

Travis County Asset Mapping Report

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Acknowledgments

ESC 13 would like to thank our leadership advisory team, who took the time to assist with data collection and analysis. Leadership representatives from the following organizations participated in the asset and gap report:

- Austin Community College (ACC)
- Texas State Technical College (TSTC)
- Workforce Solutions Capital Area (WFSCA)
- Workforce Solutions Rural Capital Area (WFSRCA)
- Opportunity Austin (OA)
- Travis County Independent School Districts and Charter Schools

About ESC 13

Education Service Center Region 13 (ESC 13) is one of twenty service centers that serve Texas' educational needs. We are a non-regulatory agency; our relationship with school districts is collaborative and supportive. Our purpose is to aid teachers and administrators in their role as educators of our children. We liaise between the Texas Education Agency, the local school districts, and the schools they serve by disseminating information, conducting training, and consulting for federal and state programs.

About the Tri-Agency

The Tri-Agency Workforce Initiative, launched in 2016 to support Governor Abbott's workforce development goals, is a collaboration between the Texas Education Agency, Texas Higher Education Coordinating Board, and Texas Workforce Commission. Its goal is to increase economic prosperity in Texas by linking education and industry.

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Executive Summary

Workforce development stakeholders in Travis County, Texas, are diligently working to build college and career pathways that support young people in attaining their educational and career goals, pay a living wage, and offer opportunities for career growth. This report provides a look at the county's resources for pathways development. It provides baseline data that will serve as a foundation for strategic planning and the implementation of goals. The report concludes with the gaps and assets aligned to Travis County's targeted industries, which include healthcare, information technology, manufacturing, skilled trades, and transportation/mobility. The ESC 13 team completed the gap and asset data collection for Travis County from October to December 2023.

Travis County has much to celebrate at the intersection of education and workforce development. The report identifies several key strengths of the county that can be leveraged to build strong college and career pathways, including a higher-than-average high school graduation rate of 90.8%, a diverse population with 33% identifying as Hispanic or Latino, and a booming local economy that is one of the fastest-growing regions in the state and country.

When analyzing the successes at the intersection of secondary, postsecondary, and workforce development, we see much student interest in secondary and postsecondary healthcare programs (10,500 learners). Secondary auto technician and collision programs lead the way with stackable industry-based certification (IBC) attainment and should act as a model for other CTE programs of study. The local community college systems have workforce development

programs that train students for all targeted areas. School districts are responding to industry needs by implementing new CTE programs of study and P-Tech programs aligned to emerging industries such as manufacturing. Over 19,000 Travis County students participated in a Workforce Solutions Capital Area (WFSCA) career exploration event during the 2022 - 2023 school year. Finally, there is considerable interest from various local organizations to work with K-12 institutions and create workforce pipelines.

Collaboration between school districts, higher education, employers, and conveners is crucial to solving areas of concern. Paid off-campus capstone work-based learning experiences, such as internships, pre-apprenticeships, and youth apprenticeships aligned with the top five high-skill and high-growth industries, are limited. In ESC 13's fall 2023 gap and asset analysis survey, 23% of educators noted limited coordination, and 45% noted moderate coordination between campuses and employers.

Postsecondary credential attainment of workforce certificates, industry-based certifications, and associate degrees is limited. In Travis County, 10% of secondary students who completed or concentrated in a state-approved program of study aligned to Travis County's top five high-skill and high-demand industries passed an industry-based certification.

Second, 8% of students who have concentrated or completed a program of study aligned to the top five high-skill and high-demand industries received dual credit in their CTE class. It's imperative that all partners collaborate to solve this gap and develop more CTE dual credit options aligned to the top five high-skill and high-demand industries.

Travis County Overview

Travis County is Texas’s fifth-most populous county in Texas. The Austin Metropolitan Statistical Area (MSA), composed of eight counties, is one of the fastest-growing regions in the state and country. Williamson and Hays counties, north and south of Travis County, ranked among the five fastest-growing counties between 2020 and 2022.

The Travis County population is predominantly white, with 33% identifying as Hispanic or Latino. 9% of the population is Black or African American, and Asian Americans round out the top four racial/ethnic groups at 8% of the population.

In Travis County, 91% of students graduate high school, above the state average of 85%. 97% of Census respondents indicated they have a computer in their household, with 92% having access to high-speed internet. Having an educated population and access to technology is a crucial driver of regional economic development.

Table 1. Demographic and Economic Characteristics (2022 – 2023)

Indicators	Travis County	Texas
Total population	1,326,436	30,503,301
Female persons	647,301 (49%)	15,251,651 (50%)
Male persons	679,135 (51%)	15,251,649 (50%)
Children under 18 years	263,961 (20%)	7,564,819 (25%)
White	1,034,620 (78%)	23,609,555 (77%)
Hispanic or Latino (of any race)	437,724 (42%*)	12,262,327 (51%*)
Black or African American	124,685 (9%)	4,087,442 (13%)
American Indian and Alaskan Native	15,917 (1%)	335,536 (1%)
Asian	111,421 (8%)	1,738,688 (6%)

Table 1. Demographic and Economic Characteristics (2022 - 2023) *Cont.*

Indicators	Travis County	Texas
Native Hawaiian and Other Pacific Islanders	1,326 (1%)	61,007 (1%)
Two or more races	38,467 (3%)	701,576 (2%)
Median household income	\$92,731	\$73,035
Persons in poverty	10.1%	14%
High school graduate or higher	91%	85%
Bachelor’s degree or higher	54%	32%
Households with a computer	97%	95%
Households with a broadband internet subscription	93%	88%

Source: (United States Census Bureau, n.d.)

*Hispanic or Latino is an ethnic subdivision of the overall white population according the United State Census Bureau.



Secondary School Enrollment

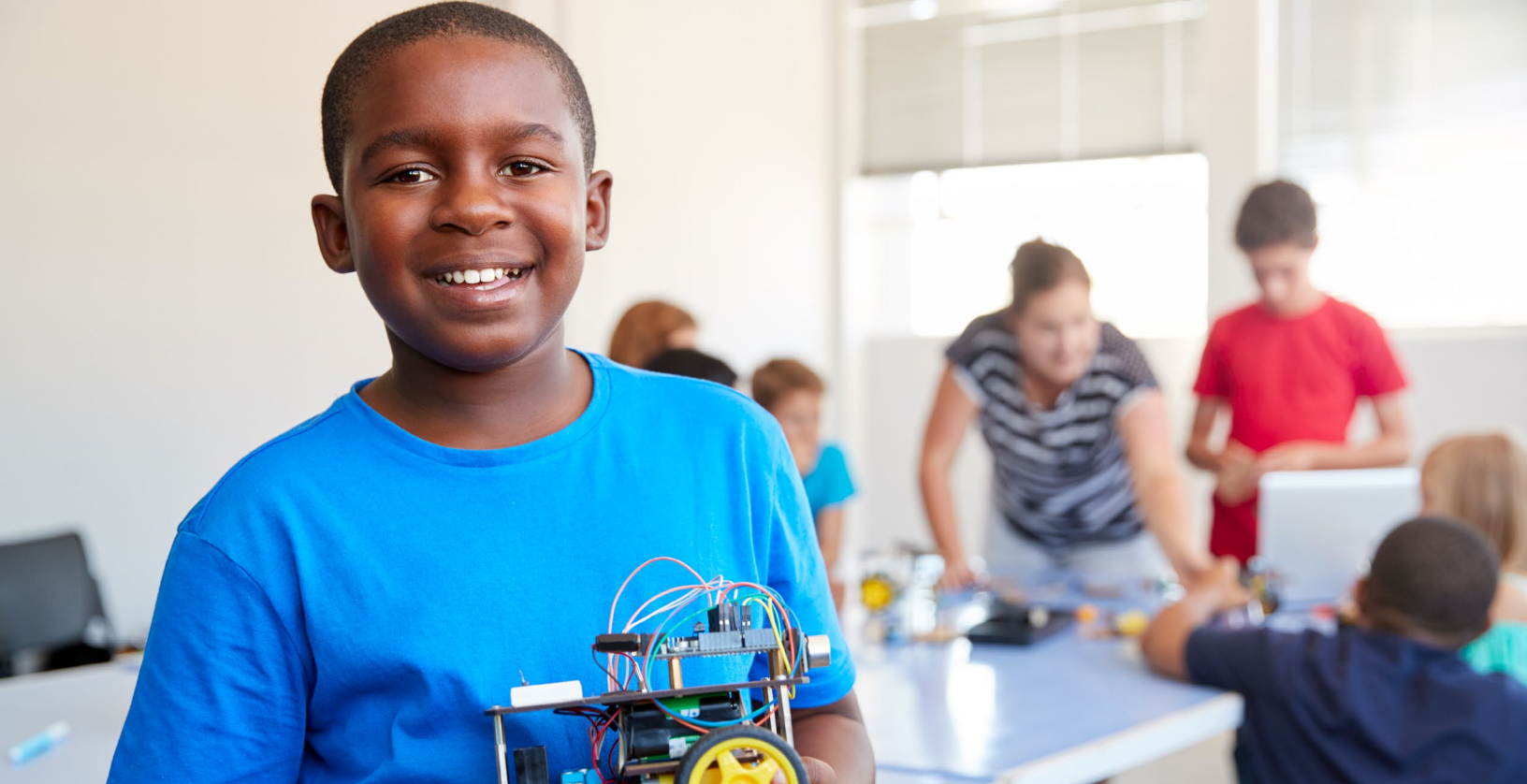
Texas and Travis County have many students enrolled in secondary education, grades 6 - 12. Overall, Texas boasts a secondary enrollment of 2,902,742 students. 81,660 secondary Texas enrollees attend a Travis County school. Regarding gender, both Texas and Travis County have a similar distribution, with slightly more male (51%) students than female (49%) students.

Texas and Travis County have a diverse racial and ethnic secondary student population. The four largest secondary student racial and ethnic groups in Travis County and statewide are Hispanic or Latino (51% Travis County; 53% statewide), White (30% Travis County; 26% statewide), Black or African American (9% Travis County; 13% statewide), and Asian (6% Travis County; 5% statewide).

Table 2. Secondary Enrollment (2022 - 2023)

Indicators	Travis County	Texas
Total Enrollment	81,660	2,902,742
Female	39,754 (49%)	1,417,277 (49%)
Male	41,906 (51%)	1,485,465 (51%)
White	24,783 (30%)	759,406 (26%)
Hispanic or Latino	41,718 (51%)	1,535,125 (53%)
Black or African American	7,290 (9%)	370,205 (13%)
American Indian and Alaskan Native	161 (<1%)	10,060 (<1%)
Asian	4,573 (6%)	144,398 (5%)
Native Hawaiian and Other Pacific Islanders	104 (<1%)	4,673 (<1%)
Two or more races	3,031 (4%)	78,875 (3%)

Source: (TEA PEIMS Standard Reports, n.d.)



CTE Concentrators and Completers

Career and Technical Education (CTE) programs serve as the foundation for workforce development and start as early as sixth grade and continue through postsecondary education. Local Education Agencies (LEAs), also known as Independent School Districts (ISDs), develop class sequences to support the labor market needs of their region. School districts develop a coherent sequence of four or more classes, known as a program of study, that fall under sixteen different career clusters (Department of Education, n.d.). In these CTE courses, students are exposed to topics such as employability skills, hands-on skills training, and occupational-specific knowledge in an industry of interest.

The United States Department of Education (DOE) has adopted two primary measurement formulas, called completers and concentrators, to track the success of CTE programming and gauge student interest in an LEA program of study. A concentrator is a student served by an LEA who has completed two or more courses for at least two credits in a single program of study. A completer is a student served by an LEA who has completed three or more classes for four or more credits, including an advanced course (level 3 or level 4) within an approved program of study (TEA CTE Programs of Study, n.d.).

When comparing concentrator data, Texas and Travis County have many CTE concentrators. Hispanic or Latino students comprise the largest group of CTE concentrators (48% Travis County; 52% statewide). Travis County has a higher percentage of Asian CTE concentrators (8% Travis County; 5% statewide), while Texas has a higher percentage of Black or African American CTE concentrators (8% Travis County; 11% statewide). Overall, both regions have a diverse group of CTE concentrators in terms of race and ethnicity.

Table 3. CTE Concentrator Data (2021 – 2022)*

Indicators	Travis County	Texas
Total CTE Concentrators	15,947	688,418
Male	8,420 (53%)	348,566 (50%)
Female	7,527 (47%)	339,852 (50%)
White	5,185 (33%)	202,006 (29%)
Hispanic or Latino	7,651 (48%)	354,545 (52%)
Black or African American	1,329 (8%)	76,939 (11%)
American Indian and Alaskan Native	22 (<1%)	2,083 (<1%)
Asian	1,192 (7%)	36,210 (5%)
Native Hawaiian and Other Pacific Islanders	12 (<1%)	880 (<1%)
Two or more races	556 (3%)	15,755 (2%)

*2022 – 2023 data is not available for statewide CTE concentrators.

Source: (OnDataSuite, n.d.); (Perkins Collaborative Resource Network, n.d.)

Unfortunately, many students stop taking CTE classes after they finish two CTE courses in a program of study, causing a steep decline in the number who complete a program of study. Overall, 20% of secondary students concentrated in a program of study, while 4% completed their course sequence. Students not completing a program of study are missing out on valuable work-based learning opportunities, capstone research projects, and employability skills training.

For the LEAs, it means a reduction in revenue since the Texas Education Agency (TEA) provides higher reimbursement rates for students attending level three and four CTE courses. Overall, the reduction in completers has wide-ranging negative implications for the health of the regional economy if students are inadequately prepared to enter the workforce or postsecondary education post-graduation.

Table 4. CTE Completer Data (2021 - 2022)*

Indicators	Travis County
Total CTE Completers	3,608
Male	1,831 (51%)
Female	1,777 (49%)
White	993 (28%)
Hispanic or Latino	1,923 (53%)
Black or African American	280 (8%)
American Indian and Alaskan Native	2 (<1%)
Asian	285 (8%)
Native Hawaiian and Other Pacific Islanders	2 (<1%)
Two or more races	123 (3%)

*TEA does not release CTE completer data. 2021 - 2022 datasets were used to stay consistent with the CTE Concentrator data above.

Source: (OnDataSuite, n.d.)

Travis County Economy

Since the early 2000s, the Travis County/Austin metropolitan area has been in an economic boom. The metro area boasts a strong government sector and is strategically located in the center of Houston, San Antonio, Dallas, and Fort Worth. Texas is a low-tax, business-friendly state, with state and local taxes 18% lower than the national average (Bodisch, n.d.).

Travis County sits on a central North American trade corridor between Mexico and Canada, with Interstate 35 cutting straight down the middle. Finally, the Travis County and Austin metro area boasts a large and growing airport serving Austin and San Antonio residents, businesses, and tourists.

As more and more businesses move operations to the Austin MSA, there is an influx of residents moving here to take advantage of job opportunities. This influx of new residents and a robust local education system with 25 colleges and universities has created a deep talent pool for local businesses. However, an influx of residents has led to a housing shortage, which has led to an increase in rent and the price of a home. An expensive housing market coupled with the rising costs of goods has led to a rise in the living wage, or a wage high enough to maintain a usual standard of living. The living wage for an adult with no children is \$18.35, and for two adults, one working with two children, it is \$39.94.



Household Composition	Living Wage
Single Adult	\$18.35
Two Adults, One Working With Two Children	\$39.94

Source: (MIT Living Wage Calculator, n.d.)

Targeted Industries

As the Travis County economy grows, it's imperative that secondary, postsecondary, and workforce development institutions continually track labor market information (LMI) and adjust programming based on industry demand. Workforce Solutions Capital Area (WFSCA) analyzes LMI to develop a list of targeted industries and occupations. To create the list of targeted industries and occupations, WFSCA looks at:

- Rapid growth
- Low turnover
- Immediate employment opportunities for jobs with high-earning potential
- Demand supported by local knowledge and employer input

Two other key indicators that are taken into consideration when identifying targeted occupations are:

- Does the position offer an hourly living wage rate?
- If not, are there opportunities to springboard into advanced career occupations that offer an hourly living wage rate?

Based on the criteria identified above, WFSCA identified the following five targeted industries:

- Healthcare
- Manufacturing
- Skilled Trades
- Information Technology
- Mobility/Infrastructure

Source: (Workforce Solutions Capital Area, 2023)

It's important to note that business and financial operations occupations outpace all other industries listed above in growth but are not included as a separate targeted industry. Instead, they are included in the overall growth projections for the top five targeted industries. Business and financial operations workers are crucial to the overall success and growth of the top five sectors. Secondary and postsecondary institutions must continue to prepare students for business and financial operations careers to ensure the overall health of all industries.

Finally, the demand for manufacturing workers is underrepresented in labor market data. Workforce data is often delayed three to four quarters and doesn't consider the real-time manufacturing workforce trends as new manufacturing facilities, such as Samsung and Tesla, come online. Instead, WFSCA focuses on real-time Austin Regional Manufacturers Association (ARMA) data to better understand manufacturing growth trends.

Targeted Industry-Specific Successes and Areas of Improvement

Mobility/Infrastructure

The Mobility and Infrastructure (M+I) industry currently employs over 222,646 workers and is projected to expand to 404,033 workers by 2040, outpacing all other sectors except the professional and business service occupation. M+I jobs include a crossover of construction and transportation-oriented occupations, which include:

1. Frontline mobility occupations
 - Example: Bus, semi, and rail drivers
2. Skilled trades
 - Example: Electrical, pipefitting, welding
3. Fleet maintenance and repair
 - Example: Auto and diesel mechanics
4. Operations and supervision
 - Example: Foreman and superintendents
5. General construction
 - Example: Construction worker, surveyor, and inspector.

Travis County currently has labor shortfalls in frontline mobility occupations, skilled trades, and fleet maintenance and repair. Future workforce demand will continue to surpass the current supply of general construction, operations, and supervisors, leading to future labor shortages.

In the 2023 WFSCA Mobility and Infrastructure Report, industry partners noted that continual workforce shortages will lead to project delays and hamper success. The report goes on to note that more student engagement is needed to encourage more students to pursue career opportunities working on M+I projects (Workforce Solutions Capital Area, 2023).

Secondary and Postsecondary M+I Workforce Pipelines

To meet the M+I demand, secondary schools, postsecondary institutions, and training providers such as union-based apprenticeship programs must collaborate to develop accelerated pathways to employment for students after they graduate from high school. Below is a snapshot of workforce development successes and recommendations to help close the labor M+I labor market demand gap.

Successes:

- Austin, Del Valle, Elgin, Manor, and Pflugerville ISDs have established construction, skilled trades, and automotive programs at many high schools.
- IHE partners offer 16 local training programs to prepare students for working with vehicles or in construction. Multiple degree levels are available for students.
- 13+ apprenticeship programs are available with local unions and independent organizations to prepare apprentices for opportunities in skilled trades.

- Middle and high school career construction and skilled trades events led by the National Alliance for Women in Construction (NAWIC), the Rosendin Foundation, and ACE Mentoring expose middle and high school students to hands-on construction skills and mentoring programs.
 - A Youth Apprenticeship program, starting in August 2024, with the Austin Electrical Training Alliance (ETA), National Electrical Contractors Association (NECA), and the International Brotherhood of Electrical Workers (IBEW) will accelerate students' path to achieving an electrical journeymen licensure.
 - Work-based learning partnerships with Texas Critical Systems (TCS) Mechanical, Austin Fleet Maintenance, Texas Department of Transportation (DOT), the Texas Regional Pathways Network (TRPN), and local auto dealership service centers are showing successful outcomes, encouraging students to continue their education and work in M+I.
 - Secondary career exploration events, led by WFSCA, educate students about M+I and apprenticeship opportunities.
 - When off-campus WBL opportunities are unavailable for M+I students, secondary schools have developed innovative approaches to hosting on-campus experiences. For example, a senior-level automotive class might work on customer cars, or a capstone construction class might build a tiny home to donate to the community.
 - 209 Austin ISD students received dual credit for completing a construction course.
 - 404 students earned an Automotive Service Excellence (ASE) IBC. ASE certifications are highly stackable and considered the gold standard in automotive maintenance.
- construction management, or electrical trades during the 22 - 23 school year, which is far below the current demand for 4,777 workers in the construction trades.
- There are 453 postsecondary students enrolled in a two-year higher education skilled trade, architecture, or construction trades program, far below the current demand for 4,777 workers in the construction trades.
 - In Travis County, 271 students concentrated, and 152 students completed a program of study sequence in automotive technology during the 22 - 23 school year, far below the current demand for 2,972 fleet maintenance and auto repair workers.
 - There are 397 postsecondary students enrolled in a higher education mechanic and repair technology program, far below the current demand for 2,972 fleet maintenance and auto repair workers.
 - There are no secondary training programs to prepare students for frontline mobility operations positions. Developing secondary to workforce pipelines for students to obtain a commercial driver's license, specialize in diesel and heavy equipment mechanics, and distribution and logistics will improve labor shortfalls.
 - Only 25 students received dual credit for an automotive class during the 2022 - 2023 school year. 18 of those credits were received by students in the automotive collision classes at Northeast High School
 - 2,416 male students completed a course in an automotive program compared to 305 females.
 - 16,394 male students completed a course in a construction trades program compared to 4,365 females.
 - More paid off-campus WBL opportunities, such as internships and youth apprenticeships, are needed to attract students to complete their M+I CTE program of study.

Areas of Improvement:

- In Travis County, 278 students concentrated, and 113 students completed a program of study sequence in architectural design, carpentry,

Healthcare

Healthcare lags slightly behind M+I in overall industry growth. As the population of the Austin MSA increases, so does the demand for healthcare workers. The region is also grappling with a shortage of workers who left the industry during the COVID-19 pandemic (2020 - 2023). Luckily, healthcare CTE programs continue to thrive as some of the most popular programs on secondary and postsecondary programs. Healthcare occupations are often broken down into five pathways that offer employment opportunities for various interests. They are:

- 1. Therapeutic Services**
 - Example: Physicians, nurses, and dental assistants
- 2. Diagnostic Services**
 - Example: Optometrist, occupational therapist, phlebotomist
- 3. Health Informatics**
 - Example: Project manager, health information administrator, clinical coder
- 4. Support Services**
 - Example: Biomedical/clinical engineer, healthcare administrator, community health worker
- 5. Biotechnology Research and Development**
 - Microbiologists, pharmaceutical sales representatives, quality assurance technician

Travis County currently has labor shortfalls in healthcare, with the majority in the therapeutic and diagnostic career pathways. As new hospitals and clinics come online, the demand for therapeutic and diagnostic professionals grows. Currently, there is a demand for 6,663 therapeutic and diagnostic professionals yearly. Luckily, there is a high interest in healthcare careers, with many students committing to and completing secondary and postsecondary programs. Labor shortfalls in the healthcare industry can lead to delays in opening new healthcare facilities, long wait times for patient appointments, worker burnout, and poor patient health outcomes.

Secondary and Postsecondary Healthcare Workforce Pipelines

To meet healthcare workforce demands, secondary schools, postsecondary institutions, and industry partners must continually collaborate to develop accelerated training programs, such as apprenticeships, and grow work-based learning opportunities, such as clinical rotations, to keep up with labor demand. Below is a snapshot of workforce development successes and recommendations for expanding healthcare workforce pipelines.

Successes:

- Labor projections indicate that Travis County will need 6,663 healthcare workers annually. Travis County has 1,182 healthcare CTE concentrators. The Austin MSA has 3,152 students enrolled in 2-year health professions programs and 5,494 in 4-year health professions programs.
- Ascension Seton and ACC developed the first medical assisting (MA) and patient care technician (PCT) apprenticeship program in Travis County.
- The Central Texas Healthcare Partnership, led by WFSCA, has been a critical driver in developing public-private partnerships between the major hospitals, clinic systems, and higher education. This group's work has significantly improved students' opportunities to explore healthcare careers.
- All LEA and most charter school systems have an established healthcare program of study (13 total).
- Austin Community College has 27 programs to prepare students for therapeutic, diagnostic, and health informatics careers. Courses are available at multiple ACC campuses and online.
- Community-based organizations, such as Capital Idea and Mission Capital, offer low-cost or free healthcare training programs for low-income adults.
- More high school students pass the certified clinical medical assisting (CCMA) certification (142 earned) than any other

industry-based certification offered in Travis County schools.

- Female students completed 9,306 secondary health care courses compared to 4,809 completed by their male counterparts. Secondary healthcare programs of study are the only female-dominated pathways that lead to a targeted industry.

Areas of Improvement:

- 1,862 students in Travis County are healthcare program of study concentrators. Only 36% of students completed their healthcare program of study (672 total).
- More paid secondary off-campus WBL opportunities, such as internships and youth apprenticeships, are needed to attract students to complete their healthcare program of study. It is rare for healthcare institutions to pay students. In addition, many healthcare organizations restrict the number of students who can participate in off-campus WBL programs. Many schools must have a lottery to reduce the number of students who can participate in a level 4 practicum of health science class, thus leading to a reduced healthcare program of study completion rate.
- Many healthcare employer-sponsored education programs require employees to pay the cost of postsecondary education with tuition reimbursement after course completion. For employees working in

entry-level positions, such as medical assistants, certified nursing assistants, and patient care technicians who make less than Travis County's living wage, taking advantage of these programs is challenging, thus making it hard to stack credentials and degrees.

- Only 216 students received dual credit for secondary health science classes.

Skilled Trades and Construction

Anyone living in Travis County for an extended period has seen the city's skyline dramatically change as more skyscrapers, businesses, and housing have been added. As the economy grows and more people arrive in the capital city, the need for more housing, storefronts, entertainment venues, etc., also increases, leading to a construction boom. Approximately 4,777 general construction workers and skilled tradespeople are needed each year to complete infrastructure and building projects. Construction careers are often broken down into two main categories, general construction and skilled trades, and include but are not limited to the following occupations:



- General construction
 - Construction managers
 - Construction laborer
 - Construction equipment operators
 - Building Inspectors
 - Civil Engineers
 - Architects
 - Cement Masons
 - Concrete Finishers
- Skilled Trades
 - Carpenters
 - Electricians
 - Plumbers and pipefitters
 - Sheet metal
 - Fire sprinkler fitters
 - Insulators
 - Ironworking

As construction demand rises, employers compete for the same labor pool to erect new buildings and complete infrastructure projects. Currently, there is a demand for 4,777 general construction and skilled tradespeople. The construction and skilled trades also have an aging workforce of individuals who are 50+ and nearing retirement. Labor shortfalls in the general construction and skilled trades.

Secondary and Postsecondary General Construction and Skilled Trades Workforce Pipelines

Due to the cross-over of employer demand between infrastructure and building projects, some successes and areas of improvement will be identical. To meet the general construction and skilled trades demand, secondary schools, postsecondary institutions, and training providers such as union-based apprenticeship programs must collaborate to develop accelerated pathways to employment for students after they graduate from high school. Below is a snapshot of workforce development successes and recommendations to help close the general construction and skilled trades labor demand gap.

Successes:

- Austin, Del Valle, Elgin, Manor, and Pflugerville ISDs have established construction and skilled trades programs in many high schools.
- 13+ Apprenticeship programs are available with local unions and independent organizations to prepare apprentices for skilled trades careers.
- Middle and high school career construction and skilled trades events led by the National Alliance for Women in Construction (NAWIC), the Rosendin Foundation, and ACE Mentoring expose middle and high school students to hands-on construction skills and mentoring programs.
- A Youth Apprenticeship program, starting in August 2024, with the Austin Electrical Training Alliance (ETA), National Electrical Contractors Association (NECA), and the International Brotherhood of Electrical Workers (IBEW) will accelerate students' path to achieving journeymen licensure.
- WBL partnerships with companies such as Texas Critical Systems (TCS) Mechanical, Rosendin Electric, etc., show successful outcomes, encouraging students to continue their education and work in general construction and skilled trades.
- Secondary career exploration events, led by WFSCA, educate students about the myriad of skilled trades apprenticeship opportunities.
- When off-campus WBL opportunities are unavailable for construction trades students, secondary schools have developed innovative approaches to hosting on-campus experiences. For example, a level four practicum in construction class might build a tiny home to donate to the community.
- 209 Austin ISD students received dual credit for completing a construction course.
- As employers become more educated about school liability laws, they are more likely to host secondary students for on-site field trips and paid WBL experiences such as internships, youth apprenticeships, etc.
- More secondary counselors and career advisors are receiving education about apprenticeships through educator externships, career events, etc., and talking more with students about alternatives to college.
- 229 students earned some form of Autodesk certification, thus building the foundation for drafting, blueprint reading, and project management.



Areas of Improvement:

- In Travis County, 278 students concentrated, and 113 students completed a program of study sequence in architectural design, carpentry, construction management, or electrical trades during the 22 - 23 school year, which is far below the current demand for 4,777 workers in the construction trades.
- There are 453 postsecondary students enrolled in a two-year higher education skilled trade, architecture, or construction trades program, far below the current demand for 4,777 workers in the construction trades.
- 16,394 male students completed a course in a construction trades program of study compared to 4,365 females.
- More paid off-campus WBL opportunities, such as internships and youth apprenticeships, are needed to attract students to complete their construction program of study.
- IBC attainment in non-Autodesk certifications is very low (41 passed), signifying a skills training gap.
- In 2022- 2023, 18,010 Hispanic or Latino students completed one or more construction trades courses, while 2,741 students from all other racial and ethnic groups did the same. More diversity is needed in secondary construction trades programs.
- No school districts or charter schools, except for Austin ISD, had students earn dual credit in a secondary construction trades course.

Manufacturing

With the passing of the Chips and Science Act in 2022, Texas has seen a boom in massive manufacturing projects. Companies such as Tesla, Samsung, and Texas Instruments have seen the value of operating in a low-tax state and working with local taxation districts to take advantage of tax incentives and land deals to develop manufacturing plants. The Austin MSA has seen the rise of Samsung's new semiconductor facility in Taylor, TX, and Tesla's vehicle production facility in Del Valle. In addition to the latest manufacturing facility construction, companies such as British Aerospace Systems (BAE), Next eXPerience, Advanced Micro Devices (AMD), and Applied Materials have an enormous presence in Austin. As more large manufacturing facilities are built, smaller manufacturing, robotics, and supply companies follow behind to serve the needs of large manufacturers.

The November 2023 WFSCA manufacturing labor market overview predicts the manufacturing industry will experience a 1.9% annual growth rate in the Austin MSA. Currently, 72,000 people work in the industry, and 32,000 additional jobs will be added in the next ten years. The average salary is \$120,000, which is \$39,000 more than any other industry. One of the report's key findings is that K-12 outreach is critical to attracting students into manufacturing careers (Workforce Solutions Capital Area, December 2023).

The manufacturing industry offers various entry-level career options with multiple levels of education. Manufacturing careers are often broken down into two main categories: jobs that require more advanced training or a bachelor's degree and those that require short-term training, apprenticeship, on-the-

job training, or certification. Some examples include, but are not limited to:

- Jobs that require short-term training, apprenticeship, on-the-job training, or certification:
 - Welders
 - Certified production technicians
 - Electrical and electronic engineering technologists and technicians
 - Industrial engineering technologists and technicians
 - Electrical and electronics repairers
 - Semiconductor processing technicians
- Jobs that require a bachelor's degree or more advanced training
 - Engineers
 - Production managers
 - Quality management
 - Operations management

Travis County currently has labor shortfalls in manufacturing, with the majority in careers that require short-term training, apprenticeship, on-the-job training, or certification. As new manufacturing facilities open, there is a demand for 3,400 entry-level positions yearly (Workforce Solutions Capital Area, December 2023). Unfortunately, secondary student interest in manufacturing careers is low, with only 742 students concentrating and 95 completing a manufacturing program of study. Labor shortfalls in the manufacturing industry can lead to production delays, the opening of new manufacturing facilities locally, and less interest in moving manufacturing operations to the area.

Secondary and Postsecondary Manufacturing Workforce Pipelines

To meet manufacturing workforce demands, secondary schools, postsecondary institutions, and industry partners must continually collaborate to develop more manufacturing career exploration opportunities, accelerated training programs, such as apprenticeships, and grow work-based learning opportunities, such as internships, to keep up with labor demand. Below is a snapshot of workforce development successes and recommendations for expanding manufacturing workforce pipelines.

Successes:

- Austin, Pflugerville, Del Valle, Eanes, Lake Travis, Elgin, Manor, and the Texas School for the Deaf have advanced manufacturing and machinery mechanics programs of study on some of their high school campuses.
- Austin Community College offers six manufacturing degree pathways with various degree levels.
- TSTC offers three manufacturing degree pathways with various degree levels at the East Williamson County Higher Education Center (EWCHEC).
- WFSCA has helped co-develop two manufacturing apprenticeship opportunities for adult learners with higher education and employers. Manufacturing employers' interest in apprenticeship programs is growing.
- In Travis County, 214 students earned dual credit in a manufacturing course. 183 of those dual credits were awarded to Elgin ISD students in the Welding P-Tech program.
- Skillpoint Alliance and the Austin Area Urban League offer low to no-cost manufacturing training opportunities for adult learners.
- 1,381 students are enrolled in a 2-year engineering or engineering-related degree in Travis County. 883 students are enrolled in a 4-year engineering or engineering-related degree in the Austin MSA.

Areas of Improvement:

- 742 secondary students are concentrators in CTE manufacturing programs, and 95 have completed their CTE manufacturing programs.
- Female secondary students completed 351 courses in a manufacturing program of study, compared to 2,825 male course completions.
- There are 383 students enrolled in a 2-year manufacturing-focused degree plan, which falls short of the demand for 3,400 entry-level manufacturing job openings in Travis County.
- Only 19 secondary students attained an IBC aligned to a manufacturing program of study, all of which were structural steel certifications.

Information Technology

2018 marked the point in which the amount of machine-generated data surpassed the human-generated data. As the world increasingly relies on machine-generated data, the demand for information technology (IT) professionals to interpret, secure, and store that data is growing exponentially. According to the March 2023 WFSCA Texas Talent Experts Report: Addressing the Tech Talent Shortage, the US will have a 1.2 million software engineers shortage by 2026. In Travis County, employers have 8,212 IT job openings annually. 41%, or 3,379, of annual openings in the information technology sector are for software engineers. There have been notable collaborations between non-profits, higher education, and school systems to expose students to software engineering. Still, more work is needed to expand high school WBL programs, such as paid internships and youth apprenticeships, to ensure the completion of the IT program of study (Workforce Solutions Capital Area, March 2023).

The technology industry is responding to the talent shortage by rethinking its hiring process. In the Austin MSA, 74% of tech and IT jobs require postsecondary training or a four-year degree, yet only 60% of the applicants meet that criterion. Companies are adopting workforce development models such as apprenticeships, IT boot camps, and on-the-job training to fill labor needs where postsecondary degrees aren't necessary. Those interested in an IT career must determine which of the following six pathways they would specialize in.

- Computer Support
 - Examples: Computer user support specialists and computer network support specialists
- Cybersecurity
 - Examples: Cybersecurity analyst and security engineer
- Networks and Systems
 - Examples: Computer network architects and computer systems analysts
- Software Development
 - Examples: Software engineer and software developer
- Web Development
 - Examples: Web developers and frontend developers
- Data
 - Examples: Database administrators and data analyst
- Cloud Computing
 - Examples: Cloud engineer and cloud programmer

Secondary and Postsecondary General Construction and Skilled Trades Workforce Pipelines

Students are exposed to IT skills at an earlier age than ever before. They are learning the logic to succeed in this industry as early as ages 3 and 4, yet many students lose interest in secondary school. Secondary schools, industry partners, and higher education must work together to solve this problem and develop curriculum and WBL models that excite students and encourage them to continue their IT education. Collaborative efforts among secondary schools, industry partners, and higher education are essential to address this challenge. Together, they should strive to create engaging curricula and WBL models that inspire students and foster a sustained interest in their IT education. Below is a snapshot of workforce development successes and recommendations for expanding IT workforce pipelines.



Successes:

- 3,183 students in Travis County passed an AP computer science class.
- Austin Community College offers 17-degree pathways with various degree and certification levels for students training for IT careers.
- TSTC offers four online IT degree pathways with various degree levels for students training for IT careers.
- Four non-profit organizations provide non-degreed training opportunities to help various populations gain entry-level IT jobs.
- There are 3,705 students enrolled in a postsecondary two-year IT program in Travis County and 3,912 students enrolled in a four-year IT-related degree plan in the Austin MSA.
- WFSCA co-developed eight IT apprenticeship opportunities in collaboration with IHEs and industry partners.

Areas of Improvement:

- 5,199 students concentrated in an IT program of study compared to 843 who completed, marking an 84% decrease in students completing 2 or more classes in their four-year IT course sequence.
- Female secondary students completed 2,121 courses in an IT program of study, compared to 5,186 male course completions.
- Black or African American students completed 474 courses in an IT program of study compared to their Hispanic or Latino (3,193 course completions) and White (2,408-course completions) counterparts.
- Only 49 students passed an IT-related IBC.
- WBL opportunities, such as IT internships and youth apprenticeships, are few and far between.

Overall Recommendations

Cross-sector partnerships

Cross-sector partnerships are the lifeblood of workforce development programs. In 2016, Governor Abbott issued a series of workforce development charges called the Tri-Agency, aimed at promoting collaboration between three state agencies: the Texas Higher Education Coordinating Board (THECB), the Texas Workforce Commission (TWC), and the Texas Education Agency (TEA). The priorities outlined the need to break down barriers between the agencies, promote more cohesive data-sharing policies, and begin empowering local agencies such as Education Service Centers (ESC), Workforce Solutions (WFS), Institutes of Higher Education (IHE), and Community-Based Organizations (CBO) to convene cross-sector teams comprised of Local Education Agencies (LEA), industry partners, industry organizations,



and higher education to work together to create seamless kindergarten to career pathways that lead students to high-skill and high-demand careers. In Travis County, organizations such as ESC 13, WFS Capital Area, ACC, TSTC, Opportunity Austin, E3 Alliance, The Make It Movement, and others are working diligently to prepare youth and adults for high-demand careers.

Recommendation #1

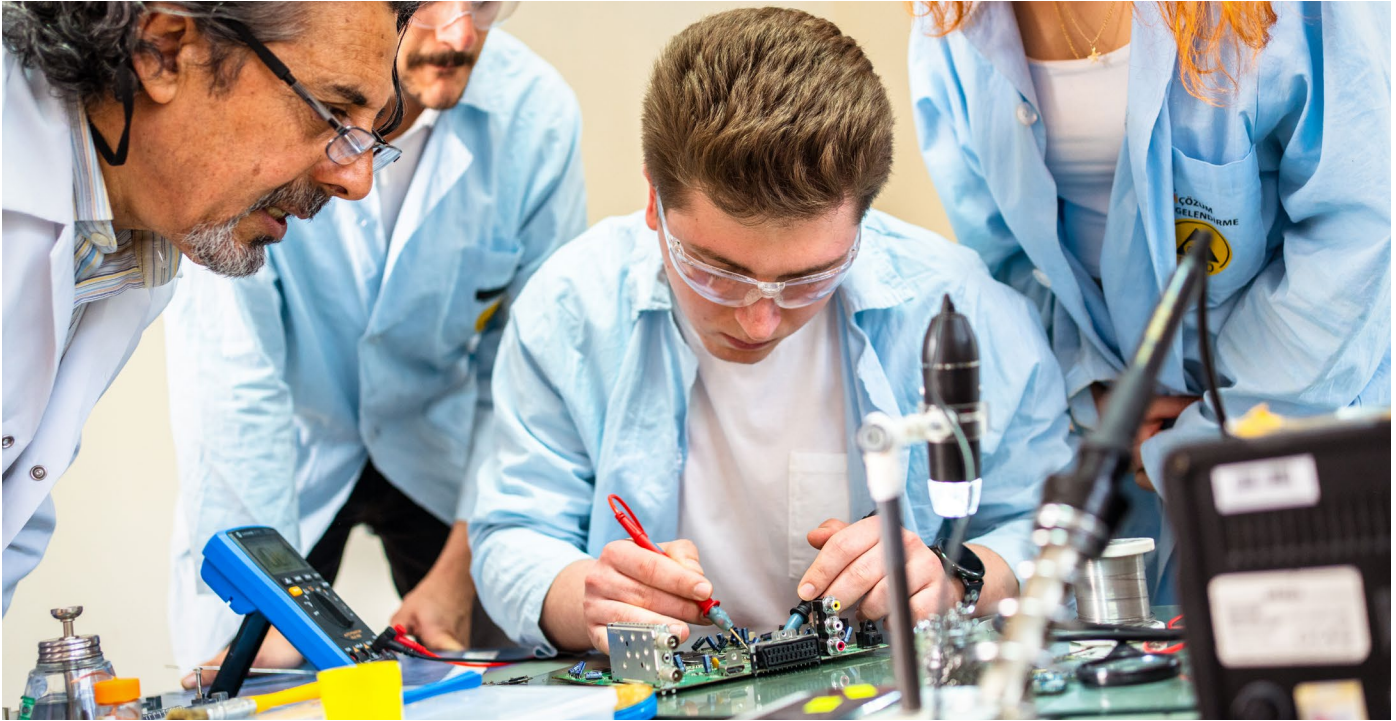
The convener organization acts as a neutral voice that brokers deals between the other partners to develop programs that lead students to high-skill and high-demand industries where they can make at least a living wage with opportunities to springboard into more advanced jobs. **As more conveners enter the workforce development space, all partners must coordinate efforts to avoid replicating services and support each organization’s services.**

Recommendation #2

Industry organizations and employers recognize the need to engage more with secondary schools to build career awareness in middle school and begin workforce training in high school CTE programs. Some growing industry sectors are more advanced in their K - 12 outreach. **Convener organizations must work with growing industries and K -12 to break down barriers and build more robust workforce pipelines.**

Alignment with Labor Market Demand

Educating students and parents about the projected high-demand and high-skill industries is crucial to avoid postsecondary degrees with high unemployment rates and career tracks leading to static jobs with little room for career growth.



Recommendation #1

Many students make career decisions based on the recommendations of the adults they have close relationships with as opposed to data-driven discussions about industries with high growth. Workforce development partners must increase parent and K - 7 exposure to high-skill and high-demand careers before students choose their CTE program of study and develop a high school graduation plan. **In Travis County, few events target career awareness and exploration for students ages 5-13**

Recommendation #2

In a recent survey of secondary administrators, CTE teachers, counselors, and college and career advisors (CCA), 38% of respondents noted that students receive their college and career education from counselors, while 28% acknowledged that college and career advising centers play a vital role in college and career education. **Workforce partners must collaborate to educate counselors and CCAs about career opportunities and postsecondary degree options that will lead students to high-skill and high-demand jobs.**

Links Between Secondary and Postsecondary

With the introduction to College and Career Readiness School Models (CCRSMs) throughout Texas, there has been tremendous improvement in the linkages between secondary and postsecondary partners through Early College High School (ECHS) and Pathways in Technology (P-Tech) programs. CCRSM programs provide opportunities for students to earn dual credit for general education and CTE courses to earn an associate's degree in high school. While these programs show much success, they only focus on training students for specific industries.



Recommendation #1

P-Tech programs that connect high school students to college credit and workforce training are becoming more popular. Travis County has one construction, two IT, one healthcare, and two manufacturing P-Tech programs that train students for the five targeted industries. **Developing more dual credit linkages, modeled after P-Tech programs, to train students for entry-level positions in the five targeted industries will significantly improve secondary to postsecondary linkages.**

Recommendation #2

An analysis of all ACC and TSTC dual credit MOUs identified 122 courses that can be offered for postsecondary credit aligned to the five targeted industries. Of those, 49 had students who received dual credit. **Postsecondary institutions and LEAs should review existing MOUs, identify why so few CTE courses are offered for dual credit, and develop a plan to strengthen and enhance CTE dual credit offerings aligned to the five targeted industries.**

Credential with Value in the Labor Market

An E3 Alliance report, as part of their pathways to prosperity program, identified that two-thirds of jobs require some postsecondary credential, such as a workforce certificate or a postsecondary degree. According to E3 Alliance research, young adults who do not attain a postsecondary credential within six years of leaving high school face a daunting reality, as they have only a 12% chance of earning a living wage going forward.

Source: (E3 Alliance Community Conversations with Central Texans, n.d.)



Recommendation #1

In Travis County, 10% of secondary students who completed or concentrated in a state-approved program of study passed an industry-based certification. **LEAs must identify why students struggle to pass IBCs and develop a plan to improve learning outcomes and IBC attainment.**

Recommendation #2

During the 2022 - 2023 school year, 76 students in ESC 13's ten-county service area earned a level I or II certificate in any workforce development area. **LEAs and IHEs should look at current dual credit CTE crosswalks and develop additional paths to level I and II certification aligned to the five targeted industries.**

Integration of Rigorous Academics and Career-Focused Learning

Advanced academic programs such as dual credit, advanced placement (AP) classes, and international baccalaureate (IB) programs extensively prepare students for postsecondary success. When coupled with career-focused learning, such as project-based learning (PBL), out-of-school time (OST) programs, and participation in off-campus career learning, these programs ensure that students see the connection between career learning and attaining postsecondary credentials to accelerate their careers.



Recommendation #1

53% of respondents to ESC 13's fall 2023 gap and asset analysis survey suggest that students moderately participate in advanced academic programs. **LEAs should consider developing programs of study sequences aligned to the top five in-demand industries that include advanced academic programming aligned with career learning.**

Recommendation #2

When respondents to ESC 13's fall 2023 gap and asset analysis survey were asked about the coordination of career education efforts, 15% identified that they would like to create more opportunities for students, and 23% noted that they were unsure how to increase collaboration with employers. **Given the considerable workload of administrators and teachers, LEAs would benefit from designating a district single point of contact or regional convener to facilitate business relations and coordinate the organization of career-focused learning events.**

Effective Advising

Effective advising is a developmental approach that helps students make more informed and financially sound college and career decisions. Students learn about career opportunities available in their region and the skills, education, and training required to pursue careers of interest. When respondents to ESC 13's fall 2023 gap and asset analysis survey were asked to rate the role of college and career advising in their districts, 42% noted that college advising plays a significant role on campuses, and 59% indicated career advising played a critical or considerable role on campuses.



Recommendation #1

69% of ESC 13's fall 2023 gap and asset analysis survey noted that counselors play a critical or considerable role in college and career advising. **All workforce partners must work together to educate counselors about the skills, education, and training required to pursue careers of interest in Travis County's top five high-skill and high-demand industries.**

Recommendation #2

All educators must have access to the latest information regarding high-skill and high-demand industries. **Workforce development partners must promote regional workforce resources, such as the [WFSCA Climb The Ladder Central Texas](#), to educate students about the most up-to-date skills, education, and training requirements needed to pursue a career of interest in a targeted industry.**

Continuum of Work-Based Learning

The continuum of WBL experiences includes career awareness activities in elementary school, career exploration in middle school, and preparing for the world of work in high school. As students move toward the end of high school, their capstone WBL experiences include opportunities for internships, on-the-job training (on campus or off), pre-apprenticeship, and youth apprenticeship. As a region, we have a lot to celebrate regarding career exploration. Thanks to the hard work of the WFSCA K - 12 awareness team, 19,235 secondary students participated in career exploration activities during the 2022 - 2023 school year. Unfortunately, the capstone off-campus WBL experiences are limited for student participation. Luckily, LEAs have been creative in creating on-campus WBL experiences that function similarly to an off-campus experience.



Recommendation #1

In ESC 13's fall 2023 gap and asset analysis survey, respondents were asked to rate the level of WBL coordination between high schools and employers. 23% noted limited coordination, and 45% noted moderate coordination. **Conveners, LEAs, and employers are encouraged to explore developing a more efficient and streamlined approach to facilitate connections between high schools and employers.**

Recommendation #2

When asked about the barriers preventing student participation in WBL, 20% of respondents cited transportation issues, another 20% highlighted a scarcity of opportunities, and 15% pointed to scheduling conflicts affecting WBL programs. **Conveners, LEAs, and employers must collaborate and devise solutions addressing these challenges, specifically focusing on transportation concerns, scheduling conflicts, and the shortage of paid work opportunities for students.**



Conclusion

The Travis County Asset Mapping Report is a comprehensive analysis of the region's education and workforce development landscape. Prepared by ESC 13, the report identifies the strengths and challenges of the education and workforce systems in Travis County. The report was made possible with the help of the leadership advisory team, comprising representatives from various organizations, who participated in the asset and gap report. The Tri-Agency Workforce Initiative aims to increase economic prosperity in Texas by linking education and industry. By providing insights into the education and workforce systems, this report can help the Tri-Agency Workforce Initiative and other stakeholders in Travis County make informed decisions that can positively impact the region's economic growth.

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