

# Collin Technical Campus

Association For Learning Environments

2022 Submission Post-Secondary Education





**“Students will be proud to come here”**

– **Toni Jenkins** Sr VP, Campus Operations Collin College (Ret.)



## Executive Summary

Located in one of the fastest growing counties in Texas, the college recognized a need for comprehensive **technical workforce training** and their ability to meet this need with a new purpose-built campus. Bringing together onto one campus a wide variety of programs including **automotive repair, HVAC, construction trades, IT, allied health, and dual credit partnerships** with four local school districts, the design team saw an opportunity to create a rich learning environment where students from diverse backgrounds and areas of study could interact and support learning for students from all walks of life.

Elevating the historically uninspiring experience of vocational training, the campus takes on a clean modern aesthetic and is infused with abundant **natural light**. Training areas of differing specializations are connected visually through the strategic use of glazing and circulation paths, reinforcing a common social goal of **interdisciplinary learning**. Nature is ever present through visual and physical connections and provides much needed respite to students spending long hours in class or labs. **Community building** is at the heart of the learning journey.

Enrolment rates are 30% higher than initially projected and the creation of a wait list proves the impact the project has had on the community and its aspirations to create a more **resilient workforce** and promote generational prosperity.





## Scope of Work

The **360,000 square foot** project houses classrooms, labs, student services, and an array of trades including: construction, auto repair, robotics, commercial HVAC, welding, CAD, IT certification, nursing, and allied health programs for **5,000 students**. The **32-acre** green-field site was developed for a total construction cost of **\$141,999,800** which included technical training equipment and parking for 950 cars split evenly between surface parking and a single parking deck below the trades buildings.

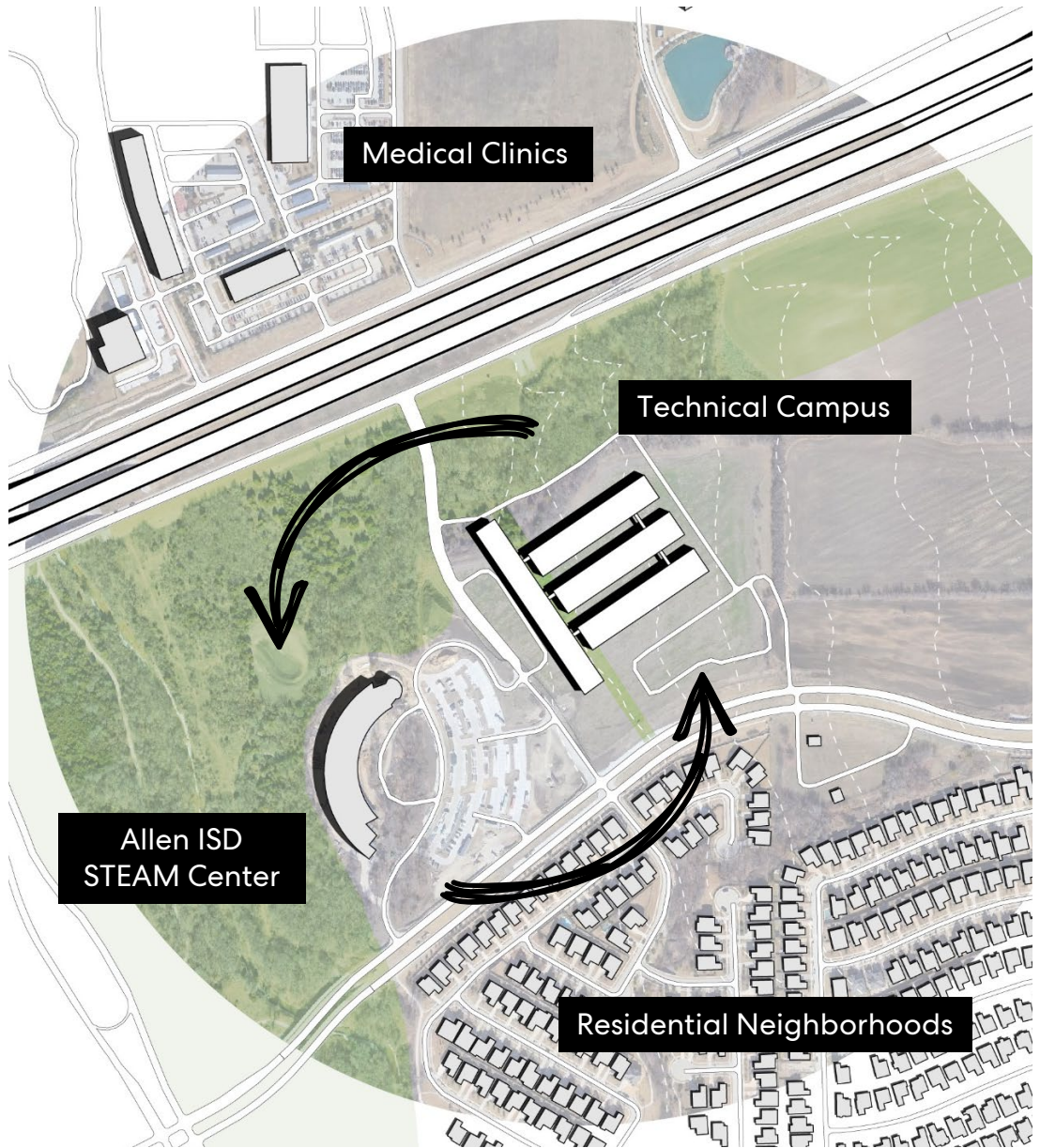


## School & Community Engagement

In the process of identifying the most valuable areas of vocational training for the community, the college reached out to **industry leaders** for input. The resulting program was tailored specifically to meet the needs of regional industry and construction growth. Automotive repair, construction trades, welding, and HVAC are a few of the programs specifically designed to create a **direct pipeline** for students into local careers.

Additionally, the college was already partnered with the four local school districts to provide **dual credit programs** for students on a path into health sciences careers. This campus grows the dual credit program and provides expanded dedicated space for students to connect more easily to future careers.

The most significant programming challenge was the simple fact that as the region grows and changes so will the programs needed to support the local economy. The project utilized an efficient and **flexible structural system** in the trades areas which allows for easy reconfiguration and the possibility of additional academic space as needed.



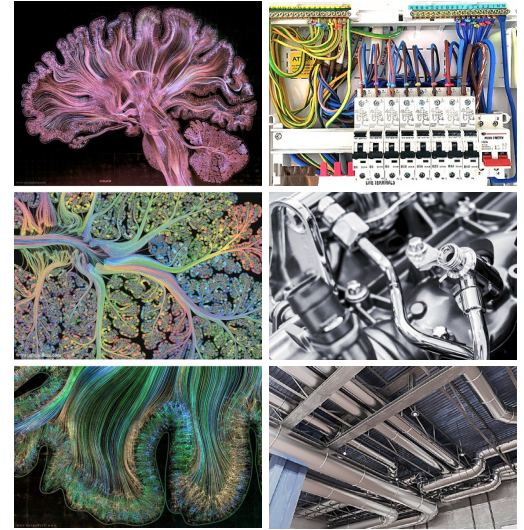
The campus is part of its community and a **resource** to students.



## School & Community Engagement



In much the same way the brain and body form an **interconnected network** of information paths, this project connects academic and trades areas visually through framed views and physically with stairs and pathways. Academics and Trades are mutually supportive programs, becoming a metaphor for **embodied cognition** and the brain/body relationship.



**“Academic and trades training are two sides of the same coin.”** - Dr. Abe Johnson, Senior VP, Campus Operation Collin College





## Educational Environment

The college defined its aspirational vision to build a **resilient workforce** for the region and to provide opportunity for **generational prosperity** for first generation students, non-traditional students, and students who did not want to follow a typical four year post secondary education path.

A key component of building resiliency in the workforce is building **empathy** between individuals and various diverse groups. The building works to this end by providing shared learning spaces where various trades and specialties can work side by side, just as in a real-world environment, and thus build understanding and appreciation for other vocations. Student amenity spaces like the learning commons and dining areas further reinforce the importance of **community** among students on campus.

**Elevating the trades experience** by infusing the labs with abundant natural daylight and employing wide circulation areas provide a new standard for trades training in the region, attracting an entirely new student population.





## Educational Environment



The first floor welcomes **high school students** for dual credit courses and career training.



**Flexible** structural systems allow future reconfiguration of labs spaces as needed to meet changing needs of the community.

The project will become a **regional asset** by providing education in high demand trades its community needs.



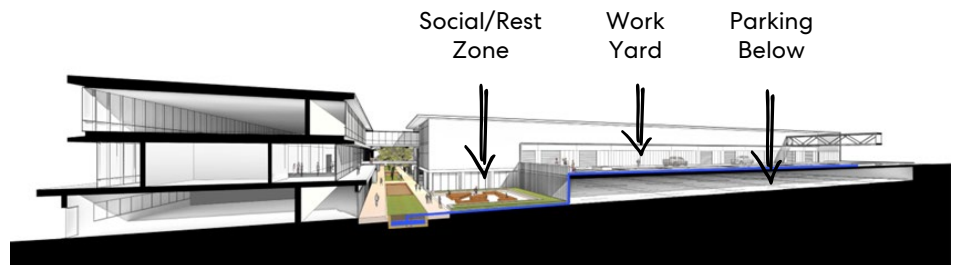


## Physical Environment

The program elements of the campus are divided into linear bars for academic and trade education. Student services, health sciences, dual enrollment, and administration are in the **Academic bar** which runs North/South parallel to the **Outdoor Spine** of circulation and social spaces.



**Trade education** happens in the bars that run East/West and are connected by open air and enclosed bridges and walk-ways. Lower-level **courtyards** connected to the main green pathway provide areas of respite for students and faculty. A flat parking deck below can be converted to instructional areas as needed. The space in between these technical bars are used as shared **outdoor work-yards** where large projects can be assembled and evaluated.





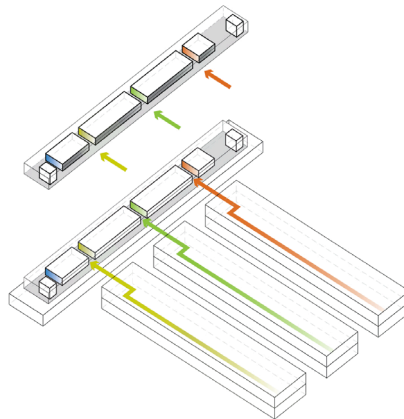
## Physical Environment

Linear forms and dramatic overhangs establish a recognizable visual language for the school, a **technical aesthetic**. Architecture **frames views** of the landscape and surrounding trees. Plantings that run the length of the Outdoor Spine **connect** the campus back to the existing **natural area** to the north of the site. Existing site topography and a balanced approach to cut and fill create berms which reduce the visual impact of the building to adjacent neighborhoods.





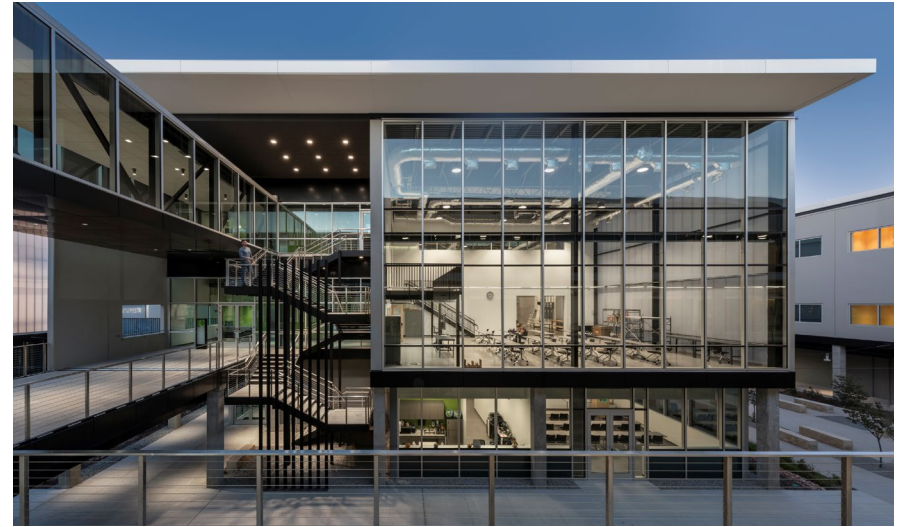
## Physical Environment





## Results of the Process

Teaching spaces are designed to be highly **adaptable** and remain visually and physically **connected** to each other throughout the project. This promotes knowledge sharing and an atmosphere of curiosity. Trade education spaces incorporate flexible shared **classrooms** for instruction, **hands-on training areas**, **observation areas**, and connected **shared outdoor work-yards**. Raising student social spaces to the second floor situates them in the **tree canopy**, which is visible through its glass walls. Berms rise to meet this level and anchor its outdoor spaces.





## Results of the Process

Since opening the Technical Campus, Collin College has experienced enrollment **beyond anticipated demand** with a 30% growth rate outpacing other campuses by a wide margin and many programs adding students to waiting lists.

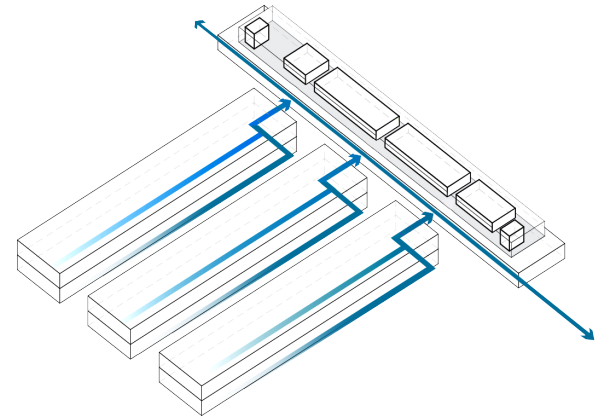


**Industry partnerships** with companies like Toyota and Trane help place students directly into their new careers.



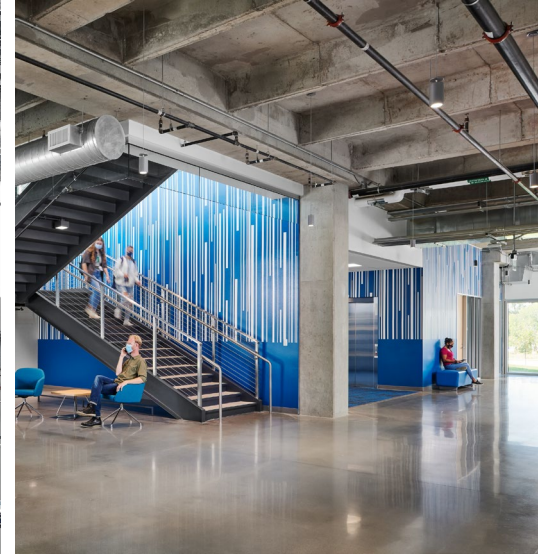
## Sustainability & Wellness

The Outdoor Spine has been developed as a “verdant conduit” that puts sustainable building practices **on display**. This conduit serves as a holistic green organizer; **collecting rainwater**, providing **passive cooling** and shade, replenishing **air quality**, and animating the central campus social space. Run-off water from the site is channeled into underground storage at the **central bioswale** for **distribution** into the ground and landscaping.





## Sustainability & Wellness



The design prioritizes **natural light** while accounting for the increase in energy costs it can create. South facing walls utilize **translucent** polycarbonate, which floods workspaces with diffused daylight and lowers the impact of the sun on cooling systems. Glazing with western exposure is given a 60% **ceramic frit** to manage glare and **reduce heat gain**. By leaving structural and MEP systems exposed, material and **embodied energy** consumption is **reduced** while increasing durability and flexibility.



**Wellness** and activity are promoted through movement between buildings; facilitated by bridges and stairs, connected outdoor spaces, and building proximity. Common areas provide access to **outdoor social spaces** and nature, providing needed rest and respite.



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