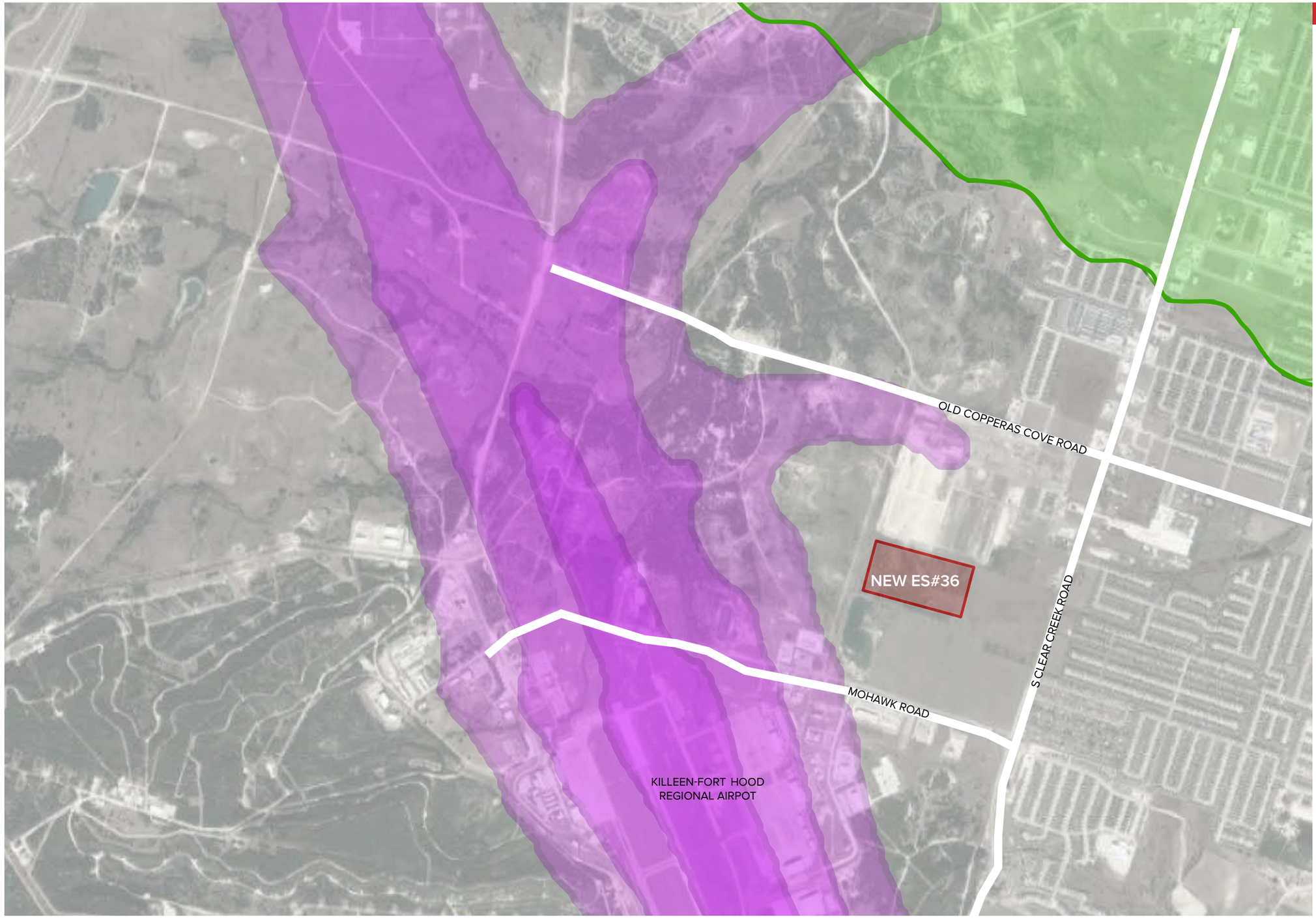
SITE PLAN



LEGEND

- Large Arms Testing Noise Contours
- Airport Noise Contours
- New ES#36 Site

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EXTERIOR PERSPECTIVE **8.1**

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INTERIOR PERSPECTIVE **8.3**

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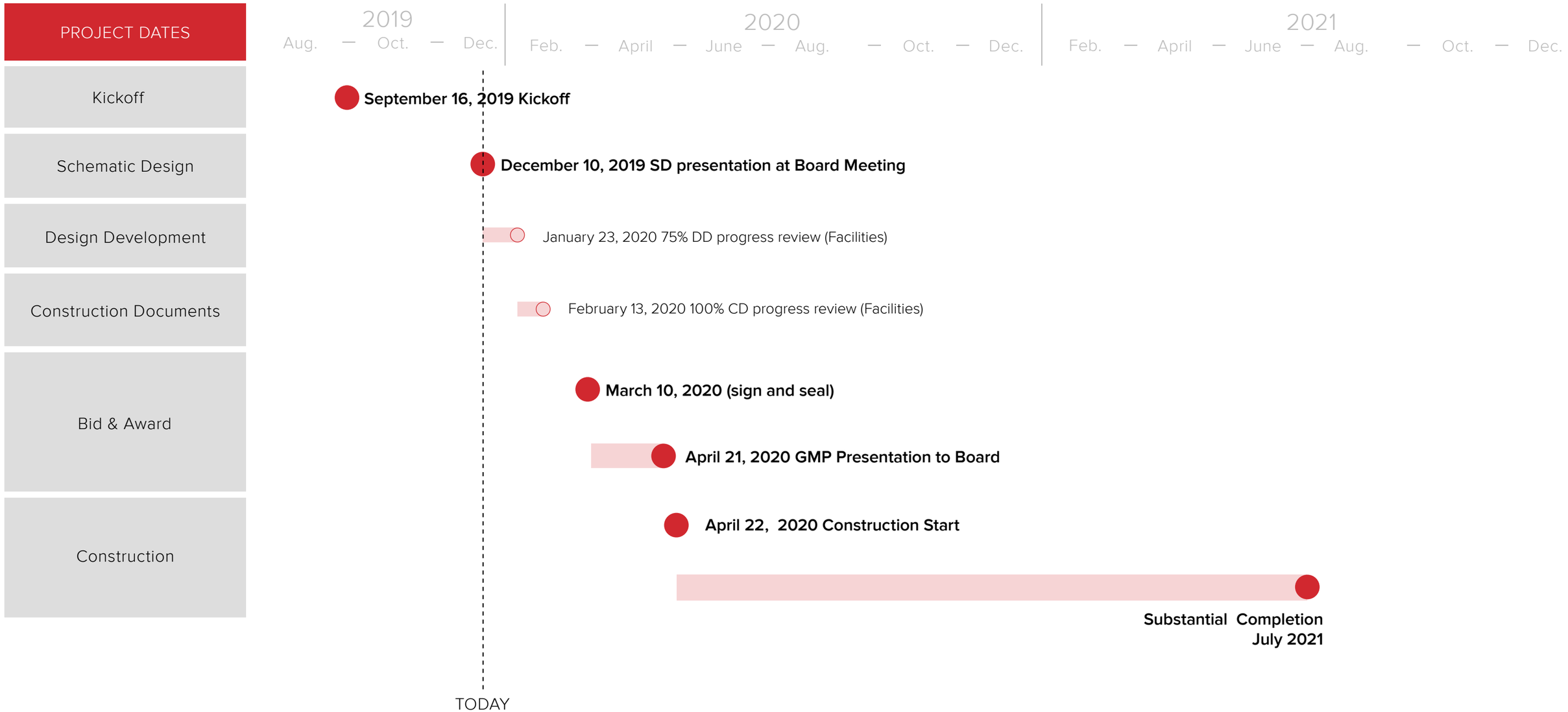

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MORE THAN ARCHITECTS