
# The Collegiate Center

## Edison Preparatory High School - Tulsa Public Schools - Tulsa, Oklahoma

**CEFPI 2015 Exhibition of School Planning and Architecture - “Renovation” Category**

# Community Environment

Edison Preparatory High School serves students grades 9 through 12 within the **Tulsa Public Schools** (TPS) district–an independent, **choice-based district** with approximately 24,000 students in the Tulsa, Oklahoma, area.

Edison was built in 1954 in a style considered progressive for its time. The school is located on a **44-acre campus** in midtown Tulsa in a residential neighborhood area. The school has a history of innovation and **progressive educational thinking**–and intends to strengthen this success in a forward-looking new facility.

The **planning process** for The Collegiate Center included all relevant **stakeholders**. The design team held nine separate meetings in order to get feedback from the Principal, Assistant Principal, Facility Manager, administrative staff, end users, and official test administrators.

The addition needed to meet numerous testing requirements in order to **serve students district wide** as a major testing site, and offer **meeting space for the community at large**.

*Panoramic view of the exterior of Edison. The Collegiate Center will occupy the parking area and lawn in front of the school.*

*Aerial view of Edison's 44-acre campus in midtown Tulsa, Oklahoma.*

## Community Environment

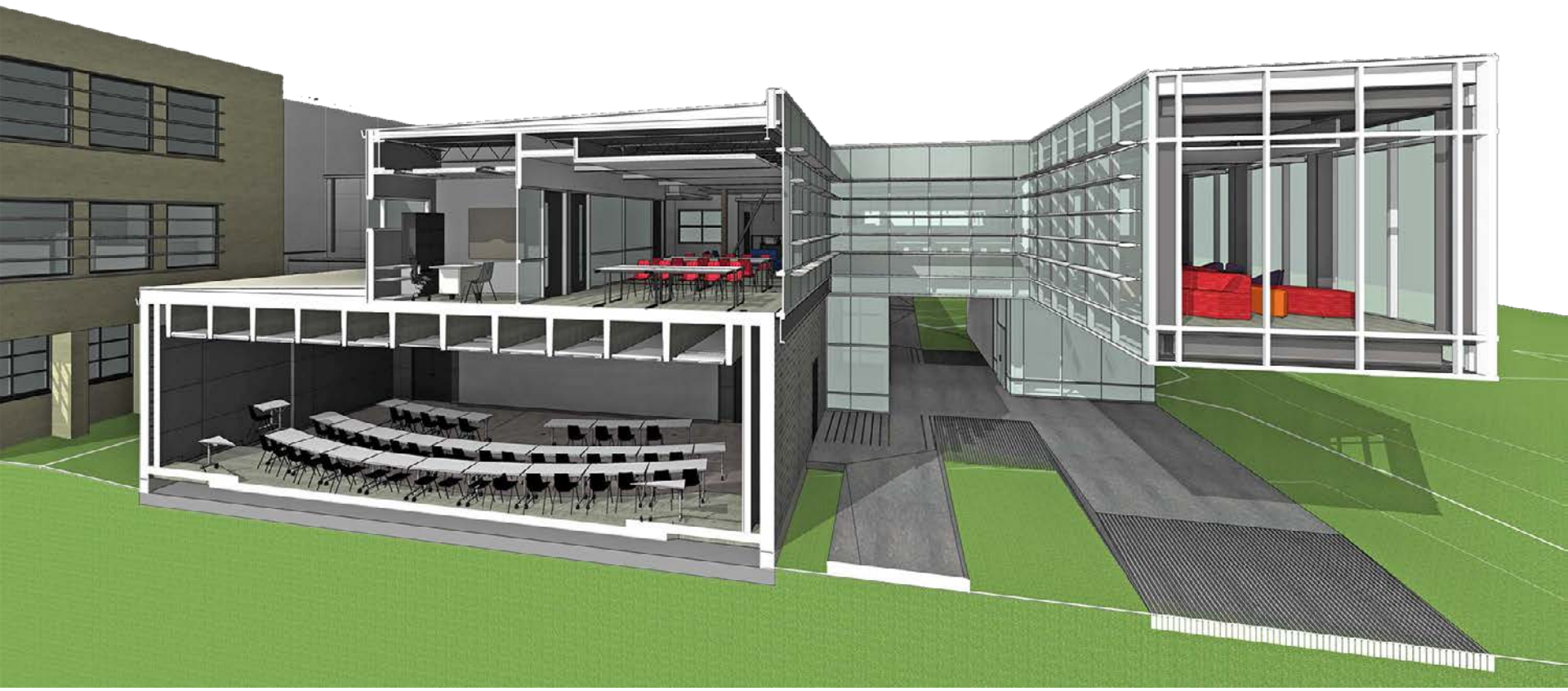
The program outlined by the client for the addition focused on **two primary objectives**: 1.) raise Edison's profile in the community as **a high school focused on preparing students for the collegiate experience and** post high school **careers** and 2.) provide **safe rooms** to occupants during extreme weather events.

It needed to act as a **recruitment tool** with academic guidance offices and provide students with spaces more aligned with **career readiness** and the school's emphasis on **college level course work**; over half of Edison's student population participates in Advanced Placement (AP) courses and Edison offers the AP Capstone Diploma.

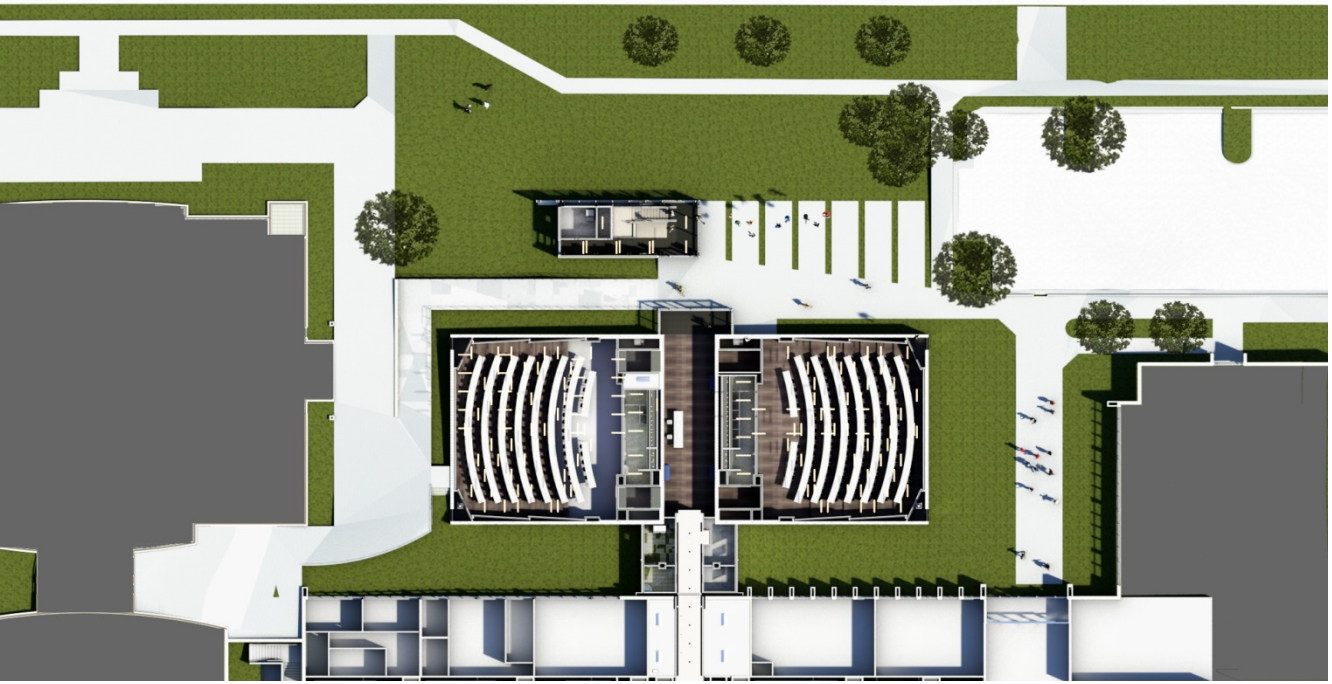
The Collegiate Center design had to address **safety**, **transparency** and **accessibility** while still meeting all of the project's programming and **aesthetically coexisting** with the existing school building.

*The groundbreaking for The Collegiate Center was a celebration for the entire district; a landmark bond passing not only helped fund Edison's addition but demonstrated the community's commitment to extreme weather safety.*

# Planning Process



# Planning Process



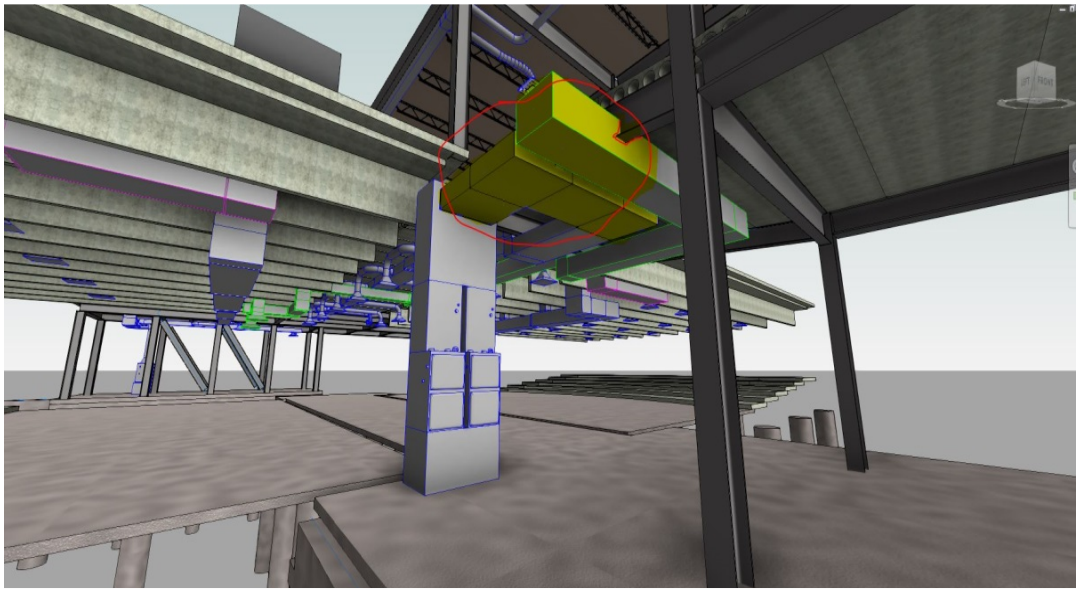
*The site runs parallel to a **busy street** and the school has a single, **secure entrance**.*

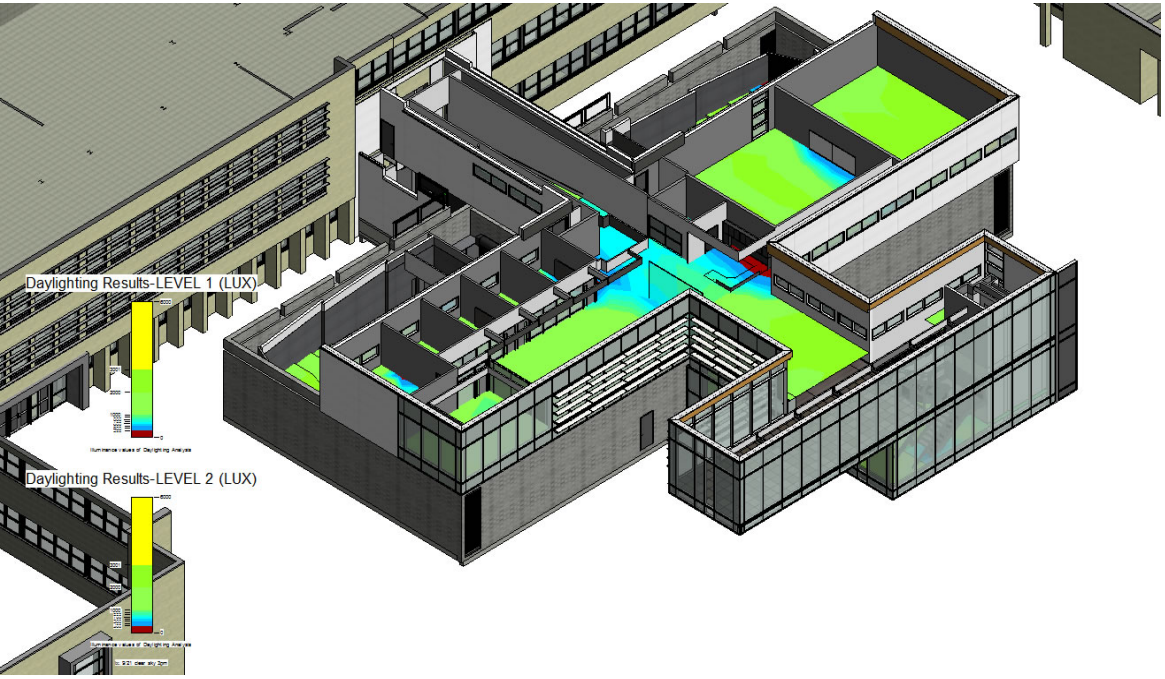
*A circulation path from the parking area through the building was carved through the center of the site, and a **visual path** to the single access entry was achieved by raising the **front façade piece** to the second level in a story-high cantilever structure.*

*The addition will **lead students from the existing building** into The Collegiate Center and provide open, exciting study areas and a **floating cantilevered study lounge** as the most dramatic feature of the project.*

# Physical Environment

*The team used Building Information Modeling **(BIM)** for structural and mechanical **clash detection**, allowing immediate HVAC design input and modifications. The direction and flow of **strong winds** (240 mph) were also ran through the program to detect any weaknesses.*






*Solar analysis was necessary due to the breezeway, circulation paths and glazing. **Solar and wind analysis** was conducted, including a Life Cycle Energy Cost that helped the designer justify the initial higher cost in implementing a **decentralized energy system** that reduces energy cost by 50 percent.*

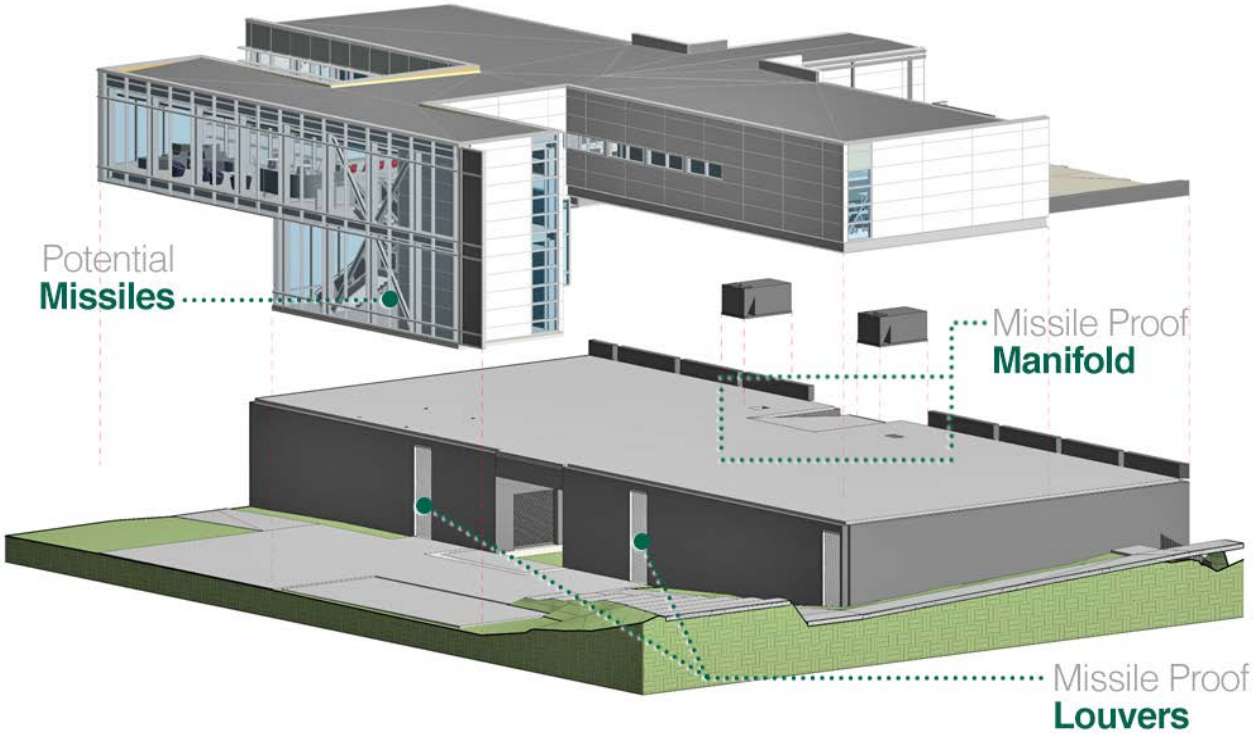
***Glazing** is a major part of the project and BIM was used to get quantities and cost estimates that helped **keep the project within budget** and the Construction Manager informed.*

## Physical Environment

Oklahoma makes national headlines annually with regard to the **severe storms** and tornadoes the region encounters. After an **EF5 tornado** struck Moore, Oklahoma, killing 24 people (including seven children) and destroyed two elementary schools, TPS sought to provide the **highest level of storm security** at Edison and have the project act as a **prototype** for renovations and new builds **district wide**.

The design of The Collegiate Center is a structural **steel frame** with a **glass curtain wall** on cast-in place and pre-cast concrete. It includes **two distinct structures that integrate** into the existing school and each other– with one building being the **safe structure** and the second building being **a sacrificial structure in the event of extreme weather**.

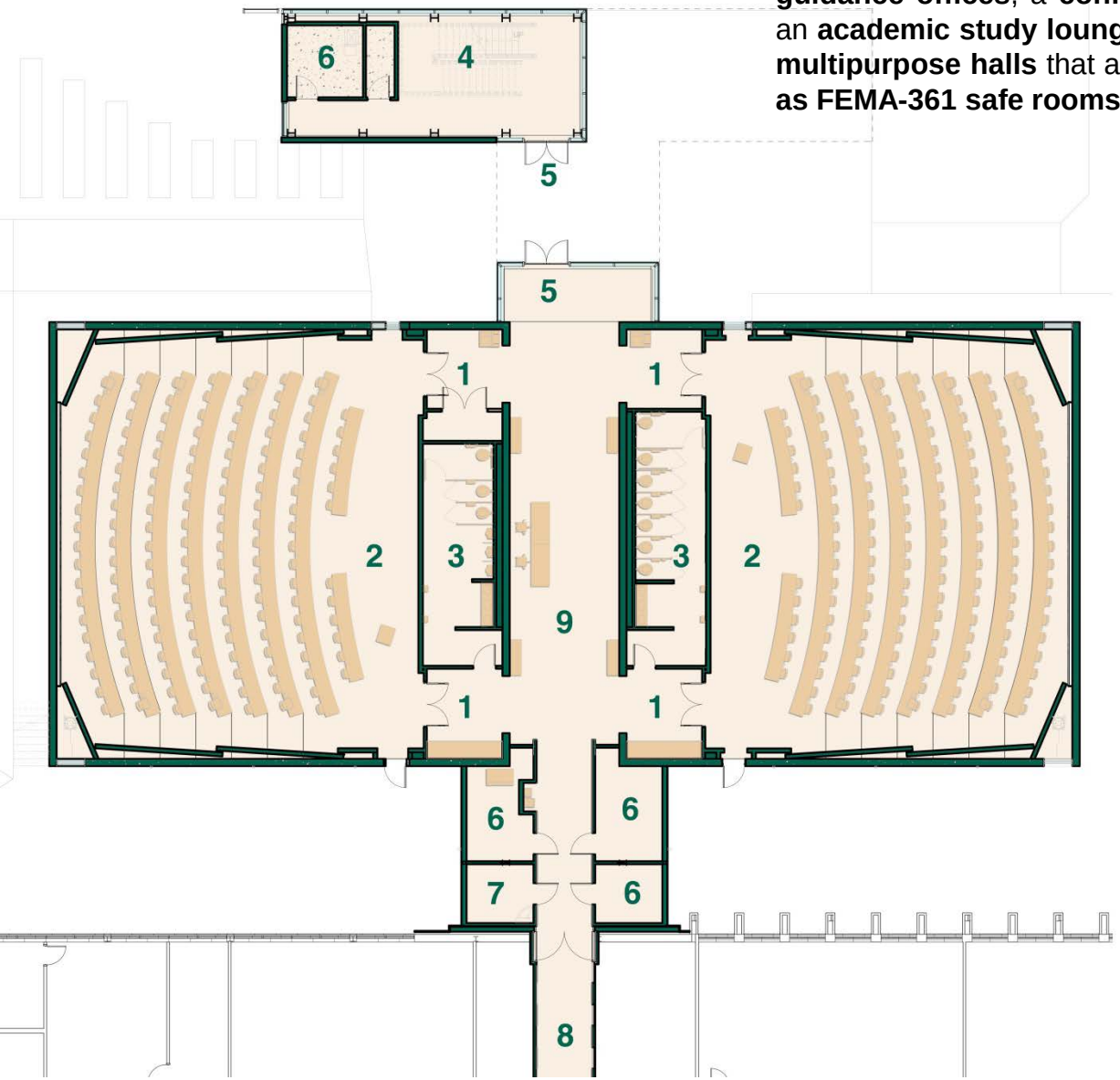
The safe structure on the ground floor contains multiple programmatic elements in its design as well as the **backup life support systems**. The sacrificial structure of the second floor level includes the faculty offices, research and study areas.




*A **'missile manifold'** was designed as a shield that will **protect occupants** in the storm shelter from water and debris in the event of the loss of the sacrificial second floor in **extreme weather.***

# Learning Environment

The design of The Collegiate Center is **programmatically dense** with **15 distinct spaces** all within **18,884 SF**, including **academic guidance offices**, a **conference room**, a **computer research lab**, an **academic study lounge**, **concurrent classrooms**, and **two new multipurpose halls** that accommodate 150 people each and **double as FEMA-361 safe rooms**.



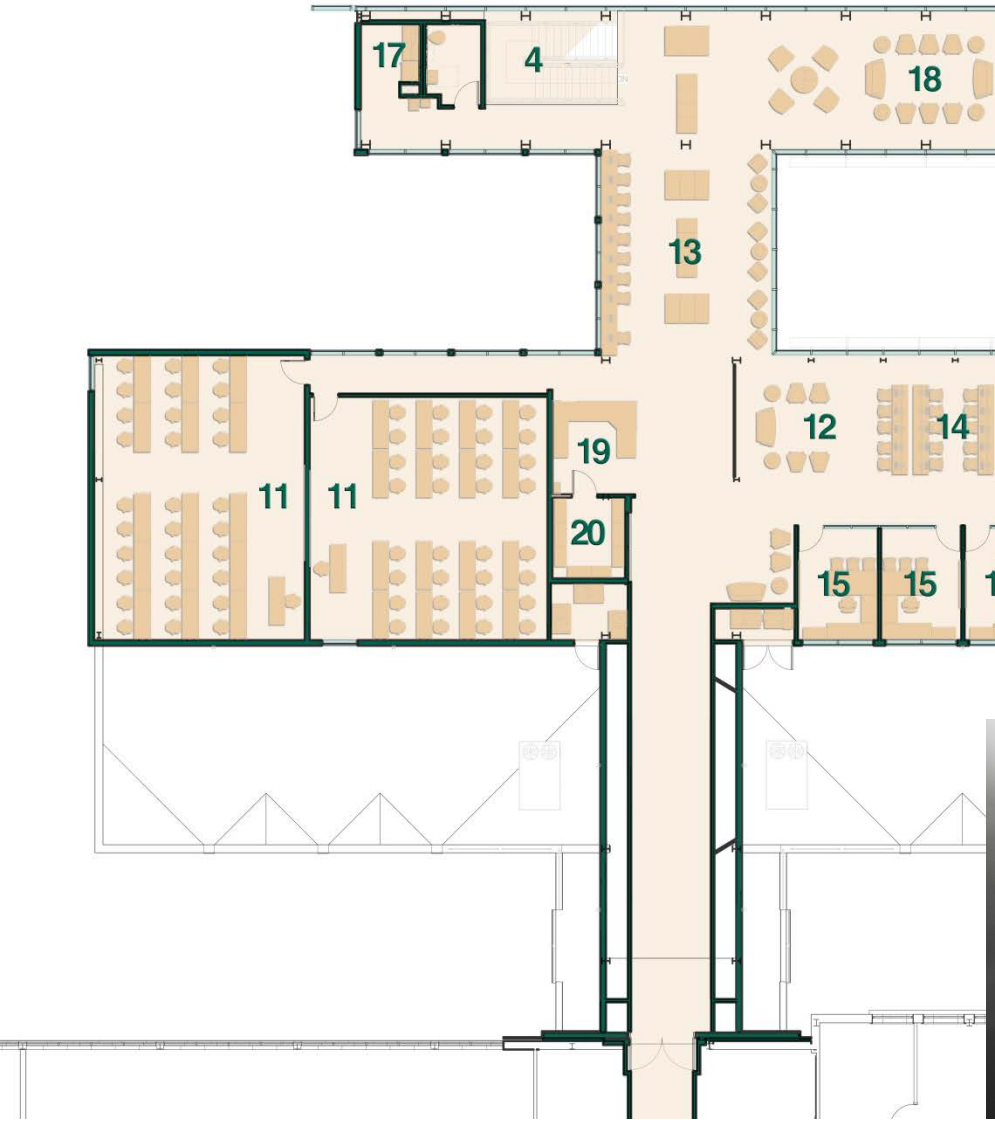

*Existing School*

**1.** Event Entry
**2.** Multi-Purpose Halls
Purposes and Seating Requirements:
- Faculty Meetings (135)
- AP Testing (5-130)
- PSAT Testing (Max)
- PLAN Testing (300)
- ACT Testing (75-275)
- EOI Testing
- ASVAB Testing
- Lectures/Presentations (20-Max)
- Professional Development (20-135)
- Parent Meetings (20-MAX)
- District Trainings (Max)

**3.** Restrooms
**4.** Stairs
**5.** Secure Entry
**6.** Mechanical
**7.** Maintenance
**8.** Main School Entry
**9.** Pre-Assembly

# Interior Multi-Purpose Hall / Safe Room

# Learning Environment




**4.** Stairs
**11.** Concurrent Classrooms
**12.** Waiting
**13.** Digital Library
**14.** Academic Research Lab
**15.** Academic Guidance Offices
**16.** Parent Conference Room
**17.** Kitchen
**18.** Study Lounge
**19.** Reception
**20.** File

*View from Academic Research Lab (**14**) looking past the lower courtyard and into the Study Lounge (**18**)*

*Existing School*

# Study Lounge

# Academic Center / Computer Research Lab

## Interior / The Bridge / Digital Library

## Interior / Academic Study Lounge

# Exhibition of School Planning and Architecture Project Data

| Submitting Firm : | KSQ Architects |
|---|---|
| Project Role | Architecture |
| Project Contact | Kyle Casper |
| Title | Project Designer |
| Address | 406 S. Boulder Avenue, Suite 500 |
| City, State or Province, Country | Tulsa, Oklahoma, USA |
| Phone | (918) 592-0622 |

| Joint Partner Firm: | Not Applicable |
|---|---|
| Project Role | |
| Project Contact | |
| Title | |
| Address | |
| City, State or Province, Country | |
| Phone | |

| Other Firm: | Wallace Engineering |
|---|---|
| Project Role | Structural and Civil Consultants |
| Project Contact | Brian Walker |
| Title | Principal |
| Address | 200 East Matthew Brady Street |
| City, State or Province, Country | Tulsa, Oklahoma, USA |
| Phone | (918) 584-5858 |

| Construction Firm: | Crossland Construction Company, Inc. |
|---|---|
| Project Role | Construction |
| Project Contact | Greg Smith |
| Title | Director of Preconstruction Services |
| Address | 14149 E. Admiral Place |
| City, State or Province, Country | Tulsa, Oklahoma, USA |
| Phone | (918) 712-1441 |

# Exhibition of School Planning and Architecture Project Details

| | |
|---|---|
| **Project Name** | The Collegiate Center |
| **City** | Tulsa |
| **State** | Oklahoma |
| **District Name** | Tulsa Public Schools |
| **Supt/President** | Dr. Deborah A. Gist |
| **Occupancy Date** | February 1, 2015 |
| **Grades Housed** | 9-12 |
| | |
| **Capacity (Students)** | 572 students (school wide capacity is 1,175) |
| **Site Size (Acres)** | .9 Acres |
| **Gross Area (SQ. FT.)** | 18,884 SF |
| **Per Occupant (Pupil)** | 3.3 SF/S |
| **gross/net please indicate** | Gross |
| | |
| **Design and Build?** | No |
| **If yes, Total Cost:** | |
| **Includes:** | |
| | |
| **If no,** | |
| **Site Development:** | Included |
| **Building Construction:** | $5,934,449 |
| **Fixed Equipment:** | Out of Scope |
| **Other:** | |
| | |
| **Total:** | $5,934,449 |