ARKANSAS
WORKFORCE ASSESSMENT

ARKANSAS DEPARTMENT OF COMMERCE

Prepared by: sme

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1. ABOUT THIS STUDY

In 2022, manufacturing constituted 12.41% of the state's non-agrarian employment, providing nearly 164,000 jobs. (National Association of Manufacturers, 2021). As manufacturing continues to grow in Arkansas, there is an increased need for skilled workers to support local employers and position the state for continued economic growth.

This study and subsequent reports are in support of a planning activities grant provided to the state of Arkansas by the **U.S. Department of Commerce, Economic Development Administration (EDA) American Rescue Plan Act**. SME, a 90-year-old nonprofit organization dedicated to advancing manufacturing through awareness of new technologies and development of a strong workforce throughout the industrial, education, defense, and government channels, was selected to assist the State of Arkansas to better understand local, state and regional gaps that could inhibit the availability and sustainability of manufacturing talent. And if left unresolved or addressed, it is these gaps that could negatively impact the economic growth of manufacturing across the state.

This study, initiated during the fall of 2022, was focused within three workforce areas:

— 1 —
Statewide and Regional Industry Skill Analysis

— 2 —
Educational Program Alignment

— 3 —
Employment Needs of the Emerging Workforce

The information in this report was derived from quantitative and qualitative data received through surveys distributed to more than 1,000 manufacturers and nearly 400 students across the state, eight regional in-person focus groups consisting of employers, education and workforce development partners, and community college students. In addressing the labor market demand for Arkansas, SME utilized labor market intelligence and quantum labor analytics to understand historical and emerging manufacturing hiring trends as well as skills relevant to the Arkansas manufacturing industry sectors. In addition, SME utilized a neuroscience-based assessment to understand the foundational behaviors necessary for success in a representative sample of in-demand entry-level manufacturing jobs.

2. ARKANSAS SKILLS GAP: RESEARCH METHODOLOGY

The research for this project consisted of a mixed methodology approach. To address manufacturing labor and skills demand, SME triangulated labor market intelligence data addressing 36,000 unique job postings over a 12-month period with interview and focus group/discussion questions. For the labor market analysis, SME utilized Lightcast Labor Market Analytics (formerly Burning Glass), which is a real-time labor and skills analytics data platform that highlights job postings, credentials, skills (soft and job-specific), compensation data and at-risk classifications based upon government sources (Bureau of Labor and Statistics, U.S. Census Bureau, O*Net), job postings, online resumes, online profiles, and any additional data sources available through the state of Arkansas.

Surveys, focus groups and discussion questions were designed with manufacturing industry experts to minimize respondent fatigue and maximize engagement. Survey instruments were designed and deployed for both manufacturing companies and educational stakeholders (see Appendix B – Survey Instruments). Focus group questions were designed and delivered specifically for educational stakeholders, employers and workforce entities (see Appendix C – Focus Group Questions).

The following data sources and instruments were utilized to investigate, understand and address the research sections for the statewide labor market analysis and skills gap determination, and to address the workforce development pipeline for Arkansas manufacturing.

- Labor Market Intelligence: This real-time labor and skills analytics data highlights job postings, credentials, skills (soft and job-specific), compensation data and at-risk classifications based upon government sources (Bureau of Labor and Statistics, U.S. Census Bureau, O*Net), job postings, online resumes, online profiles and any additional data sources available through the state of Arkansas (if so desired).

- Person-Level Intelligence: This is person-level identification data about unmet demand for training and employment at the unique Arkansan level down to the individuals themselves and the communities in which they live. Person-level identification technology utilizes the L2 national database, and the person-level intent score data is modeled from stratified sample statewide survey input. This data is designed to help workforce boards, sector partners and states identify and optimize worker and workforce pipeline supply to drive economic mobility for manufacturing.

- Quantum Labor and Skills Analysis: The Quantum Labor Analysis engine enables advanced skills intelligence and the insights needed for a sector-based workforce strategy. This skills-based AI engine utilizes several layers of machine learning technology, including natural language processing and machine learning, deep learning and statistical analysis. The engine ingests over 24TB of global labor supply, demand and training data daily. This includes job postings, job descriptions, resumes, worker profiles, government economic data, forecasts, patents, academic journals and more. SME leverages a series of machine learning services to analyze and extract skills from these labor market artifacts. This machine learning process generates a fluid skills taxonomy/ontology that adjusts to fluctuating labor markets while also aligning to existing taxonomies, such as ESCO and O*NET.

- Job DNA Matrix: Understanding the behaviors, skills and competencies ("Job DNA Matrix") of a specific job role is important to evaluate and foster optimal workforce performance and retention. Implementation of a Job DNA Matrix is even more vital for the training and development of emerging or net-new job roles. As part of this framework, we will conduct a specific, yet comprehensive, Job DNA analysis that understands human behavior based on key discoveries of neuroscience comprehending the brain's role in creating behavior. The goal will be to identify the difference-making behavioral DNA that high performers have in common. Given that an individual's set of behavior preferences are not influenced by intellect, background or academic performance, the Job DNA matrix fosters diversity, equity and inclusion.

- Focus Groups: Eight regional focus groups (totaling over 150 participants) were conducted in person with community college students, education and workforce training entities, and industry representatives. (See Appendix C for list of questions.)

- Surveys: Three survey instruments, designed and deployed to education/training stakeholders and industry representatives, addressed labor market needs and skills alignment. (See Appendix B for list of questions.)

The quantitative and qualitative information gathered throughout the study and displayed in this report was derived from these research activities:

- **Statewide Manufacturing Market Analysis:** This analysis addressed Industry and Job Demand while incorporating specific insights from Arkansas industry representatives regarding the manufacturing workforce challenges and opportunities.

- **Statewide and Regional Skills Gap Study:** The study addressed the Manufacturing Skills in Demand and the Voice of the Industry on relevant technical and employability skills, and provided recommendations to identify, evaluate and develop current and emerging manufacturing skills and competencies.

- **Desired Employer Study:** This study surveyed the potential workforce in each region to understand the most critical items workers desire to remain with an employer (i.e., pay, flexible schedule, culture, etc.). Collaborating with regional schools, employment agencies and other pipeline partners to investigate employer attributes, the desired employer study addressed what individuals were looking for as far as workplace fit and culture.

- **Pipeline Modeling Study:** This study researched, at an Arkansas regional level, all current and potential workforce pipeline models (i.e., high school, career and technical education (CTE), and youth apprenticeship), and where shortfalls or opportunity may exist. It also investigated personal-level intent to work and get training as a potential pipeline identification strategy.

- **Educational Alignment and Articulation Study:** This study investigated the education and training opportunities related to manufacturing skill and credential needs.

3. STATE OF ARKANSAS: DEMOGRAPHIC LANDSCAPE

To illustrate the landscape of Arkansas, SME started with an overall view of the demographics of Arkansas residents (see Chart 1). This landscape view provides a demographic background analysis to understand the current and potential workforce pipeline for manufacturers in the state of Arkansas.

Chart 1. State of Arkansas Census Data and Demographics with Education and Career Intention Scores

Arkansas Snapshot	
Population	3,030,522
Population 18+	2,628,804*
Working Population (18 – 64) with Intent	1,164,719*
Education Attainment	88% High School Diploma
Unemployment	3.4%
Labor Participation Rate	57.4%

*Adult Prospect Pipeline as of August 2022

Gender

50.9%
Women

49.1%
Men

Census Data

3,030,522 Residents

Labor Force
Participation Rate: **57.4%**

3.4% Unemployment (Dec. 2022)
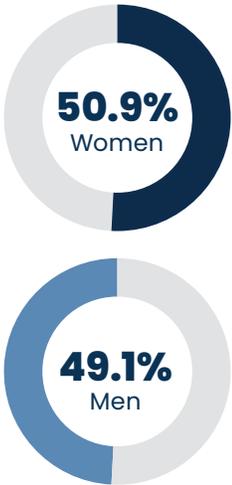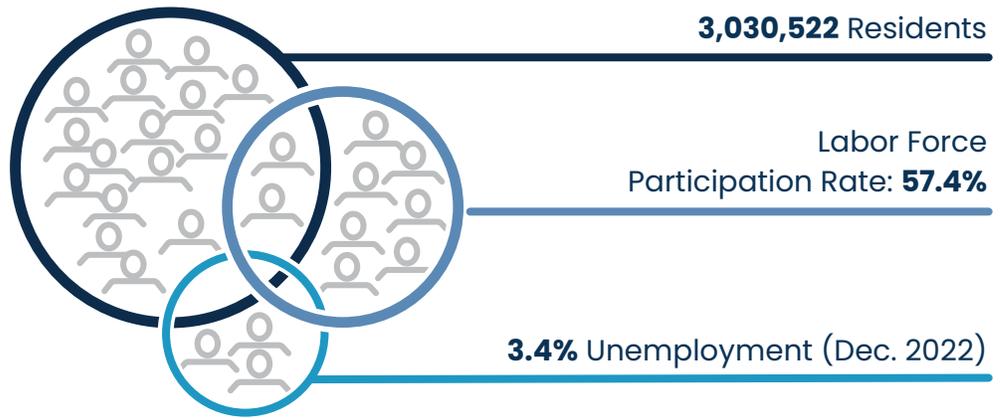
For this study, the state of Arkansas was divided into specific regions that were provided to the study team to better understand localized needs. These regions were divided by the recommendation of the Economic Development Association of Arkansas. Focus group sessions with employers, educational partners and students were held in each region. The following map illustrates the regional sectors, and the full list of corresponding counties is listed in Appendix A.

Regional Sectors — Arkansas Counties
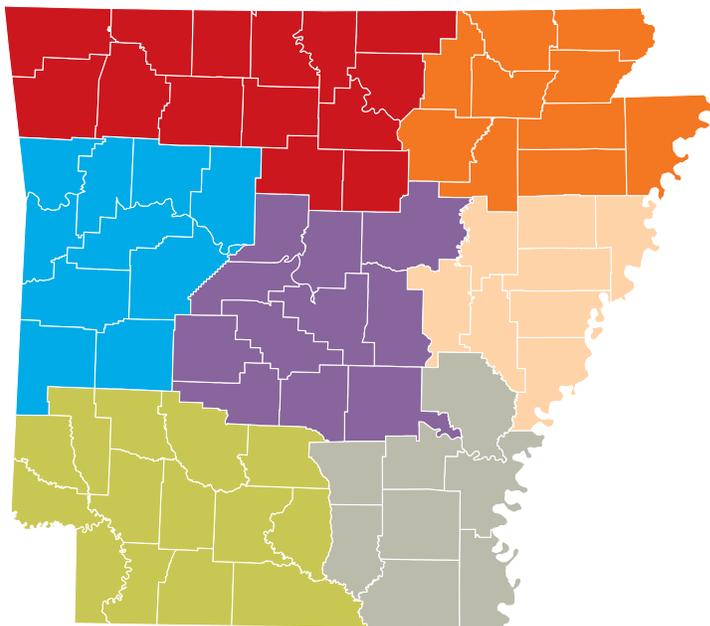
Arkansas Regional County Grouping	
Northwest	
Western	
Southwest	
Central	
Northeast	
Eastern	
Southeast	

The sections throughout this report have been written from the information gathered from the above research activities. For alignment purposes, throughout the report, each section includes the research activity that acted as a source for that section's content.

4. STATEWIDE MARKET ANALYSIS

The statewide market analysis addresses Industry and Job Demand while incorporating specific insights from Arkansas industry representatives regarding the manufacturing workforce challenges and opportunities.

The information in this section is derived from the **Statewide Manufacturing Market Analysis and the Statewide and Regional Skills Gap Study**. A market analysis of the manufacturing industry in Arkansas was conducted to better understand current manufacturing job viability and potential growth. This research was accomplished through independent research of job postings within each Arkansas geographic region and through a Manufacturing Skills Gap Survey that was distributed to 1,000 companies across the state. The Statewide Manufacturing Market Analysis uses labor market intelligence data that utilized the Lightcast Labor Market Analytics tool, over a 12-month time-period, to analyze 30,413 unique job postings in the manufacturing industry for the state of Arkansas. In this market analysis, we investigated the trends for specific in-demand postings at the various entry-level positions as well as benchmarking the number of job postings for manufacturing in Arkansas against other industry areas.

For the Statewide and Regional Skills Gap Study, we designed and distributed surveys to capture more specific hiring and skill needs from manufacturers. This combination of the labor market intelligence data and field surveys allowed for a more robust analysis of the industry's need.

This section provides a workforce competitive analysis of Arkansas manufacturing as compared to other industries over a 12-month period, the in-demand manufacturing job trends within the state, and the section entitled Voice of the Industry, which provides industry survey feedback regarding immediate workforce development needs.

Industry Workforce Demand: Competitive Analysis

Based on 2020 U.S. Census Bureau data, manufacturing in Arkansas consists of 2,525 total establishments, employing more than 162,000 workers. Of those total establishments, 2,187 (87%) employ 100 or fewer workers. **The manufacturing industry was the leading contributor to the increase in Arkansas' GDP, accounting for up to 18% of the state's GDP in 2022** (IBIS world, Arkansas Economic Development Commission). The sector is anticipated to **expand steadily** as more manufacturers decide to expand their operations in Arkansas (IBIS world, Arkansas Economic Development Commission).

> **" We have a supply to demand issue."**
> – Industry partner focus group participant

To understand how Manufacturing stands up against other industries in the state of Arkansas, a review of job postings per industry was conducted. The data, derived from Burning Glass Labor Insights, shows that Manufacturing is a top industry for job postings throughout the state of Arkansas, preceded only by the Health Care and Social Assistance and Retail Trade industries. As seen in the table below, Manufacturing has grown in the percentage of job postings more than any other industry over the past three years.

Table 1. Arkansas Manufacturing — Industry Demand

Industry Sector	Total Number of Job Postings 11/21 - 10/22	Percentage of Total Job Posting 11/21 - 10/22	Percentage of Total Job Posting 1/21 - 12/21	Percentage of Total Job Posting 1/20 - 12/20
Health Care and Social Assistance	56,719	32.0%	36.3%	44.2%
Retail Trade	39,510	22.3%	21.8%	19.5%
Manufacturing	32,080	18.1%	11.8%	10.7%
Finance and Insurance	26,315	14.8%	11.8%	10.7%
Transportation and Warehousing	14,010	7.9%	14.8%	12.9%
Construction	4,392	2.5%	2.1%	1.9%
Utilities	2,586	1.5%	0.7%	0.6%
Mining, Quarrying, and Oil and Gas Extraction	1,031	0.6%	0.5%	0.6%
Agriculture, Forestry, Fishing and Hunting	586	0.3%	0.3%	0.3%

Based on 2020 U.S. Census Bureau data, maunfacturing in Arkansas consists of 2,525 total establishments, employing over 162,000 workers. Of those total establishments, 2,187 (87%) employ 100 or less workers.

A thriving manufacturing economy provides significant employment and advancement prospects in the local market. However, the drastically increasing demand could also result in a new issue—a conflict of interest between talent and employers. According to our data, the proportion of physical and manual occupations has decreased since 2016 by more than 15%. The significant labor shortage in the manufacturing sector over the past 12 months could be most visible in the job families connected with skilled workers. To better understand where manufacturing jobs are available across the state of Arkansas, additional research was conducted to understand the total job postings per region. In each defined geographic region, manufacturing remained a top four industry job poster, according to the data. The following graphic illustrates the percentage of job postings by top five industries per regional classification over the last 12 months (manufacturing data labels listed). See Appendix D for full listing of industry comparison by region.

Arkansas Manufacturing Jobs

To understand how Manufacturing stands up against other industries in the State of Arkansas, a review of job postings per industry was conducted. Derived from Burning Glass Data Insights, the data shows that **Manufacturing** is a top industry for job postings throughout the State of Arkansas, only preceded by the **Health Care and Social Assistance** and **Retail Trade** industries.

Manufacturing has grown in the percentage of job postings more than any other industry over the past three years.

Chart 2. Industry Hiring by Region

Chart legend: Health Care and Social Assistance · Retail Trade · Manufacturing · Transportation and Warehousing · Finance and Insurance

Manufacturing data labels: Northwest 16.9%, West 24.4%, Southwest 25.7%, Central 16.5%, Northeast 21.5%, East 15.0%, Southeast 18.8%
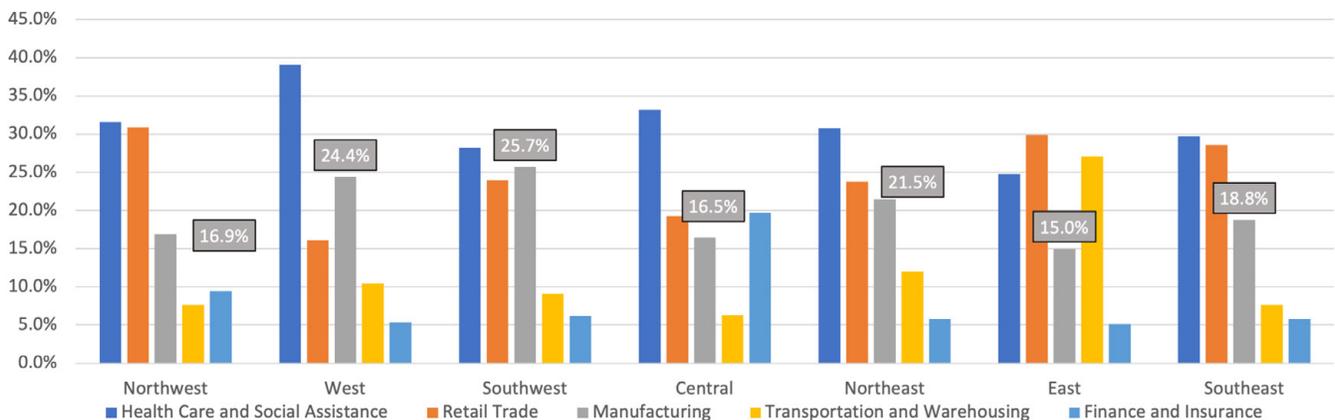
Given that the manufacturing industry can encompass a vast expanse of different types of manufacturing, SME also analyzed the top three manufacturing industry classifications by region in terms of their job postings. By segmenting the more specific manufacturing areas within the identified Arkansas regions, stakeholders can not only better understand the in-demand job positions but also further target the needed skills and training for these specific manufacturing sectors. Similar to the industry competitive analysis, these data points also incorporate a 12-month time period of job postings. The following interactive map (scroll over map pins per region to see manufacturing industries) illustrates the top three sub-sectors of manufacturing based upon their six-digit North American Industry Classification System (NAICS) code. For reference, NAICS is the industry standard used by federal agencies (e.g., U.S. Census Bureau) to "classify business establishments for the purpose of collecting, analyzing and publishing statistical data related to the U.S. business economy" (https://www.census.gov/naics/).

Industry Workforce Demand: Competitive Analysis

The following interactive regional Arkansas map indicates the hiring demand by manufacturing sector (top three per region); in order to see the respective hiring data simply scroll your cursor over the specific map pin for the region.
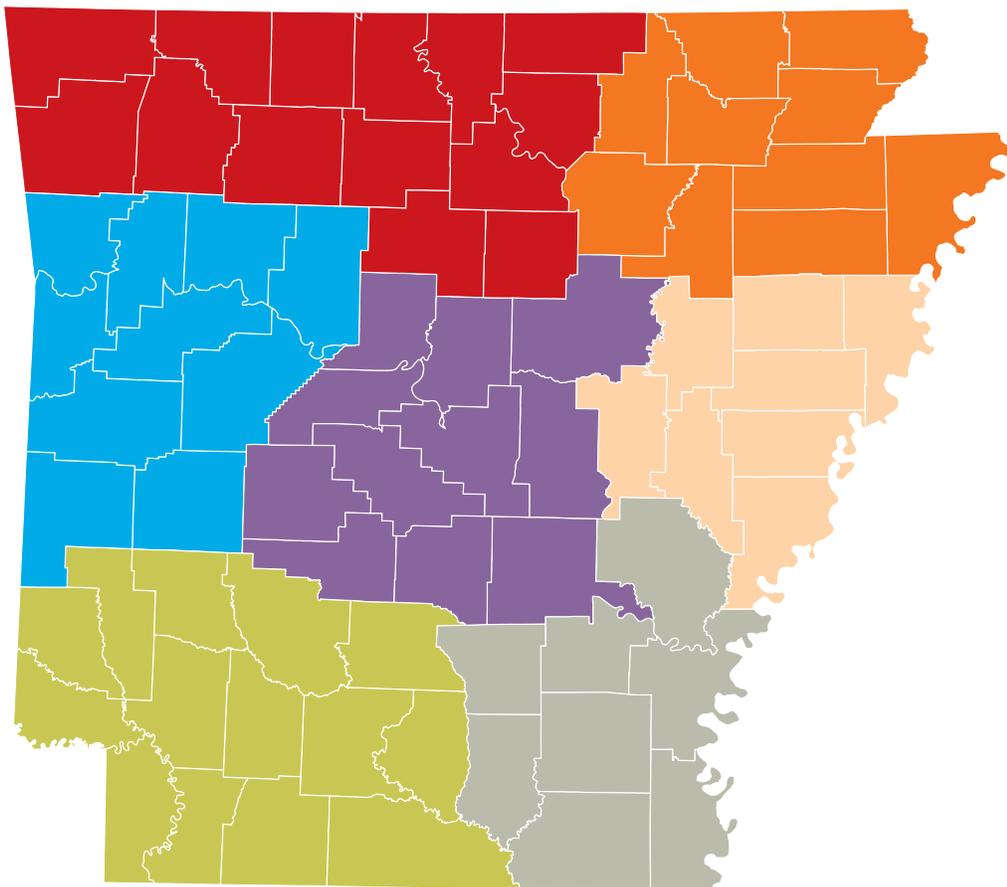
Based upon regional analysis of the respective manufacturing areas, the previous manufacturing industry analysis map indicates a consistent labor need in the areas of automotive manufacturing and components, poultry production and processing, and petroleum refining across many regions. One key area that illustrated a significant rise in labor demand over the indicated time period was the semiconductor sector in Central Arkansas, which increased from 1.4% of job postings in 2021 to 23% (1,285 positions) in 2022.

In addition, SME analyzed the more than 30,000 unique job postings to determine which manufacturing positions are "hardest to fill" in Arkansas and, more specifically, in the identified Arkansas regions. For the purpose of this analysis, the definition of "hardest to fill" encompasses an equation of number of job postings that are correlated with the length that these postings are continuously listed. While there are limitations in this process (e.g., employers failing to remove the job posting), we understand that this can provide valuable insights into manufacturing occupations that continue to remain unfilled. To mitigate some of the variability in this trend, we analyzed changes in specific manufacturing positions at set 30-day intervals up to one calendar year (365 days). The data revealed that the "hardest to fill" positions based on the number of job postings during the past 12 months across the entire state of Arkansas were ranked as 1) Production Worker, 2) Manufacturing Machine Operator, 3) Production Supervisor, and 4) Mechanical Engineer.

When validating these job titles in our manufacturing company focus groups, those employers consider both the Production Work and Manufacturing Machine Operator to be entry-level roles for their organizations. Chart 5 shows that those entry-level roles consist of 66% of the "hard-to-fill" jobs throughout Arkansas.

> **" We will take anyone these days. Pre-qualifications are gone. If you are a warm body, we will take you."**
> – Industry partner focus group participant

During the focus groups, employers additionally pointed out that these entry-level roles are not only the roles with the most job openings, but they are also constantly in flux and hold the highest turnover percentage in the company. In fact, some employers mentioned that 10-15% of their ongoing open positions are mostly for their entry-level jobs. Some employers indicated their entry-level positions are turning over at an 80% attrition rate, so the 10-15% of opening positions remains consistent due to a lack of retention for these workers. The following graphic is based on labor data for Arkansas manufacturing that says 66% of the hardest-to-fill positions relate to entry-level positions.

Chart 3. Hard-to-Fill Positions Based on Number of Job Postings
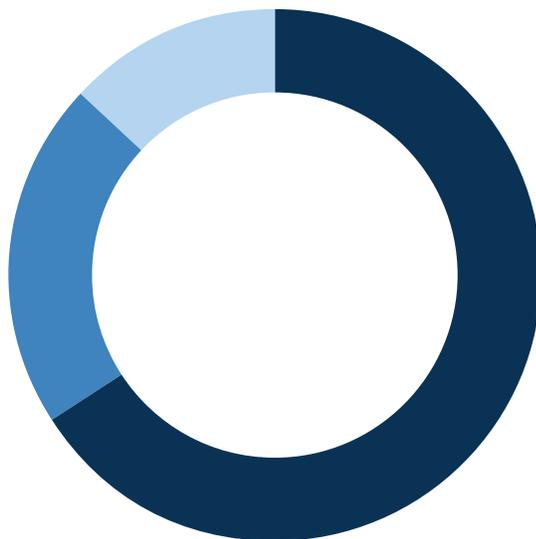
- Entry Level – **1824 Postings, 66%**
  (Production Worker/Manufacturing Machine Operator)
- Production Supervisor – **573 Postings, 21%**
- Mechanical Engineer – **355 Postings, 13%**

In-demand jobs research continued with an analysis of job postings for each region across the state to see if there were major discrepancies in different regions. The demand threshold for the period January 2023 to June 2023 is determined by the need concentrated in the selected geography, and SME analyzed the top 10 positions by region to indicate very high, high and medium demand. In addition, SME listed the relevant experience level corresponding to each job title. These experience levels are listed as the following with their definitions:

- Entry-Level: Entry-level job term refers to bottom-level employment position in the company that generally does not require experience, training or higher level of education.

- Mid-Level: Mid-level jobs are roles that require some level of experience to complete. They are a step up from entry-level positions and sit below senior-level positions. They will usually require some sort of management of entry-level employees.

- Senior Technical: Senior technicians are employees who have attained a recognized level of technological competence and who hold at least one certification for a company product on which they are required to work.

- Research and Design: R&D engineers, or research and development engineers, develop new products, redesign existing products, and perform research and testing on product concepts.

See Appendix E for complete listing by region and top employers by region.

Table 2. In-Demand Manufacturing Positions Within Arkansas

Experience Level	Job Title	Northwest Region	Western Region	Southwest Region	Central Region	Northeast Region	East Region	Southeast Region
Entry	Production Worker	High	Very High	Very High	Very High	High	High	High
Entry	Manufacturing Machine Operator	High	Very High	High	High	Very High	Very High	Very High
Entry	Building and General Maintenance Tech	Very High	Very High	Very High	Very High	Very High	Very High	Very High
Mid-Level	Engineering Manager	High	Medium	High		Medium		
Mid-Level	Production Supervisor	High	High	High	Medium	High	Medium	High
Mid-Level	Quality Control Analyst	Medium	High	High			Medium	
Mid-Level	Manufacturing/Production Technician	Medium	High	High				
Senior/Executive	Mechanical Engineer	Medium	Medium	High	Medium	Medium		
Research and Design	Chemical/Process Engineer			High	Medium		Medium	Medium
Entry-Level	Quality Inspector / Technician				Medium	Medium		Medium
Mid-Level	Electrical and Electronics Technician				Medium			Medium
Mid-Level	Industrial Mechanic	Medium	Medium			High	Medium	
Research and Design	Manufacturing Engineer		Medium	High	Medium	Medium		
Senior Technical	Millwright			Medium			Medium	Medium
Senior/Executive	Production Plant Manager	Medium			Medium		Medium	
Senior Technical	CNC Operator					Medium		
Senior Technical	Molding/Casting Worker						Medium	

Voice of Industry on Job Demand

To validate the independent research, as part of this study, a Manufacturing Skills Gap Survey was deployed to over 1,000 companies across the state. In the table below, the same entry-level roles were highlighted as the highest-in-demand jobs, as the market study also indicated. Employers were also asked about their percentage of unfilled positions. Employer

> **" Seven years ago, our average tenure was 10 years. Now, it's three years."**
> – Industry partner focus group participant

respondents consisted of various job families within companies, including administration, plant management, human resources, chief executive officers and owners, facilities managers, finance workers, and operation and plant management. Over half of the respondents indicated that less than 10% of their jobs are unfilled. However, during focus group sessions, several company representatives stated that that 10% remains unfilled for them due to constant turnover of the same entry-level positions, as highlighted earlier in the report.

Table 3. Employer Survey Responses to In-Demand Job Positions (Manufacturing Skills Gap Survey 2022)

# Positions Needed	1-24	25-50	51-75	76-100	100+	Weighted Average
Production Labor	58.11%	12.16%	4.05%	4.05%	1.35%	2.18
Machine Operator	59.46%	5.41%	5.41%	2.07%	0.00%	1.97
Production Supervisor	58.11%	4.05%	0.00%	1.35%	0.00%	1.72
Welder	37.84%	6.75%	1.35%	2.70%	0.00%	1.66
Assembler	39.19%	2.70%	2.70%	1.35%	1.35%	1.65
Quality Control	52.70%	2.70%	0.00%	0.00%	0.00%	1.58
Maintenance Technician	52.70%	2.70%	0.00%	0.00%	1.35%	1.51
Industrial Machine Repair	39.19%	2.70%	1.35%	0.00%	0.00%	1.49
Machinist - CNC	30.14%	2.74%	1.37%	1.37%	0.00%	1.45
CNC Programmer	27.40%	2.74%	1.37%	1.37%	0.00%	1.42

Statewide Market Analysis Summary and Recommendations

There were several key findings from the statewide labor market analysis in terms of both current workforce development and future development needs. Currently, the greatest demand for workers throughout Arkansas is for entry-level job roles, followed by strong frontline supervisors, and then highly skilled technical positions, such as welders and industrial maintenance crafts.

- Entry-level roles are the most in-demand jobs and hold the highest turnover percentage.

- Entry-level roles are Production Workers and Machine Operators.

- Highly skilled technical positions are still in demand, but the total number of openings for entry-level roles appears to create a higher immediate criticality for those workers (66% of the hardest-to-fill roles).

- Well-developed Frontline Supervisors are required for manufacturing business and workforce sustainability, and a potential credential program would ensure the needed skills for the job.

Data from statewide job postings and data collected directly from the manufacturing survey and focus groups suggest that the hardest and most critical roles to maintain are the entry-level job roles, such as production worker and machine operator.

Other more technically skilled job roles, such as maintenance, welding, assembler and quality control roles remain in high demand; however, the absolute number of openings make the entry-level roles a more critical need. Given that workforce investment boards, career and technical education programs, technical centers and community colleges across Arkansas include programs to train a pipeline into these in-demand roles, it may be conducive for Arkansas to conduct an alignment of education and workforce training for not only its educational institutions but also those training programs listed within its Eligible Training Provider List (ETPL). This will determine if relevant manufacturing skills are being aligned by selected regions. In addition, for those programs that do show alignment to regional workforce demands, improving enrollment trends and the understanding of how to develop a robust student awareness campaign could help meet the future demand needed in these roles.

To compound the difficulty of finding talent for these entry-level roles, the entry career level holds the highest turnover rate among manufacturing positions. The Bureau of Labor statistics list the average turnover rate for manufacturing in 2021 at 40%. During our 2022 focus groups, manufacturing industry representatives confirmed that they continuously turn over these entry-level positions, and they struggle to remain fully staffed in them.

The Production Supervisor position was highlighted by both survey data and qualitative feedback from industry focus groups. The traditional frontline supervisor role has changed from a very technical/functional director of an area, department, process or line to include many skills required to

> **"" Can you help my supervisors become nice?"**
> – Industry partner focus group participant

successfully lead and develop people. This includes the ability to lead cross-generational teams. During focus groups, manufacturers stated that they tend to acquire supervisors through promotion of high performers on the production floor. This technique has proved to be problematic in modern work environments, as many of the technical leaders do not have the capability to provide the proper level of emotional intelligence, and other power skills, needed to be a successful leader of today's workforce. As part of our work, SME has conducted numerous focus groups with individuals who have declared that one of the main reasons they decide to leave an organization is based on frontline supervision. The fact that this role directly impacts the turnover of entry-level job roles means this role is critical to creating a sustainable skilled workforce. In fact, in its article "15 Shocking Statistics Every Manufacturing HR Leader Needs to Know," Clark Shaefer Hackett Business Advisors reports that 81% of frontline supervisors say they are not satisfied with their own performance (MacDonald, 2021).

Recommendations: The state of Arkansas has the opportunity to further understand the more specific reasons for higher turnover rates in these in-demand entry-level positions and apply specific interventions to assist. For example, further research study on this specific area of turnover could lead to more tailored insights. One possible way to address attrition and ghosting during the onboarding process is to utilize employee engagement tools to remind and nudge individuals to continue their progress — while also understanding reasons employees are possibly leaving companies.

Given the crucial need for qualified and skilled production supervisors in the state of Arkansas, one consideration for future pipeline development could be an initiative to evaluate and develop a standard review of current regional workforce training and future workforce training needs that validates the technical and transferable skills needed to be successful in entry and progressive job roles.

5. STATEWIDE AND REGIONAL SKILLS GAP STUDY

The Statewide and Regional Skills Gap Study section addresses the following areas: Manufacturing Skills in Demand, the Voice of the Industry on relevant technical and employability skills, and recommendations to identify, evaluate and develop current and emerging manufacturing skills and competencies.

Job-Specific Skills in Demand

SME utilized quantum labor analytics to understand the various skill needs for manufacturers over a 12-month period. To guide the discussion on skills, the following skills taxonomy was utilized:

Functional Skills: These are the skills that people require to do a specific job and perform certain tasks. Examples would include audit, data modeling and financial analysis.

Technical Skills: These are digital tools, software like Microsoft Word or Adobe, a programming language like Python or C#, operating systems like Linux or macOS, and analog technologies.

Non-Functional Skills: These are what we know as "employability" and "soft" skills. Examples would include patience, communication, agility and problem-solving. These skills can be used across many roles.

In analyzing Arkansas manufacturing job roles, SME identified that more than **3,700 unique skills** had been identified from the research. From these unique skills, the data indicated that employers in Arkansas' **manufacturing** sector are more likely to select candidates with higher **functional skills**. These are areas where the **workforce** in Arkansas is comparatively **less skilled**. The following charts illustrate the top Functional, Technical and Non-Functional Skills (top ten).

Chart 4. Job Specific Skills

■ % Share of total manufacturing jobs available in Arkansas over the past 12 months

■ % Share of total manufacturing workforce in Arkansas over the past 12 months

Top Functional Skills

Skill	Jobs Available	Workforce
Digital Literacy	49%	5%
Organization Skills	35%	13%
Operations Management	25%	27%
Customer Experience Management	22%	1%
Project Team Management	21%	0%
Presentation Skills	19%	6%
Sales	17%	26%
Project Resource Management	15%	0%
Reporting	15%	11%
Continuous Process Improvement	15%	4%

Top Technical Skills

Skill	Jobs Available	Workforce
Microsoft Excel	25%	9%
Microsoft Office	24%	4%
SAP	15%	8%
Microsoft PowerPoint	12%	2%
Information Systems	10%	1%
Operating Systems	5%	1%
Microsoft Power BI	5%	1%
AutoCAD Software	4%	2%
Google Cloud Platform	3%	0%
Microsoft Word	3%	3%

Top Non-Functional Skills

Skill	Jobs Available	Workforce
Communication	54%	16%
Supervision	36%	17%
Leadership	32%	23%
Training	32%	25%
Safety	31%	17%
Problem Solving	29%	5%
Work Collaboratively	21%	8%
Prioritization	20%	5%
Detail-Oriented	18%	6%
Time Management	17%	1%

Employability Skills in Demand

The information in this section is derived from the ***Statewide and Regional Skills Gap Study***, which consisted of both a survey instrument to employers and focus group sessions with both industry members and students. The employers' skills survey was distributed to 1,000 manufacturing companies across Arkansas. The response rate for the survey was 9%, which offered the opportunity to explore insights from more than 85 manufacturing companies across the state of Arkansas. In the survey, employers were asked what they think are the most important technical and/or employability skills needed for a worker to be successful in their facility. Employability skills are defined as transferable skills that are useful in nearly every job, but are especially important to success in manufacturing roles where the skills often lead to improved performance, minimized errors, and positive collaboration with coworkers and supervisors. Examples of employability skills can include, but are not limited to, teamwork, collaboration, problem-solving and critical thinking. In addition, SME conducted eight regional focus groups that consisted of participants from education, industry and community-based organizations.

Knowing that the current adult population is not a complete pipeline strategy, efforts were made to understand the needs of the next workforce generation. Participants in a Manufacturing Skills Gap Survey with corresponding focus groups were asked which technical and/or employability skills are most important for workers to be successful in their facilities. Employability skills are transferable skills that are useful in nearly every job, but are especially important for success in manufacturing roles where employability skills often lead to improved performance, minimized errors and positive collaboration with coworkers and supervisors. Results from the survey highlighted that younger workers often do not possess the necessary employability skills required to be successful in manufacturing jobs, and, therefore, likely do not meet the expectations of anticipated skills needed in the future.

> " Soft skills (employability skills) are more important than technical skills. We can train the technical skills."
> – Industry partner focus group participant

Key results from the survey and related focus groups are as follows:

- When members of industry were asked to identify the importance of various competencies to new hires, 60% stated that the most in-need skills among workers were employability-related power skills such as teamwork and active listening.

- When students approaching graduation from education institutions were asked as part of focus groups how they rated themselves in terms of employability skills, many noted a lack of confidence in their ability.

- There appears to be a direct correlation between poor employability skills for entry-level jobs and current turnover rates in those high-demand jobs.

- A renewed concentration on 21st-century power skills in high schools could improve employability and mobility across the state.

- Among recommendations that emerged from employers and educators was a recommendation that the state consider an endorsement process or program that validates employability skills through credentialing, digital badging or community cohort workshops.

The following table provides results of the survey, with industry skill demands placed in order of importance.
As seen below, safety awareness and teamwork ranked among industry leaders as the top two skills, followed by the skill of active listening. Not surprisingly, written communication and social perception ranked as the least important skills.

Table 4. Employer Responses to Employee Skill Needs

Skill	Description	Importance
Safety Awareness	Being constantly aware of how one or others are working and being able to recognize the hazards they face prior to potential injury.	81%
Teamwork	Working productively with others toward a common goal.	79%
Active Listening	Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.	62%
Quality Controls	Conducting tests and inspections of products, services or processes to evaluate quality or performance.	54%
Verbal Communications	Talking to others to convey information effectively.	52%
Measurements	Inspecting equipment, structures or materials to identify the cause of errors or other problems or defects.	47%
Interpersonal Communications	Providing information to supervisors, co-workers and subordinates by telephone, in written form, by email, or in person.	46%
Active Listening	Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.	62%
Active Learning	Understanding the implications of new information for both current and future problem-solving and decision-making.	42%
Time Management	Managing one's own time and the priority of tasks needing completion in the assigned time.	41%
General Math	Choosing the right mathematical methods or formulas to solve a problem.	40%
Assembly Process	Installing components, equipment, machines, wiring or programs to meet specifications.	39%
Customer Service	Actively looking for ways to help people.	32%
Welding/Fabrication	Set up, operate, or tend welding machines that join or bond components to fabricate metal products or assemblies.	31%
Mechanical Maintenance	Performing routine maintenance on equipment and determining when and what kind of maintenance is needed.	26%
Critical Thinking	Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.	26%
Written Communications	Communicating effectively in writing as appropriate for the needs of the audience.	25%
Social Perception	Being aware of others' reactions and understanding why they react as they do.	25%

In discussion with our manufacturing focus groups, many believe that the lack of these skills and other work readiness skills, such as general literacy skills, is the reason why the population of entry-level workers is turning over consistently. The focus groups mentioned that new hires from certain community college programs are better prepared with these employability skills; however, almost all participants across the state emphasized that these are missing skills within most of the emerging workforce, regardless of their experience.

In recent years, some educators across the U.S. have been promoting the inclusion of 21st-century skills as part of their primary school curriculum. These skills include many of the desired skills of manufacturers, but also include additional skills surrounding creative thinking and life. The skills are broken down into three groups containing different sets of competencies:

Table 5. Categories of 21st-Century Skills

Learning Skills	Literacy Skills	Life Skills
Critical Thinking	Information	Flexibility
Creative Thinking	Media	Initiative
Collaborating	Technology	Social Skills
		Productivity
		Leadership

As they are seeing success in alternative programs that include employability skills, many higher education institutions across the country — most at the community and technical college level — have acknowledged the need to better prepare students for the modern workforce using a more innovative approach. The National Association for Community College Entrepreneurship (NACCE) provides community colleges with tools and communications surrounding digital badging, which could extend and enhance a developing workforce pipeline. Many of these offerings address the interpersonal, transferable-skill emphasis that aligns with the 21st-century skill set and many of the skills that manufacturers say they need from their workforce.

Based on recommendations from both student and employer focus groups, the state should explore incorporating a version of a 21st-century skills badge or credentialing option within the Arkansas Community College system in collaboration with industry. This will validate that proper skills are being transferred to employers, whether those skills are infused throughout the current curriculum or incorporated into the development of new programs. The following 21st-Century Skills Snapshot provides a case study example that could be implemented in the state of Arkansas.

21st-Century Skills Snapshot

Entity: Education Design Lab

Task: To develop industry-aligned, relevant microcredentials focused on employability skills in the following competencies: Initiative, Resilience, Intercultural Fluency, Collaboration, Creative Problem-Solving, Empathy and Critical Thinking.

Activity: For the last seven years, the Education Design Lab has focused on developing, prototyping and piloting a set of rubrics, definitions, curricula, assessments and credentials for 21st-century skills as an important tool to level the playing field for underserved learners. The lab partnered with 20 institutions — with active input from more than 60 employers — to develop and test a set of eight skill areas and accompanying sub-competencies. In May 2018, this system was published as an Open Educational Resource toolkit. To date, more than 1,700 individuals representing over 1,200 organizations from 44 countries and institutions have signed a memorandum of understanding (MOU) to access the suite of rubrics, definitions, curricula, assessments and credentials.

Outcome: The Education Design Lab's *#BadgedtoHire* initiative expanded employers' awareness and acceptance of 21st-century skills digital microcredentials to create market signals for the power of these credentials to bridge the skills gap, particularly for underserved learners. This initiative is built on previous work with seven institutions and their employer design partners. The lab selected the most promising partners from the *TeeUp the Skills* initiative — the seven campuses of the University of Maine System (UMS), San Jose State University (SJSU), Central New Mexico Community College (CNM) and the University of Dayton (UD) — to build a full market test with more than 40 employers and 2,700 students (900+ participating partners).

Further information: https://eddesignlab.org/microcredentialing/microcredentials/

To create sustainable pipeline development, the greater challenge is how to get employability skills instilled into the audience that goes directly from high school to the workforce. Currently, Arkansas reports an 88.5% graduation rate, falling from 88.8% in 2020 (NCES.ed.gov). Without data to support this as a trend, this slight decline in graduation should not be taken lightly. Arkansas trails Texas by 5.5%, Missouri by 3.5% and Tennessee by 1.5%, and is ahead of Mississippi and Oklahoma by 1% and Louisiana by 5.5%. These contiguous states compete for talent to fill their open positions and attract new industries. It is therefore important to address the 11.5% of Arkansas students who do not receive a high school credential, as well as those who do not see post-secondary education as their immediate next step, and create pathways to sustainable living wages within the state.

This target employment group generally provides the workforce for the entry-level roles that are most critically needed now — the roles that industry partners report are experiencing continual turnover across Arkansas. To begin to understand the correlation in employability skills, the research team investigated current educational statistics throughout the state.

The Barbara Bush Foundation of Family Literacy ranks Arkansas 39 out of the 50 states in literacy, stating that 23.1% of adults in Arkansas have low literacy. Research shows that literacy is a strong correlation to unemployment. The U.S. Bureau of Labor Statistics' 2020 Career Output report stated that workers ages 25 and over who have less education than a high school diploma had the highest unemployment rate (5.4%) and lowest median weekly earnings ($592), three times less than workers with the highest level of education (Statistics, 2020).

Table 6. Math and Literacy Ratings

Subject	Need Support	Close	Ready	Exceeding	Met Benchmark
Math	58%	20.4%	14.7%	6.9%	21.6%
Reading	43.8%	25.5%	21.6%	9.1%	30.7%

Grade 11 ACT scores are also available on the Division of Elementary and Secondary Education's website. ACT's College and Career Readiness Standards are sets of statements intended to help students, parents and educators understand the meaning of test scores. The standards relate test scores to the types of skills needed for success in high school and beyond. They serve as a direct link between what students have learned and what they are ready to do. For this research, the Mathematics and Reading ACT Scores are highlighted below.

Table 7. Math and Reading Subject Areas of ACT Scores

Subject	Benchmark Score	2017-2018	2018-2019	2019-2020	2020-2021
Math	22	18.4	17.9	18.1	17.8
Reading	22	18.8	18.9	18.7	18.4

These assessment scores suggest a significant percentage of students may not be college- or career-ready upon graduation, which provides the state with opportunities to both integrate employability skills and create short-term career pathways for filling needed entry-level roles in manufacturing — thus creating a skilled workforce. For the current in-demand jobs that do not require a college degree, awareness campaigns, as well as bridge or learn-and-work programs, could also assist in increasing workforce participation direct from high school. It is common knowledge that the manufacturing workforce includes some of the brightest and most educated minds in the world, but data suggests that we are missing an entry-level group that is available to get into manufacturing and grow within it. Tapping the great minds of Arkansas youth will ensure continued economic growth for the state once the gap and employability skills are addressed.

As the Arkansas ACT data above suggests, students are struggling to reach the benchmark scores in both math and reading by approximately 20%. This, coupled with little or no emphasis on 21st-century skill development, may be partly responsible for producing a high number of unemployable workers in the current job market. If that is true, it is likely contributing to the high turnover of entry-level job roles in the manufacturing industry.

> **" Most people can't add two columns of numbers together. Long division? Don't even talk about that."**
> – Industry partner focus group participant

Alternative programming has been proven to address pipeline development. The best example of alternative programming for K-12 pipeline development is a career academy. These academies are in more than 8,000 high schools, including regional career centers, charter and magnet schools, and traditional comprehensive high schools (MDRC, 2020). New offerings such as digital badges and microcredentials also help arm graduates with the 21st-century skills employers are seeking. Arkansas is positioned well for bringing together the manufacturing industry and education to develop or adopt the programs that best align the future workforce.

As part of this research study, more than 360 community college students — who are considered part of the emerging workforce — were surveyed. As part of the survey, students were asked to rate their highest level of preparedness in basic employability skills. As shown in the following table, the highest level of preparedness by those surveyed is only 50%. These student responses show low confidence in the foundational employability skills that manufacturing employers desire in existing employees and new employees entering the workforce.

Table 8. Student Perceptions of Skill Preparedness

Skill	Preparedness Level
Interactive Learning	50%
Basic Measurement	50%
Teamwork	49%
Active Listening	42%
Time Management	39%
Reading Technical Documentation	38%
Critical Thinking	36%
Complex Problem-Solving	32%
General Writing	31%
Computer Aptitude	30%
Interpersonal Communications	29%
Social Perceptiveness	29%
General Mathematics	28%
Data Collection and Analysis	22%

Workforce Behavior Analysis

In addition to understanding the aligned skills that are necessary for relevant manufacturing positions, SME analyzed important behaviors that are relevant for success in specific positions. Coupled with a comprehensive understanding of skills (skills cluster, job and technical skills, and power skills) per job role, a behavioral analysis can provide unique insights into the foundational behaviors that align with success factors in specific job roles. In fact, research indicates that understanding and aligning behaviors to job and organizational fit can reduce entry-level employee attrition by nearly 30% (Murphy, 1996, Weiters, 2007). Therefore, given the potential impact to keep employees from leaving, SME utilized a neuroscience-based assessment, Job DNA Matrix, to additionally analyze the key workplace behaviors for two roles that were very prominent in the Arkansas manufacturing job needs: Production Worker and Machine Operator. The Job DNA Matrix can break down a job into its constituent parts, which are often a collection of tasks, activities and people interactions, each requiring frequency, duration and intensity. People who are a fit for a job through their Job DNA Matrix are more naturally motivated to learn skills, routines and processes quickly, because the job activities align with their own natural set of preferences. Thus, low-skilled entry-level workers can be mobilized at scale to stabilize today's manufacturing jobs and prepare them for careers in the jobs and industries of the future. Through modern neuroscience, the behavioral Job DNA Matrix of this community of workers is identified, irrespective of intellect, education level and circumstance. The Job DNA Matrix for

entry-level manufacturing jobs in Arkansas can assist in the workforce development strategy for current, new and emerging jobs and industries, and provide Arkansas with workforce mobility. This strategy could potentially mobilize the full spectrum of the workforce, including unemployed, under-served and displaced workers, to position Arkansas to offer a mobile and talent-rich workforce. The DNA Matrix is made up of the behavioral dimensions required to execute a job to a high standard. These dimensions are:

- **Behavior Preferences** — natural behavioral strengths that allow workers to perform job-based activities to a high standard over prolonged periods

- **Core Competencies** — a specific set of natural, instinctive professional, relational and intrapersonal competencies that support peak performance in a job role

- **Work Aptitudes** — natural mental or physical talents, or special abilities to do — or learn to do — certain kinds of work

Based on these dimensions, employees (especially those with a lack of skills) can learn job functions quickly, perform a job to a high standard, become highly motivated and engaged, eliminate skill gaps and talent shortages, and expand talent pipelines. The following DNA matrices for the job roles of Production Worker and Machine Operator are based on a representative sample of job descriptions found on Arkansas job boards (25 job descriptions per job role). While these competencies and behaviors are derived from public-facing labor information, a more robust behavioral analysis can be conducted and triangulated with internal job architecture information and by conducting assessments with employees currently working in these specific roles.

The Production Worker and Machine Operator roles have similarities; therefore, the following components of a Job DNA Matrix cover both of them:

Table 9. Behavior, Competencies, and Aptitudes

Top Four Behavior Preferences		
Behavior	**Preference**	**Key Characteristics**
1. Finishing	Very High Intensity	Paying great attention to detail and quality, and abiding by rules such as standard operating procedures.
2. Evaluating	Very High Intensity	Using data to support decisions; being factual and accurate.
3. Delivering	Natural Intensity	Working in an organized way; paying attention to performance metrics.
4. Coordinating	Natural Intensity	Collaborating with others; consultative and open-minded.

Top Three Work Aptitudes		
Behavior	**Preference**	**Key Characteristics**
1. Practival & Mechanical	Very High Intensity	Enjoys hands-on activities that foster practical and mechanical competence; provides work that produces tangible results.
2. Orderly & Efficient	Very High Intensity	Enjoys being methodical, logical, trim, and efficient, and following clearly defined procedures that keep things running smoothly.
3. Mathematical & Logical	Natural Intensity	Enjoys analyzing and reasoning with numbers and concentrating on complex data, even for long periods.

Core Competencies
Core competencies contained within Finishing behavior
• **Accountability** — Taking responsibility for all one's work activities and personal actions while following through on commitments. • **Planning and implementation** — Arranging and organizing business processes, and implementing and maintaining a decision or plan of action.
Core competencies contained within Evaluating behavior
• **Problem-solving** — Using resolution skills while creating and accomplishing tasks and goals. • **Decision-making** — Utilizing sound judgment to formulate a choice.
Core competencies contained within Delivering behavior
• **Time management** — The ability to use one's time effectively and productively, taking a structured approach to work. • **Project management** — The act of planning, executing, controlling, and accomplishing goals while maintaining quality focus.
Core competencies contained within Coordinating behavior
• **Teamwork/collaboration** — Working successfully with others to find solutions to difficult and complex challenges. • **Effective communication** — Expressing a message to individuals or groups through clear and compelling body movement, speaking, and writing. • **Negotiation and persuasion** — Implementing or engaging in a conversation to reach an agreement, or gain approval for an idea or action.

Voice of the Industry on Skills

One key finding that underlines both the Production Worker and Machine Operator job roles is that performance is heavily reliant on following set routines and performing repetitive activities while meeting an extremely high standard for work quality, productivity and safety requirements. Given the underlying foundational behaviors with these positions, it allows for the recruitment of individuals who possess or can be easily trained in these areas. This can, of course, broaden the talent pipeline pool, but also provide insights into specific employability skills training aligned to these behaviors.

To provide a broader alignment of behaviors to skills, SME analyzed, over a 12-month period, the state and national labor data for the relevant technical skills utilized by such entry-level positions as Production Worker and Manufacturing Machine Operator. SME then cross-referenced these with a national skills validation study, also conducted by SME, regarding industry certification as a Certified Manufacturing Associate (CMfgA). From this analysis, the following key skills were determined for these entry-level positions:

Table 10. Entry-Level Job-Specific Skills (Production Worker/Manufacturing Machine Operator)

Aligned and Emerging Job Specific Skills (Entry Level)	
Machinery	Hazardous materials handling
Industrial Engineering Industry Expertise	Hand and power tool safety
Forklift Operation	Lean / continuous improvement
Machine Operation	Quality assurance
Repair	Machinery
Materials Transport	Industrial engineering industry expertise
Hand Tools	Forklift operation
Packaging	Concept of value added
Basic / Applied Mathematics	Print reading
Predictive / Preventative Maintenance	Inspection instruments and gauges
Material Handling	Go/no-go gauging
Maintenance, Repair, and Installation: Hand Tools	Fasteners and assembly
Work Area Maintenance	Concept of value added
Safely Assembling Components	Print reading

Skills Summary and Recommendations

Manufacturers have indicated that their greatest need is an incoming workforce that has the foundational skills required to be successful in employment. These include basic academic skills such as math and reading, combined with essential employability skills that will prepare workers for the workplace and for more success in manufacturing roles.

Academic assessment scores are very dependent on the geography of the schools; however, reading and math scores are an area that needs statewide improvement — even for students who are not college-bound — in order for the state to maintain a work-ready pipeline. School ESSA Report Card grades are listed in Appendix F of this report.

Employability skills, or even 21st-century skill frameworks, should be reviewed for potential inclusion in core curriculums or be treated as specific credentialed programs, designed to create a work-ready pipeline entering manufacturing jobs. One such Arkansas program is Future Fit, developed by the Arkansas Economic Development Commission. This program prepares individuals with core skills for well-paying jobs with participating companies throughout Arkansas. Participants in the Future Fit program complete training that will prepare them for entry-level employment with companies. It takes approximately 96 hours to complete the course, which combines hands-on and online training for the basic skills needed to be successful in a manufacturing position.

> **" It would be nice to get a quick program to do basics: Learn tape measure and basic math, and do it while employed. We would make that investment."**
> – Industry partner focus group participant

One of the recent Future Fit classes produced 11 graduates. After completing the course, all 11 found employment. After six months, 10 of those graduates remained employed with the same company. The program successfully aligns students with the skills needs and expectations of manufacturing work; however, individual participation remains low, despite the program's success and the need it fills in the market.

During statewide focus groups with industry partners, employers stated that they would be in favor of 1) hiring graduates of the program if transferable skills are validated, and 2) participating in Future Fit as a community cohort program, in which multiple employers would send new hires to a Future Fit program center as part of their employee hiring process.

During focus groups, it was also discussed that if the emerging workforce possessed these employability skills, employers would be more likely to invest educational dollars back into those workers to upskill them to other technical roles, which will be in demand in the very near future.

One challenge raised during conversation was that some regions in the state still suffer from poor broadband connection, which may be a barrier to developing the necessary employability skills. Underserved broadband communities are at a disadvantage in providing students with the technology and access needed to compete with other students across the state. In fact, during the focus group in the eastern region, participants stated that people leave the area due to poor broadband speeds. A broadband coverage map is available in Appendix G.

Additional statewide strategic planning should be considered as part of a strategy to increase both academic- and skill-driven employability needs, as graduation rates, labor participation rates, assessment scores, and student self-evaluations on essential skills appear to be misaligned with employer expectations and needs.

Desired Employer Study

SME surveyed the potential workforce in each region to understand the most critical items workers desire to remain with an employer (i.e., pay, flexible schedule, culture, etc.). SME collaborated with regional schools, employment agencies and other pipeline partners to investigate employer attributes. In the desired employer study, SME addressed what individuals were looking for in their workplace fit and culture.

It was important to include the voice of the emerging workforce in this study. Manufacturing is turning over its new-hire workforce in record numbers, and this study aimed to discover any potential disconnections between industry and the expectations of individuals entering the workforce.

A key finding in the Desired Employer Survey was that: *A misalignment exists between the emerging workforce's expectations of a company and what manufacturing currently provides, which may result in continuous turnover.* Insights from the survey indicated that:

- Career opportunities for growth, promotion, achievement and security were stated as the emerging workforce's most desired characteristics.

- A disconnection exists between desires of the emerging workforce and offerings currently provided by employers.

- Starting pay expectations for graduates of a community college program are slightly higher than what the market provides.

- Manufacturers would like access to support services that would help them adopt retention practices.

- The cost of living in some counties and housing will impact the availability of the workforce.

Voice of the Students (Emerging Workforce)

Data was collected from the emerging workforce through two methods. First, an electronic survey was distributed to community colleges across the state to elicit feedback from existing students or recent graduates. In addition, the skills gap research team held facilitated focus groups across the state with current community college students. During these focus groups, survey information was validated and other qualitative information was gathered.

The survey participants were asked to rank the qualities most desired in an employer, where "5" indicated the highest priority. As seen in Table 11, *Career Opportunities for growth, promotion, achievement and security* was the most desired characteristic (67.1%), followed by *Work-Life Balance to allow for flexible scheduling preferences* (62.5%) and *Total Rewards consisting of base pay, benefits and bonuses* (61%). A need for a strong supervisor is apparent in the results, which refer back to the Frontline Supervisor role mentioned earlier in the Job Demand section of this report.

Table 11. Employer Qualities Desired by Students

Characteristic	1	2	3	4	5
Career Opportunities for growth, promotion, achievement and security.	2.7%	1.5%	11.8%	16.9%	67.1%
Work-Life Balance to allow for flexible scheduling preferences	2.7%	4.5%	10.6%	19.4%	62.5%
Total Rewards consisting of base pay, benefits and bonuses	3.6%	3.3%	11.8%	20.2%	61%
Management that displays a professional behavior, provides open two-sided communication, and enables knowledge and skills achievement	3%	4.2%	14.2%	22.4%	56%
Job Training that provides structured methods to build confidence in job assignments	2%	4.8%	19.3%	21.5%	52.3%
Strong Corporate Culture that displays mission, values, safety, diversity and supportive co-workers	4%	7%	19%	20.2%	49.9%
Health and Family programs that support child or elder care, work-related health, or non-work-related health	6.7%	11.2%	19.6%	18.4%	44%

Student focus groups validated that the emerging workforce is looking for more job growth and job security, followed by employment that allows for flexible scheduling. Promoting career development and infusing a work-life balance into manufacturing have traditionally been a struggle.

For alignment purposes, industry participants were asked in the Manufacturing Skills Gap study to declare what employee retention practices they are actively participating in within their facilities. As seen in Table 12, industry is overwhelmingly not participating in the characteristic most desired by the emerging workforce — *Well-Defined and Communicated Career Pathways* — and other preferred characteristics.

Table 12. Employment Retention Strategies

Retention Tactic	Participating	Not Participating
Well-Defined and Communicated Career Pathways	35%	65%
Strong Onboarding	45%	54%
Flexible Work Schedules	48%	52%
Standardized On-the-Job Training Supported by a Train-the-Trainer Program	37%	63%
Modernizing Training and Development Practices	39%	61%
Mentoring Programs	30%	70%
New Hire Bonus	9%	91%
Retention Bonus	20%	80%
Skill-for-Pay Models	35%	65%
Tuition Reimbursement	44%	56%
Performance Bonus	54%	46%

As seen with the high turnover and feedback from the emerging workforce, manufacturing should implement more effective ways to attract and retain its workforce. Even if employability skills are improved through new and infused program development, trends show that the turnover will continue if manufacturing does not adopt to modern workplace development attributes to include ongoing career and skill development, flexible work scheduling, supporting work environments, and total rewards.

One potential intervention for the state of Arkansas would be to consider funding ongoing workshops and consulting support for manufacturers that are adopting retention practices, while maintaining profit-driven business models. Increased turnover of new hires will have a dramatic impact on the bottom line of the business due to the continuing cost of hiring. Illustrating the economic impact of losing new talent coupled with a deeper understanding of why new talent is leaving would provide key insights to address early retention needs.

To gain feedback on compensation strategies, the study asked participating students their pay expectations as they enter the workforce. The table below displays the desired salary results.

Table 13. Desired Salaries

Pay Range	Expectation
$15-$20 per hour	29%
$20-$25 per hour	34%
$25-$30 per hour	19%
$30+ per hour	19%

Most students indicated the range between $20-$25 per hour, which is roughly $40,000-$50,000 per year — minus overtime — and full benefits.

For comparison purposes, a search was conducted in the Burning Glass Labor Insights dashboard tool for an Industrial Maintenance role. The median salaries (not including overtime and benefits) for workers with Industrial Maintenance vocational training in seven U.S. regions are shown in the following table.

Table 14. Median Salaries

Region	Median Pay
Northwest	33.3K
Western	30.2K
Southwest	38.4K
Central	38.8K
Northeast	51.1K
Eastern	40.1K
Southeast	36.5K

Starting pay shown in the table above may be lower than what students expect coming into their first job, but research indicates that the figures shown are above the per capita income in counties within the listed regions. The following tables display the per capita income by county, according to U.S. Bureau of Economic Analysis data.

In student focus groups, students told the research team that they expect to earn a higher wage after completing their community college programs. In contrast, during the industry focus groups, 80% of participants said that they have no plans to pay degreed workers higher wages than non-degreed workers. Obviously, pay expectations differ between the student and industry focus groups.

In addition, county-specific research was conducted that compared entry-level wages to both county median income and median housing prices. During focus groups, some counties were highlighted as being too expensive to live in for those making an entry-level manufacturing wage or technical instructor salary, which could force workers to either commute into these counties or look for work in other counties.

Median per capita income and median housing prices per county are found in Appendix H. The average per region, found in the table below, emphasizes differences in entry-level manufacturing wages, and general discrepancies in wages versus housing prices in some regions.

Table 15. Per Capita Income and Home Prices by Region (Arkansas)

Region	Per Capita Income	Housing Prices
Northwest	$39,720	$161,539
Western	$34,766	$134,816
Southwest	$37,967	$105,059
Central	$42,269	$164,264
Northeast	$38,347	$113,565
Eastern	$39,147	$99,471
Southeast	$41,352	$105,919

As current or future manufacturing companies determine site locations, it is important to consider wage versus cost of living in specific counties, and make the necessary adjustments on housing prices and availability of housing. It is also important to understand if housing is available for new workers to enter a county for new manufacturing work. A listing of dwelling availability per county through October 2022 is available in Appendix I via Realtor web services.

As some students may not be able to live in the county where they are employed, we asked them how far they would be willing to travel for work.

Table 16. Student Survey – Distance-to-Work Expectations

Driving Distance	Response
0-10 miles	13%
10-20 miles	43%
20-30 miles	29%
30+ miles	16%

During focus groups, students had greater interest in driving a further distance if wages supported the decision. In fact, many students in each region, except for the Southwest region, claimed they were planning on moving out of their hometowns to find a better job opportunity or different lifestyle opportunities. Local employers need to actively participate in stronger outreach to keep students in regions where they have job opportunities.

In student focus groups, some students said they want to leave their current area based on job opportunity and lifestyle change. Some students explained that they consider relocation as a move to an adjacent county. None of our focus group students declared that they would leave the state of Arkansas.

Recommendations for Industry

Manufacturers can no longer run their businesses like they have for generations. To reduce turnover, industry members should review all aspects of their human capital practices and refresh their workplace development strategies. Looking at the characteristics of the emerging workforce should be a blueprint to make these necessary changes.

Members of the emerging workforce do not want just a job; they want a career. If they feel a position is just a job, they are inclined to move on. As mentioned earlier, a high percentage of individuals are choosing not to work, so industry must do its part to show those who want to work that long-term career opportunities are available.

Manufacturing should adopt strong onboarding programs, develop strong frontline leaders, structure training and upskilling programs, invest in continuous education of personnel, and ensure that employees' total rewards are competitive in the market and provide a decent living wage in the region. Industry focus groups revealed that for some people, two roadblocks to employment are childcare and transportation. Industry members should work with their workforce development representatives to find ways to help with childcare and transportation concerns.

6. ECONOMIC DEVELOPMENT AND PIPELINE MODELING — SHORT- AND LONG-TERM

For each region, SME researched all current and potential workforce pipeline models (i.e., high school, CTE, youth apprenticeship, etc.) to find out where shortfalls or opportunity may exist.

During the study, each session across the state showed some disconnections between workforce development entities and industry — whether it is lack of communication with industry or industry's lack of involvement in pipeline activities that drive employees to their business. In addition, discussions with students provided insight into career direction from high schools. The following section details potential areas of opportunity as Arkansas moves toward the next generation of workforce partnerships.

Often in the determination of labor market demand, job postings are a key metric in understanding the workforce needs of state, region, industry or even a specific company. In fact, in the previous sections on labor market analysis, SME utilizes job postings to gain insights in the hiring needs per region for Arkansas manufacturers. However, there are limitations to just analyzing job postings. For instance, are the positions filled, delineating multiple hires? More importantly, we need to understand the talent pipeline for these occupations. In other words, job postings are only postings until they are filled. States and organizations have large data sets, but few are leveraging person-level intelligence to identify the immediate adult workforce pipeline, and even fewer optimize that data in an actional way. As part of our research, we studied person-level identification data of unmet demand for training and employment for the state of Arkansas, down to the individuals and the communities in which they live. This data is designed to assist the state in identifying and optimizing worker and workforce pipeline supply for the purpose of driving economic mobility for working-age residents, while also providing employers — both current and prospective — with the data they need to build, grow and sustain a workforce. Table 17 is a review of the overall Arkansas demographic landscape, with the addition (highlighted in blue) of adult personal level data that could represent potential workforce pipeline candidates.

Table 17. State of Arkansas Census Data and Demographics with Education and Career Intention Scores

Arkansas Snapshot	
Population	3,030,522
Population 18+	2,628,804*
Working Population (18 – 64) with Intent	1,164,719*
Percent Male	49.1%
Percent Female	50.9%
Education Attainment	88% High School Diploma
Unemployment	3.4%
Labor Participation Rate	57.4%

*Adult Prospect Pipeline as of August 2022

Understanding necessary skills does not guarantee pipeline development. To maximize worker and workforce optimization, SME leveraged predictive, person-level modeling with intent scores on individual residents of the state of Arkansas who are 18 years and older, down to the county in which they live. Each region is depicted with a detailed heatmap of current residents (Appendix J) and is based on 650 data attributes, 400 demographic fields and 90+ predictive data fields — including intent scores for individuals who have high likelihood of enrolling in training programs, or who are actively seeking a job or have intent to change jobs. These heatmaps were then leveraged to identify regions within the state and match key groups of individuals in need of upskilling opportunities, who likely fall into categories such as unemployed, displaced workers and/or underserved and historically resilient populations. While this intent data does not guarantee identified Arkansans' success in program enrollment, it does provide targeted engagement with likely participants interested in education and training. This makes outreach activities more efficient, helping to attract individuals and groups into programs leading to skills development for open jobs in manufacturing.

Findings showed that of the 1,900,894 working-aged Arkansans, age 18-64, 61.2% (1,164,366) show a high likelihood (intent) to engage in education and training. Females have a higher interest rate, at 56%, than their male counterparts, at 41%. Knowing who these individuals are, and what communities they live in, can provide the state with immediate outreach targets for training opportunities that lead to skill acquisitions and can fill open positions.

The most interesting information culled from this data of working-aged Arkansans is that 51% (1,007,807) of residents are living at or below poverty, making less than $50,000 in annual household income. Of those individuals with high intent, 73.9% live at or below poverty and are likely seeking ways to better their situation.

Again, this appears to be a prime opportunity for the state to leverage established training programs and investments in education aligned to this interested population. The question that remains is: Why are the programs currently offered within the state not attracting those who are in the most need? We recommend further research to fully understand the barriers and the "why" that is preventing those residents of Arkansas who have interest and intent to pursue education and training to better themselves. Why aren't they taking advantage of state programming? Similarly, why do others have no intent to pursue training at all?

The following table provides additional details by region. Findings suggest a strong intent to pursue additional education and training across all counties within the state, with males of prime working age population consistently lagging females with respect to intent to pursue education and training. This data might be leveraged by the state to create focused program and recruitment efforts to increase interest among younger males. Similarly, understanding that the female population, a significant group, intends to secure education and training could help the state, educational systems and employers ensure they are meeting the needs of this population.

Table 18. Regional Education and Job Intent Scores Segmented by Gender

Region of State	Female Intent Score	Male Intent Score	Age Range With Highest Intent
Northwest	54.3	43.0	18-44
Western	54.7	42.3	18-50
Southwest	56.6	**39.5**	**25-44**
Central	56.2	40.3	18-44
Northeast	56.3	41.0	25-44
East	57.5	**38.2**	**25-44**
Southeast	55.6	40.3	18-50

Similarly, the following table provides additional regional details specific to the percentage of individuals with high intent scores who are likely living below a sustainable household living wage. Findings suggest that in three regions within the state, more than 50% of the population have intent to pursue education and training while living below a $50,000 annual household income threshold.

Table 19. Regional Education and Job Intent Scores Segmented by Household Income

State Region	Intent and Living Below $50K Household Income	Percentage of Population
Northwest	87,783	31.9%
Western	55,842	43.6%
Southwest	45,820	**51.8%**
Central	164,365	38.2%
Northeast	55,439	48.6%
East	29,858	**56.8%**
Southeast	19,518	**52.3%**

The following image illustrates person-level intent to seek a new career and get training in the central region of Arkansas. The various clusters of colors indicate households with an annual income of below $50,000 that have high intent for education and job opportunities.
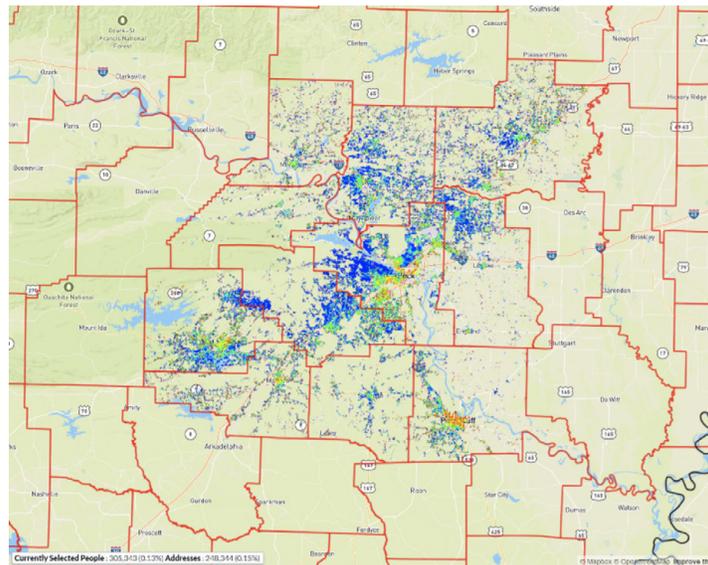
Looking at the intent scores of individuals by region shows a consistent intent rate, with two regions being outliers. The Southwest region shows extremely limited intent, which could be of interest to the state and something that warrants more investigation. Meanwhile, the East region numbers suggest that more than half of the population has the intent to pursue additional education and training. The East region might be a target of interest to the state for economic development.

Table 20. Regional Education and Job Intent Scores Listed by Total and Percent Population

State Region	Total Population	Percentage of Population With Intent
Northwest	624,088	43.9%
Western	296,970	43.1%
Southwest	204,468	**4.3%**
Central	910,741	47.2%
Northeast	261,123	43.7%
East	102,308	**51.4%**
Southeast	84,812	44.0%

One key finding from the Pipeline Modeling study was that communication surrounding manufacturing program support and career awareness can be improved. Arkansas workforce development programs could improve from a more intentional and evaluated marketing strategy. Specifically, these programs would benefit by clearly articulating their intentions, outcomes and tailored opportunities per region. Career awareness of manufacturing opportunities outside a traditional four-year postsecondary credential is an important priority for workforce development in Arkansas. Other insights from this study included:

- Local workforce system partners must engage in stronger communication, engagement and collaboration to avoid underrepresenting current programs and to identify new program needs.

- Several Arkansas workforce funding options and development programs could utilize a more targeted regional strategy to successfully market to industry.

- Industry can be encouraged and guided to participate in critical pipeline activities in addition to playing a role in the workforce development system.

- Young adults are not being introduced to potential technical careers in manufacturing, as opposed to a four-year college pathway.

- Arkansas' low college enrollment rate allows the opportunity to promote manufacturing and education outside the traditional postsecondary pipeline.

Workforce Development Partnerships

Within each regional session, there seemed to be a lack of complete understanding of the true purpose of workforce development. By the classic definition, workforce development is an approach to economic development, with a goal of enhancing a region's economic stability and prosperity by focusing on the people rather than the business. The true purpose is to develop a human resource strategy for the region. Businesses will benefit because there are more qualified candidates to choose from within the community, and the region is more successful because of higher employment numbers and an ongoing infusion of capital into the local economy.

In simpler terms, workforce development is a skill-building function to employ people, help those people advance in their careers, and ensure a skilled workforce exists to support local industry and the local economy over time. Many public workforce systems are enhanced to support individuals in underserved communities.

Throughout Arkansas, organizations (known as actors) found in a typical local workforce system were represented in more research sessions for this study. These organizations include:

- Employers, industry and the workforce, including business and trade associations, industry organizations, employers, labor unions and staffing agencies.

- Education and training providers, including two-year colleges, four-year colleges and universities, K-12 public school districts, non-degree education and training providers, and adult education providers.

- Government and the public sector, including job centers, workforce development boards, public social service agencies, economic development agencies, elected officials, and local, state and federal governments.

- Nonprofit and collaborative entities and funders, including community- and faith-based organizations, foundations and philanthropic organizations, workforce service providers and workforce intermediaries.

Industry partners are extremely important to the workforce development puzzle, because there needs to be a match between the skills employers need and the training that workforce educators provide. In their report, "State Workforce and Economic Development Collaboration," Lauren Eyster and Amanda Briggs from the Urban Institute discuss a logic model for System Change Initiatives that can be a foundation of checks and balances in Arkansas' workforce development programs. In the model, system-level goals are established to improve the system and outcomes of the system for both the workers and the employers (Eyster, 2017).

- Collaboration – Actors should have a shared vision or coordinated approach to serving workers and employers, and effectively work together to solve problems and share best practices.

- Quality and Accessibility – Services are visible and accessible to meet the needs of those who need them, especially those with disadvantages or barriers to employment.

- Industry Engagement – The system is informed by business needs, and employers are vested partners in workforce efforts.

- Data-Driven Decision-Making – Actors collect and use quality data to design and continuously improve programs and services.

- Scale and Sustainability – The system has adequate programs, funding and policies to reliably meet the needs of individuals and employers over time.

Focus groups uncovered several programs and resources in the state of Arkansas that could be communicated more effectively. For example:

- Companies do not understand the Department of Labor (DOL) Employment and Training Administration (ETA) expenditures that are available for job training, and they do not have the resources to apply for the funds. Information about the way Arkansas funds job training is not clearly available and accessible.

- Companies and some community colleges are not aware of the Future Fit program, which is aimed at addressing work readiness for manufacturing positions, matching the most desired skills of industry.

- Companies do not understand the purpose of certificates available in the state, including the National Career Readiness Certificate (NCRC).

- Companies do not understand how ACT profiling is done, and that resources are available to help them tailor assessments to qualifications needed for job roles.

- Companies are not aware of state-funded childcare options that can be provided to their employees.

Industry Accountability

As was mentioned earlier, industry has a new accountability to review its workplace development practices, which has a dramatic role in improving the retention of talent. Industry's other accountability is to actively participate within the workforce development system. Without industry's involvement in the system, there will always remain a disconnection between the skills needed by industry and the workforce programs provided to workers. Industry's proactive involvement in workforce development will help create a more robust talent pipeline. One such proactive area is having industry involved in marketing its company to the community, strengthening the overall economic success of the locality. As was mentioned earlier, being involved in sector partnerships provides an industry-driven approach to workforce development, which will yield programs that benefit local businesses. For companies to attract talent to their facilities, they would benefit from being actively involved in pipeline attraction activities.

> **" I wish we had more internships. We can get job training and OJT that way. Classes alone are not enough."**
> – Student focus group participant

Through the Arkansas Manufacturing Skills Gap survey, manufacturers were asked if they were or were not participating in common talent pipeline activities. The results in Table 21 show that industry is not getting as involved as required to promote its opportunities for local talent.

Table 21. Employer Participation in Workforce Development Activities

Pipeline Tactic	Participating	Not Participating
Career awareness presentation in the community	47%	53%
Internships	49%	51%
Job fairs	61%	39%
Registered apprenticeships	17%	83%
Support of manufacturing skills competitions	10%	90%
Open houses or plant tours	51%	49%
Local educator support from employees who help design curriculum, teach, judge projects, etc.	44%	56%
Partnerships with local schools to supply funding and/or equipment for program development	61%	39%
Youth apprenticeships	27%	73%

Many of these pipeline tactics allow companies to reach into the high schools, where students are making decisions on their futures.

Early Career Awareness

From this study, it is apparent that continued improvement is needed for industry members to provide outreach to young adults, and for high schools to promote manufacturing careers and education as viable options alongside four-year universities. Of the 32,325 public high school students graduating from an Arkansas public high school in 2019, 15,674 enrolled at an Arkansas public or private/independent institution in Fall 2019, the fall term immediately following their high school graduation. This represents a college-going rate of 48.5%, which is a 1.4% increase from the previous year's rate of 47.1%, but is a decrease from the rates shown in 2015 (50.9%) and 2016 (49.8%). (Education, Academic Year 2019-2020.)

The Arkansas Division of Higher Education published the following chart as part of the 2019-2020 College-Going Rate report. The chart shows 15,674 Arkansas Public High School Graduates who enrolled in an Arkansas public or private college or university in Fall 2019. Females outnumber males in enrollment.

Chart 5. Fall 2019 First-Time In College (FTIC) by Gender

Category	Male	Female
Private/Independent	3%	4%
2-Year Colleges	14%	21%
4-Year Universities	24%	32%
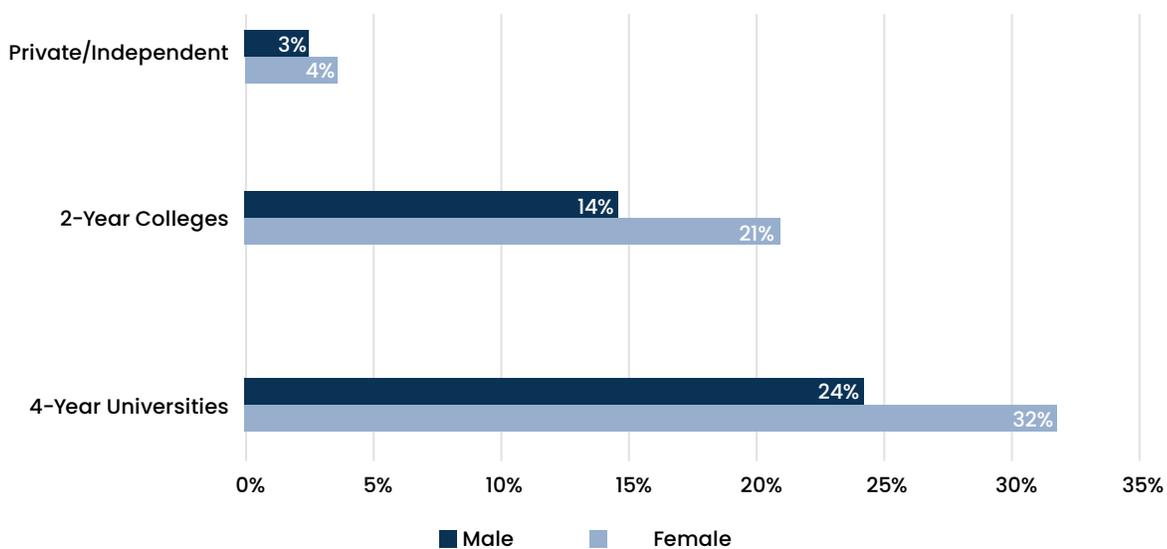
In student focus groups across the state, most participants stated they discussed two options post-graduation with teachers and counselors: going to a four-year college and heading straight into the workforce. Community college was at times mentioned as an option, but those conversations did not include the opportunity to learn a trade and find a career in manufacturing. Some focus group participants mentioned that high school personnel and relatives tried to talk them out of manufacturing as a career, because they believed the work is too hard and dangerous, which does not match the current state of manufacturing. During the focus groups, students were asked what their peers were doing instead of going to school. The response was that many of them are choosing not to work.

With the number of students who are graduating and not going to college, there needs to be a much stronger awareness campaign on introducing manufacturing job options to students. This may require state-endorsed education programs for high school teachers, guidance counselors and administration. It may also involve reviewing

> " There is still a stigma around working in manufacturing. This stigma needs to be removed from early education."
> – Industry partner focus group participant

statewide curriculum to bring back more vocational classes, giving more opportunity to those who are not going to a four-year university. When more than half the students in the state are not going to college (Arkansas Division of Higher Education), and perhaps are not college-ready based on assessment scores, high schools must prepare students for different career paths — putting high schools in the critical role of meeting workforce development needs.

When looking at the number of graduating students, the numbers are more than available to meet the skills gap, but that workforce needs to be both prepared and aware of the viable, career-centric opportunities in manufacturing.

Workforce Pipeline Recommendations

Building skills internally for manufacturers:

- In order to move people to the appropriate positions at the appropriate times, employers could evaluate their whole workforce and identify employee skills at the most detailed level.

- Employers could launch upskilling initiatives to reduce skill gaps, and promote an inclusive and resilient economy. Employers can hire new personnel with the necessary skills, acquiring 80–90% of the necessary skill sets and then deploying training to fill the remaining skill set gaps.

Educational Alignment and Articulation Study

SME will crosswalk current educational programs in each region and map them against the skill requirements needed by manufacturing. SME will identify gaps as discovered. Articulation of program content includes a review of instructional quality and an evaluation of the modes of learning — as well as how they compare with modern learning techniques (i.e., eLearning, virtual learning, virtual reality, augmented reality, mixed reality, etc.).

Arkansas offers Work-Based Learning (WBL) programs in the form of internships and youth apprenticeship offerings that combine classroom instruction with on-site job experiences. Work-based learning programs may be paid or unpaid, but they provide students with valuable, career-focused and applied experience that allows them to make connections in industry. Generally, these programs are offered as capstones of a CTE program.

Pre-apprenticeship graduates may be given special considerations for entry into a registered apprenticeship program and/or apply time-served credits toward fulfilling apprenticeship program requirements. The tables below display the number of schools and students participating in WBL, according to the website for the Arkansas Department of Education's Division of Career and Technical Education.

Chart 6. Work-Based Learning

Number of Schools Participating in WBL

Year	Number
2018–2019	30
2019–2020	50
2020–2021	52
2021–2022	56
2022–2023	69

Number of Students Participating in WBL

Year	Number
2018–2019	549
2019–2020	1176
2020–2021	1151
2021–2022	1576
2022–2023	2730

Internship ■ Career Practicum ■ Pre-Apprenticeship
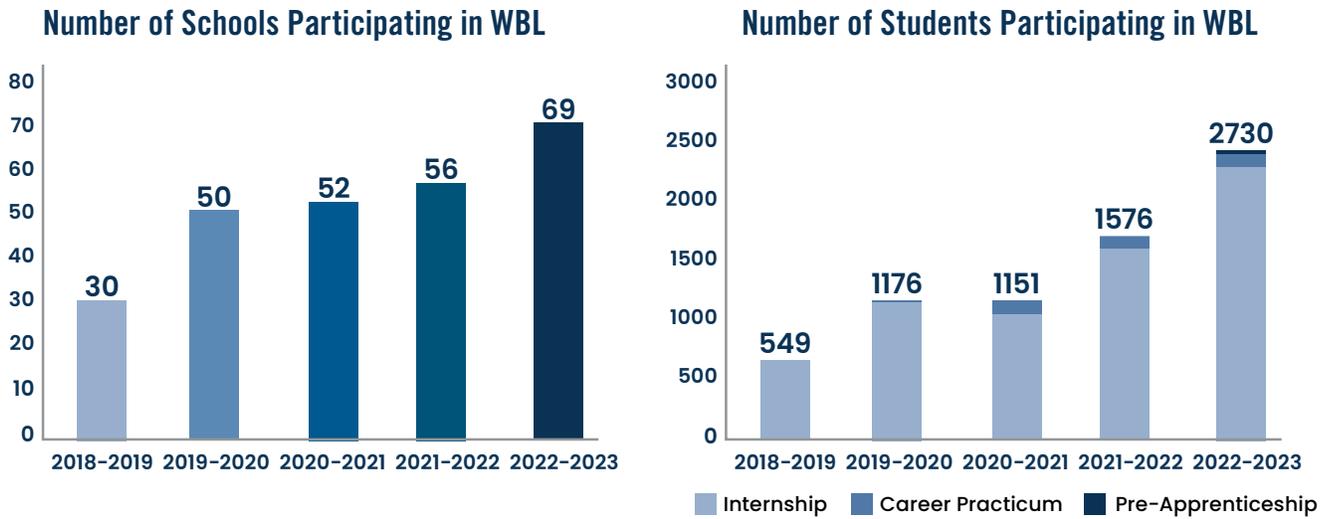
In addition, Appendix K and Appendix L, respectively outline, by county and city, the educational institutions that can offer manufacturing training, as well as the relevant manufacturing credentials offered at these institutions. From available manufacturing credentials offered at Arkansas postsecondary institutions, SME analyzed the following: certificate, associate degree and bachelor's degree.

Table 23. List of Manufacturing-Related Postsecondary Credentials (Two-Year and Four-Year Arkansas Institutions)

Credentials	Workplace Credentials	Industrial Maintenance	Welding	Machining & Fabrication	Mechatronics & Robotics	Advanced Technology	Industrial Technology (Eng. Process)
Certificate	5	18	29	11	8	10	4
Associate Degree		3	11	1	2	7	4
Bachelor's Degree							2

SUMMARY AND RECOMMENDATIONS

The state of Arkansas is not alone in the fight to attract, develop and retain a qualified manufacturing workforce while also building a sustainable workforce pipeline that will be ready for the jobs of the future. And while Arkansas has wisely invested in programming and pathways that address this skills gap, the challenge that remains is how to identify and engage individuals who see a potential career path in manufacturing. This data will be key for short- and long-term worker and workforce optimization. Data suggests that the greatest challenge facing the state is meeting the most critical in-demand jobs while simultaneously building out the infrastructure for jobs that will become more critical in the next several years. Data from this study also suggests that retaining workers in entry-level roles is the most pressing burden on industry, and that entry-level roles are key to long-term sustainability. Industry members engaged in this project reported they plan to invest to upskill workers into other skilled roles.

In developing a sustainable workforce pipeline, a stronger focus should be placed on first engaging adults who have interest in securing training and education that lead to living wage careers in manufacturing. In tandem, developing a sustainable pipeline by engaging high school faculty, parents, and students will introduce opportunities in manufacturing careers for either straight-out-of-high-school employment in the most critical entry-level roles, or enrollment in a post-secondary pathway for more skilled opportunities upon program completion. One of Arkansas' challenges is that it is trailing the national average for high school completion based on the recent NCES findings. In fact, the state is falling behind many of its contiguous peer states. What steps can be taken to support the 12% who, for a multitude of reasons, cannot sustain engagement with the K-12 system to graduation? For the 88% who do sustain engagement in K-12, what clear career pathways have been provided in the skilled trades and, specifically, in manufacturing?

Programs such as Work Readiness and Frontline Production Supervisor courses should be funded, established and well-marketed to develop both transferable employability skills and other mission-critical credentials. Additional funding models should allow employers to take existing employees and upskill them for more advanced skills they will need in the future, funneling them back for more education whenever needed. A more collaborative workforce development system should engage industry and other workforce actors in regional strategies to meet the skills demand for today and tomorrow.

One critical factor in workforce development is getting schools focused on developing the skills needed for their community. Schools need to be appropriately funded to maintain quality instructors and equipment that can develop a strong pipeline of qualified candidates. Schools must also support specific needs of their regional companies, which may require new models of credit and non-credit funding metrics.

An audit of technical education programs across the state showed that programs exist that can support many regions and build a pipeline of talent. CTE programs are in 173 high schools across the state, with representation in each county. Sixty-nine of those schools are actively participating in work-based learning activities. Although struggling with funding complexities, the community college system is well represented across the state. Welding is the most common manufacturing pathway, followed by industrial maintenance. Mechatronics and robotics programs are lacking across the state. Mechatronic programs are more attractive to younger adults, and may lure more students into signing up for technical manufacturing programs or advancing to engineering programs. Based on data collected during educator focus groups, enrollment in technical programs has decreased over the past eight years. With stronger career awareness early in primary education and a refreshed method of funding programs, a consistent pipeline of young adults can mitigate short-term and long-term skills gap challenges. Workforce development system partners should continue to serve underserved communities by promoting strong career opportunities in manufacturing, and by developing geographic-friendly programs for rapid skill development and job placement.

Finally, the manufacturers must acknowledge and adapt to a changing emerging workforce. The emerging workforce will not settle for the way manufacturing has traditionally done business. If companies struggle to move out of the box on their own, the state should provide the resources to assist companies with retention practices.

These recommendations and next steps, along with the other observations found in this report, will yield stronger practices in manufacturing job awareness, preparation, collaboration, and ongoing development and employment.

Statewide Manufacturing Market Analysis:

- Develop and deploy labor data dashboards for various stakeholders to understand the constantly changing workforce landscape, especially for emerging industries.

- A possible next step would be conducting an in-depth market analysis of emerging manufacturing industry sectors (e.g., semiconductor, electrification and electric vehicle).

Statewide and Regional Skills Gap Study:

- Develop and display skills-based career pathways based on industry sector, both as a workforce development attraction and retention strategy.

- Investigate a possible skills-based individual passport that tracks and validates skills gained through diverse options, often outside the traditional educational pathways.

- Investigate deploying a pilot for 21st-century skills development to address industry needs for a broader skill set that includes more than just technical skills.

Desired Employer Study:

- Conduct an in-depth regional analysis to uncover barriers to entry- and mid-level manufacturing jobs.

- Utilize employee and potential employee engagement solutions to understand reasons for early turnover, and mitigate ghosting and attrition.

Pipeline Modeling Study:

- Analyze Regional Personal Intent data to develop a more aligned and effective marketing campaign for in-demand manufacturing positions.

Educational Alignment and Articulation Study:

- Develop a continuous skills focus evaluation model to ensure programs and credentials are aligned from both educational institutions and workforce centers.

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Appendix A. Arkansas Regional County Groupings

Northwest	Western	Southwest	Central	Northeast	East	Southeast
Baxter	Crawford	Calhoun	Conway	Clay	Crittenden	Arkansas
Benton	Franklin	Clark	Faulkner	Craighead	Cross	Ashley
Boone	Johnson	Columbia	Garland	Greene	Lee	Bradley
Carroll	Logan	Dallas	Grant	Independence	Monroe	Chicot
Cleburne	Montgomery	Hempstead	Hot Spring	Jackson	Phillips	Cleveland
Fulton	Polk	Howard	Jefferson	Lawrence	Prairie	Desha
Izard	Pope	Lafayette	Lonoke	Mississippi	St. Francis	Drew
Madison	Scott	Little River	Perry	Poinsett	Woodruff	Lincoln
Marion	Sebastian	Miller	Pulaski	Randolph		
Newton	Yell	Nevada	Saline	Sharp		
Searcy		Pike	White			
Stone		Ouachita				
Van Buren		Sevier				
Washington		Union				

Appendix B – Survey Instrument Items

Company

1. County where your company is located?
2. Job Title
3. Company Size
4. Company Type
5. What percentage of your company's positions are unfulfilled at this time?
   a. Entry-Level Positions
      i. Assembler
      ii. Production Labor
      iii. Machine Operator
      iv. Warehouse/Distribution Labor
      v. Welder
   b. Mid-level Positions
      i. Additive Manufacturing Technician
      ii. Industrial Machine Repair
      iii. Industrial Electrical Maintenance
      iv. Maintenance Technician
      v. Supervisor
      vi. Quality Control
   c. Senior Tech Positions
      i. Millwright
      ii. Tool and Die Maker
      iii. CNC Programmer

        iv. Machinist Manual

        v. Machinist CNC

   d. Research and Design Positions

        i. CAD/CAM Design

        ii. Material Scientist

        iii. Research and Development

        iv. Design Engineer

        v. Manufacturing Engineer

6. Rank the following based upon level of importance: Rank Priority 15 (1 = low, 5 = high)

   a. Emotional Intelligence

        i. Active Listening

        ii. Social Perceptions

        iii. Teamwork

   b. Communication

        i. Interpersonal Communication

        ii. Written Communication

        iii. Verbal Communication

   c. Basic Academic Skills

        i. Computer Aptitude

        ii. Data Collection and Analysis

        iii. General Math

        iv. Measurements (English/metric)

        v. Graphic Literacy (graphs, charts, tables)

   d. Critical Thinking

        i. Active Learning

        ii. Complex Problem-Solving

        iii. Critical Thinking

        iv. Programming

        v. Time Management

   e. Other

        i. Safety Awareness

        ii. Quality Control

        iii. Mechanical Maintenance

        iv. Customer Service

        v. Assembly Process (Electrical and Mechanical)

   f. Mechanical

        i. Automation

        ii. Industrial Machine (Hydraulic and Pneumatic)

        iii. Machine Theory

        iv. Mechatronics/Robotics

        v. Welding/Fabrication

    g. Production
- **i.** 3D Printing
- **ii.** Assembly (Automatic/Manual)
- **iii.** Casting/Molding
- **iv.** Digital Manufacturing
- **v.** Shearing and Forming

    h. Design
- **i.** CAD/CAM
- **ii.** CNC Programming
- **iii.** Engineering
- **iv.** Geometric Dimensions & Tolerance

    i. Systems
- **i.** Inspection and Testing
- **ii.** Inventory Control
- **iii.** Lean/Six Sigma

    j. Electrical
- **i.** Electrical Theory

7. Which of these nationally recognized credentials do you require?
8. Do you recognize credentials that use digital badges?
9. Would you like more information on digital badges?
10. Does your company participate in the following workforce pipeline activities?
11. Does your company participate in the following employee recruitment and retention practices?
12. What percentage of your new hires are still employed after each time designation?
13. Please specify any comments on the challenges you are facing surrounding your workforce needs.
14. What percentage of your workforce is scheduled to retire in the next five years?
15. Do you see an upcoming need to upskill your workforce based on automation and/or the implementation of new technologies?

Student Survey

1. Age Group
2. Enter the date you completed school or your expected completion date.
3. County of Residence
4. Current Field of Study
5. Please rank importance of the qualities you desire in a future employer. Rank Priority 1-5 (1 = low, 5 = high)
   - **a.** Career Opportunities for growth, promotion, achievement and security.
   - **b.** Health and Family programs that support child or elder care, work-related health, or non-work-related health.
   - **c.** Job Training that provides structured methods to build confidence in job assignments.
   - **d.** Management that displays professional behavior, provides open two-sided communication, and enables knowledge and skills achievement.
   - **e.** Strong Corporate Culture that displays mission, values, safety, diversity and supportive co-workers.

f. Total Rewards consisting of base pay, benefits and bonuses.

g. Work-Life Balance to allow for flexible scheduling preferences.

6. Please rate your competency in the following areas. Rank Competency 1-5 (1 = low, 5 = high)

a. Interactive Learning

b. Active Listening

c. Complex Problem-Solving

d. Critical Thinking

e. Computer Aptitude

f. Data Collection and Analysis

g. General Mathematics

h. General Writing

i. Interpersonal Communications

j. Basic Measurement (ability to use rulers/tape measures)

k. Reading Technical Documentation (prints, charts, graphs, work instructions)

l. Social Perceptiveness

m. Teamwork

n. Time Management

7. Do you believe that manufacturing jobs provide a long-term career opportunity?

8. Do you believe that you will search for a manufacturing job after completing school?

9. What are your salary expectations for your first job out of school? (Hourly rate)

10. How far would you expect to drive to work daily?

Appendix C. Focus Group Questions (Students)

1. Do you believe that career opportunity — encompassing growth, promotion, achievement and security — is the most important factor you will look for in employment?

2. Do you believe that a direct supervisor's actions will determine if you stay long-term with an employer?

3. On a scale from 1-5, how important is work-life balance when searching for an employer?

4. What is the first word you think of when you think about working in manufacturing?

5. Do you believe that manufacturing provides long-term career opportunities?

6. Do you believe that you will search for a manufacturing job after completing school?

Appendix D: Regional Job Posting Percentages by Industry (12-month time frame)

Industry Sector	Northwest	West	Southwest	Central	Northeast	East	Southeast
Health Care and Social Assistance	31.6%	39.1%	28.2%	33.2%	30.8%	24.8%	29.7%
Retail Trade	30.9%	16.1%	24.0%	19.3%	23.8%	29.9%	28.6%
Manufacturing	16.9%	24.4%	25.7%	16.5%	21.5%	15.0%	18.8%
Transportation and Warehousing	7.6%	10.4%	9.1%	6.3%	12.0%	27.1%	7.6%
Finance and Insurance	9.4%	5.4%	6.2%	19.7%	5.8%	5.1%	5.8%
Construction	2.3%	2.1%	1.0%	2.8%	2.9%	2.0%	2.6%
Mining, Quarrying, and Oil and Gas Extraction	0.4%	0.6%	2.7%	0.5%	1.9%	1.6%	0.6%
Agriculture, Forestry, Fishing and Hunting	0.3%	0.2%	0.8%	0.2%	0.7%	0.4%	2.3%
Utilities	0.6%	1.9%	2.4%	1.6%	0.7%	2.6%	3.9%

Appendix E. Occupational Demand and Top Employers by Region

Northwest Region	Demand	Number of Job Postings
Production Worker	High	231
Manufacturing Machine Operator	High	204
Production Supervisor	High	178
Building and General Maintenance Tech	Very High	161
Quality Control Analyst	Medium	62
Mechanical Engineer	Medium	57
Manufacturing/Production Technician	Medium	55
Engineering Manager	High	50
Industrial Mechanic	Medium	50
Production Plant Manager	Medium	44

Top Employers: Tyson Foods Inc.; ConAgra Foods; Simmons Foods; Baxter International Inc.; McKee Foods; Ducommun Inc.; Oldcastle Precast Inc.; Kennametal Inc.; Simmons Prepared Food Inc.; Pfizer.

Western Region	Demand	Number of Job Postings
Production Worker	Very High	195
Manufacturing Machine Operator	Very High	160
Building and General Maintenance Tech	Very High	116
Production Supervisor	High	86
Quality Control Analyst	High	66
Engineering Manager	Medium	43
Manufacturing Engineer	Medium	42
Manufacturing/Production Technician	High	38
Mechanical Engineer	Medium	37
Industrial Mechanic	Medium	16

Top Employers: Tyson Foods Inc.; ABB Inc.; Simmons Foods; Belden; Rheem Manufacturing Co.; ConAgra Foods; Mars Inc.; American Axle & Manufacturing; Nestle USA Inc.

Southwest Region	Demand	Number of Job Postings
Production Worker	Very High	136
Building and General Maintenance Tech	Very High	76
Manufacturing Engineer	High	72
Mechanical Engineer	High	72
Chemical/Process Engineer	High	60
Engineering Manager	High	43
Production Supervisor	High	53
Quality Inspector / Technician	High	38
Electrical and Electronics Technician	High	27
Millwright	Medium	27

Top Employers: Aerojet; Tyson Foods Inc.; Lockheed Martin Corp.; Koch Industries Inc.; Cooper Tire; Lanxess; Chemtura; General Dynamics.

Central Region	Demand	Number of Job Postings
Manufacturing Machine Operator	High	234
Production Worker	Very High	195
Production Supervisor	Medium	160
Building and General Maintenance Tech	Very High	156
Mechanical Engineer	Medium	137
Manufacturing Engineer	Medium	105
Quality Inspector / Technician	Medium	67
Chemical / Process Engineer	Medium	64
Production Plant Manager	Medium	58
Electrical and Electronics Technician	Medium	48

Top Employers: Intel Corp.; Sig Sauer; Caterpillar Inc.; General Motors; Siemens; Tyson Foods Inc.; Loreal USA Inc.; Coorstek Inc.; Pactiv LLC; Kohler.

Northeast Region	Demand	Number of Job Postings
Manufacturing Machine Operator	Very High	160
Production Worker	High	119
Building and General Maintenance Tech	Very High	103
Industrial Mechanic	High	58
Production Supervisor	High	51
Manufacturing Engineer	Medium	43
CNC Operator	Medium	27
Engineering Manager	Medium	26
Quality Inspector / Technician	Medium	25
Mechanical Engineer	Medium	23

Top Employers: Nucor Steel Auburn Inc.; Carvana LLC; Nice-Pak; PepsiCo Inc.; Toro Co.; Unilever; U.S. Steel Corp.; ABB Inc.; Trinity Industries; Nestle USA Inc.

East Region	Demand	Number of Job Postings
Production Worker	High	61
Manufacturing Machine Operator	Very High	51
Building and General Maintenance Tech	Very High	39
Quality Control Analyst	Medium	28
Production Supervisor	Medium	24
Industrial Mechanic	Medium	15
Millwright	Medium	14
Production Plant Manager	Medium	14
Molding / Casting Worker	Medium	11
Chemical / Process Engineer	Medium	10

Top Employers: Carvana LLC; Coca-Cola Enterprises Inc.; Flowserve Corp.; Altium Packaging; Chrysler; Hino Motors Manufacturing USA Inc.; Robert Bosch; Bosch; Consolidated Container Co.

Southeast Region	Demand	Number of Job Postings
Manufacturing Machine Operator	Very High	21
Production Worker	High	17
Building and General Maintenance Tech	Very High	10
Chemical / Process Engineer	Medium	10
Electrical Engineer	Medium	9
Millwright	Medium	8
Production Supervisor	High	8
Quality Inspector / Technician	Medium	8
Quality Control Systems Manager	Medium	6
Electrical and Electronics Technician	Medium	5

Top Employers: Producers Rice Mill Inc.; Lennox; Koch Industries Inc.; Baxter International Inc.; Clearwater Paper Corp; Ingevity Corp.; Revolution Co.; Revolution Sustainable Solutions Holdings; PotlatchDeltic Corp.

Appendix F: 2021-2022 ESSA School Grades

*Information in this section is derived from the **Educational Alignment and Articulation Study.***

School	County	Grade
Dewitt Elementary School	ARKANSAS	C
Dewitt Middle School	ARKANSAS	B
Dewitt High School	ARKANSAS	C
Park Avenue Elementary School	ARKANSAS	F
Meekins Middle School	ARKANSAS	D
Stuttgart High School	ARKANSAS	C
Stuttgart Junior High School	ARKANSAS	D
Crossett Elementary School	ASHLEY	F
Crossett High School	ASHLEY	D
Crossett Middle School	ASHLEY	D
Hamburg Middle School	ASHLEY	C
Hamburg High School	ASHLEY	C
Noble Elementary School	ASHLEY	D
Portland Elementary School	ASHLEY	D
Albritton Elementary School	ASHLEY	D
Amanda Gist Elementary School	BAXTER	C
Cotter High School	BAXTER	C
Nelson Wilks Herron Elementary	BAXTER	C
Pinkston Middle School	BAXTER	B
Mountain Home Kindergarten	BAXTER	C
Hackler Intermediate School	BAXTER	C
Mountain Home Career Academies	BAXTER	B
Norfork Elementary School	BAXTER	C
Norfork High School	BAXTER	C
Thomas Jefferson Elementary School	BENTON	A
Washington Junior High School	BENTON	A
Bentonville High School	BENTON	A
R.E. Baker Elementary School	BENTON	B
Old High Middle School	BENTON	A
Sugar Creek Elementary School	BENTON	A
Apple Glen Elementary School	BENTON	B
Ardis Ann Middle School	BENTON	A
Elm Tree Elementary School	BENTON	B
Lincoln Junior High School	BENTON	A
Mary Mae Jones Elementary School	BENTON	B
Central Park At Morning Star	BENTON	B
Ruth Barker Middle School	BENTON	A
Centerton Gamble Elementary	BENTON	B
Cooper Elementary School	BENTON	B
Willowbrook Elementary School	BENTON	A
Bright Field Middle School	BENTON	A
J. William Fulbright Junior High School	BENTON	A
Bentonville West High School	BENTON	B
Osage Creek Elementary School	BENTON	C
Creekside Middle School	BENTON	B
Evening Star Elementary School	BENTON	A
Grimsley Junior High School	BENTON	B
Decatur Northside Elementary	BENTON	D
Decatur High School	BENTON	D
Decatur Middle School	BENTON	D
Gentry Intermediate School	BENTON	D
Gentry Middle School	BENTON	C
Gentry Primary School	BENTON	D
Gentry High School	BENTON	C
Gravette High School	BENTON	B
Glenn Duffy Elementary School	BENTON	C
Gravette Middle School	BENTON	A
Gravette Upper Elementary	BENTON	C
Eastside Elementary School	BENTON	B
Garfield Elementary School	BENTON	B
Lowell Elementary School	BENTON	C
Northside Elementary School	BENTON	C
Westside Elementary School	BENTON	C
Elmwood Middle School	BENTON	A
Oakdale Middle School	BENTON	C
Grace Hill Elementary School	BENTON	C
Bonnie Grimes Elementary School	BENTON	B
Reagan Elementary School	BENTON	C
Frank Tillery Elementary School	BENTON	B
Joe Mathias Elementary School	BENTON	C
Kirksey Middle School	BENTON	B
Lingle Middle School	BENTON	B
Bellview Elementary	BENTON	A
Rogers High School	BENTON	C
Jones Elementary School	BENTON	C
Elza R. Tucker Elementary School	BENTON	B
Old Wire Elementary School	BENTON	C
Rogers Heritage High School	BENTON	C
Janie Darr Elementary School	BENTON	A
Fairview Elementary School	BENTON	B
Rogers New Technology High School	BENTON	B
Siloam Springs Intermediate School	BENTON	C
Northside Elementary School	BENTON	C
Southside Elementary School	BENTON	C
Delbert "Pete" & Pat Allen Elementary	BENTON	B
Siloam Springs Middle School	BENTON	C
Siloam Springs High School Conversion Charter	BENTON	C
Pea Ridge Primary School	BENTON	C
Pea Ridge Intermediate School	BENTON	C
Pea Ridge High School	BENTON	C
Pea Ridge Middle School	BENTON	B
Pea Ridge Junior High School	BENTON	C
Arkansas Arts Academy Elementary	BENTON	B
Arkansas Arts Academy High School	BENTON	B
Founders Classical Academies of Arkansas Bentonville	BENTON	A
Founders Classical Academies of Arkansas High School Rogers	BENTON	A
Founders Classical Academies of Arkansas West Little Rock Elementary	BENTON	A
Founders Classical Academies of Arkansas West Little Rock	BENTON	C
Arkansas Connections Academy High	BENTON	D
Hope Academy of NWA Elementary	BENTON	F
Alpena Elementary School	BOONE	C
Alpena High School	BOONE	B
Bergman Elementary School	BOONE	B
Bergman High School	BOONE	B
Bergman Middle School	BOONE	A
Harrison Kindergarten	BOONE	B
Forest Heights Elementary School	BOONE	B
Skyline Heights Elementary School	BOONE	B
Harrison Middle School	BOONE	A
Harrison High School Conversion Charter	BOONE	B
Omaha Elementary School	BOONE	C

School	County	Grade
Omaha High School	BOONE	B
Valley Springs Elementary School	BOONE	C
Valley Springs High School	BOONE	A
Valley Springs Middle School	BOONE	A
Lead Hill Elementary School	BOONE	D
Lead Hill High School	BOONE	C
Hermitage Elementary School	BRADLEY	C
Hermitage High School	BRADLEY	C
Eastside Elementary School	BRADLEY	D
Thomas C Brunson Elementary School	BRADLEY	D
Warren High School	BRADLEY	D
Warren Middle School	BRADLEY	D
Hampton Elementary School	CALHOUN	D
Hampton High School	CALHOUN	D
Berryville Elementary School	CARROLL	C
Berryville High School	CARROLL	C
Berryville Middle School	CARROLL	C
Berryville Intermediate School	CARROLL	C
Eureka Springs Elementary School	CARROLL	B
Eureka Springs High School	CARROLL	A
Eureka Springs Middle School	CARROLL	C
Green Forest Elementary School	CARROLL	B
Green Forest High School	CARROLL	C
Green Forest Intermediate School	CARROLL	C
Dermott Elementary School	CHICOT	F
Dermott High School	CHICOT	D
Eudora Elementary School	CHICOT	C
Lakeside Elementary School	CHICOT	F
Lakeside Middle School	CHICOT	D
Lakeside High School	CHICOT	D
Louisa Perritt Primary	CLARK	D
Peake Elementary School	CLARK	D
Goza Middle School	CLARK	C
Arkadelphia High School	CLARK	C
Gurdon Primary School	CLARK	C
Cabe Middle School	CLARK	D
Gurdon High School	CLARK	F
Corning High School	CLAY	C
Park Elementary School	CLAY	B
Corning Middle School	CLAY	C
Piggott Elementary School	CLAY	C
Piggott High School	CLAY	C
Rector Elementary School	CLAY	D
Rector High School	CLAY	C
Concord Elementary School	CLEBURNE	C
Concord High School	CLEBURNE	A
Heber Springs Elementary School	CLEBURNE	C
Heber Springs High School	CLEBURNE	B
Heber Springs Middle School	CLEBURNE	A
Quitman Elementary School	CLEBURNE	C
Quitman High School	CLEBURNE	B
Quitman Middle School	CLEBURNE	B
West Side Elementary School	CLEBURNE	C
West Side High School	CLEBURNE	B
Woodlawn Elementary School	CLEVELAND	C
Woodlawn High School	CLEVELAND	C
Rison Elementary School	CLEVELAND	C
Rison High School	CLEVELAND	B
Central Elementary School	COLUMBIA	D
East Side Elementary School	COLUMBIA	D
Magnolia Middle School	COLUMBIA	D
Magnolia High School	COLUMBIA	D
Walker Pre-K Center	N/A	N/A
Emerson Elementary School	COLUMBIA	A
Emerson High School	COLUMBIA	C
Bradley Elementary School	COLUMBIA	C
Bradley High School	COLUMBIA	A
Taylor Elementary School	COLUMBIA	A
Taylor High School	COLUMBIA	A
Nemo Vista Elementary School	CONWAY	C
Nemo Vista High School	CONWAY	A
Nemo Vista Middle School	CONWAY	B
Wonderview Elementary School	CONWAY	C
Wonderview High School	CONWAY	C
Morrilton Elementary School	CONWAY	C
Morrilton Intermediate School	CONWAY	C
Morrilton Primary School	CONWAY	C
Morrilton Sr. High School	CONWAY	C
Morrilton Junior High School	CONWAY	C
Bay Elementary School	CRAIGHEAD	C
Bay High School	CRAIGHEAD	C
Westside High School	CRAIGHEAD	C
Westside Elementary School	CRAIGHEAD	D
Westside Middle School	CRAIGHEAD	C
Brookland Elementary School	CRAIGHEAD	C
Brookland High School	CRAIGHEAD	C
Brookland Middle School	CRAIGHEAD	C
Brookland Junior High School	CRAIGHEAD	C
Buffalo Island Central Elementary School	CRAIGHEAD	B
Buffalo Island Central High School	CRAIGHEAD	C
Early Childhood Learning Center	N/A	N/A
Math & Science Magnet School	CRAIGHEAD	D
Visual & Performing Art Magnet	CRAIGHEAD	C
Health/Wellness Envi Magnet	CRAIGHEAD	D
International Studies Magnet	CRAIGHEAD	C
Microsociety Magnet School	CRAIGHEAD	F
Annie Camp Junior High School	CRAIGHEAD	D
Douglas MacArthur Junior High School	CRAIGHEAD	D
Kindergarten Center	CRAIGHEAD	C
The Academies at Jonesboro High School	CRAIGHEAD	D
Fox Meadow Elementary	CRAIGHEAD	F
University Heights. Elementary School	CRAIGHEAD	D
Nettleton Junior High School	CRAIGHEAD	D
Nettleton High School	CRAIGHEAD	D
University Heights School of Medical Arts	CRAIGHEAD	D
Fox Meadow School of Creative Media	CRAIGHEAD	F
Nettleton STEAM School	CRAIGHEAD	C
Valley View Elementary School	CRAIGHEAD	A
Valley View High School	CRAIGHEAD	B
Valley View Intermediate School	CRAIGHEAD	A
Valley View Junior High School	CRAIGHEAD	A
Riverside East Elementary School	CRAIGHEAD	C
Riverside High School	CRAIGHEAD	C
Riverside West Elementary School	CRAIGHEAD	B
Alma Intermediate School	CRAWFORD	D
Alma High School	CRAWFORD	B
Alma Middle School	CRAWFORD	C
Alma Primary School	CRAWFORD	C
Cedarville Elementary School	CRAWFORD	C
Cedarville High School	CRAWFORD	C
Cedarville Middle School	CRAWFORD	C
Mountainburg Elementary School	CRAWFORD	C

School	County	Grade
Mountainburg High School	CRAWFORD	C
Mountainburg Middle School Brain Academy	CRAWFORD	C
Marvin Primary School	CRAWFORD	D
Mulberry High School	CRAWFORD	D
Pleasant View Campus School	CRAWFORD	D
King Elementary School	CRAWFORD	C
Central Elementary School	CRAWFORD	C
Butterfield Trail Middle School	CRAWFORD	C
Van Buren High School	CRAWFORD	C
James R. Tate Elementary School	CRAWFORD	D
Parkview Elementary School	CRAWFORD	B
Rena Elementary School	CRAWFORD	B
Northridge Middle School	CRAWFORD	A
Van Buren Freshman Academy	CRAWFORD	C
Oliver Springs Elementary School	CRAWFORD	C
River Valley Virtual Academy	CRAWFORD	D
Earle Elementary School	CRITTENDEN	F
Earle High School	CRITTENDEN	D
Bragg Elementary School	CRITTENDEN	F
Faulk Elementary School	CRITTENDEN	F
Maddux Elementary School	CRITTENDEN	F
Richland Elementary School	CRITTENDEN	D
Weaver Elementary School	CRITTENDEN	F
East Junior High School	CRITTENDEN	F
West Junior High School	CRITTENDEN	D
Wonder Junior High School	CRITTENDEN	D
Jackson/Wonder Elementary School	CRITTENDEN	F
The Academies of West Memphis Charter School	CRITTENDEN	D
Marion Junior High School	CRITTENDEN	D
Marion High School	CRITTENDEN	D
Herbert Carter Global Community Magnet School	CRITTENDEN	C
Marion Visual & Performing Arts Magnet School	CRITTENDEN	F
Marion Math, Science & Technology Magnet School	CRITTENDEN	D
Cross County Elementary Tech Academy	CROSS	B
Cross County High A New Tech School	CROSS	B
Wynne Primary School	CROSS	C
Wynne Intermediate School	CROSS	C
Wynne Junior High School	CROSS	C
Wynne High School	CROSS	C
Fordyce High School	DALLAS	D
Fordyce Elementary Schools	DALLAS	C
Central Elementary School	DESHA	F
Dumas Junior High School	DESHA	D
Dumas High School	DESHA	D
Reed Elementary School	DESHA	F
McGehee Elementary School	DESHA	C
McGehee High School	DESHA	D
Conner Middle School	DESHA	D
Drew Central Elementary School	DREW	D
Drew Central High School	DREW	D
Drew Central Middle School	DREW	D
Monticello Elementary School	DREW	C
Monticello Middle School	DREW	D
Monticello High School	DREW	C
Monticello Intermediate School	DREW	C
Ida Burns Elementary School	FAULKNER	C
Ellen Smith Elementary School	FAULKNER	B
Carl Stuart Middle School	FAULKNER	B
Conway High School	FAULKNER	C
Sallie Cone Preschool	N/A	N/A
Julia Lee Moore Elementary School	FAULKNER	B
Preston & Florence Mattison Elementary School	FAULKNER	D
Marguerite Vann Elementary School	FAULKNER	C
Jim Stone Elementary School	FAULKNER	C
Theodore Jones Elementary School	FAULKNER	C
Bob Courtway Middle School	FAULKNER	C
Ruth Doyle Middle School	FAULKNER	A
Ray/Phyllis Simon Middle School	FAULKNER	C
Woodrow Cummins Elementary School	FAULKNER	B
Carolyn Lewis Elementary School	FAULKNER	A
Conway Junior High School	FAULKNER	B
Greenbrier Eastside Elementary	FAULKNER	B
Greenbrier High School	FAULKNER	B
Greenbrier Middle School	FAULKNER	B
Greenbrier Westside Elementary	FAULKNER	B
Greenbrier Junior High School	FAULKNER	A
Greenbrier Wooster Elementary	FAULKNER	A
Greenbrier Springhill Elementary School	FAULKNER	A
Guy-Perkins Elementary School	FAULKNER	C
Guy-Perkins High School	FAULKNER	C
Mayflower Elementary School	FAULKNER	C
Mayflower High School	FAULKNER	C
Mayflower Middle School	FAULKNER	C
Mt. Vernon/Enola Elementary School	FAULKNER	C
Mt. Vernon/Enola High School	FAULKNER	A
Vilonia Elementary School	FAULKNER	B
Vilonia High School	FAULKNER	B
Vilonia Primary School	FAULKNER	C
Vilonia Middle School	FAULKNER	A
Frank Mitchell Intermediate School	FAULKNER	C
Vilonia Pathways Academy	FAULKNER	C
Charleston Elementary School	FRANKLIN	B
Charleston High School	FRANKLIN	B
County Line Elementary School	FRANKLIN	C
County Line High School	FRANKLIN	B
Ozark Middle School	FRANKLIN	B
Elgin B Milton Primary School	FRANKLIN	B
Ozark Upper Elementary School	FRANKLIN	C
Ozark Junior/Senior High School	FRANKLIN	B
Mammoth Spring Elementary School	FULTON	C
Mammoth Spring High School	FULTON	C
Salem Elementary School	FULTON	B
Salem High School	FULTON	B
Viola Elementary School	FULTON	C
Viola High School	FULTON	C
Cutter-Morning Star Elementary School	GARLAND	C
Cutter-Morning Star High School	GARLAND	D
Fountain Lake Elementary	GARLAND	D
Fountain Lake Middle School Cobra Digital Prep Academy	GARLAND	C
Fountain Lake Charter High School	GARLAND	C
Oaklawn STEM Magnet School	GARLAND	D
Main Street Visual & Performing Arts Magnet School	GARLAND	D
Park Magnet An International Baccalaureate Primary Years Programme World Class School	GARLAND	A
Langston Elementary Leadership Academy Magnet School	GARLAND	F

School	County	Grade
Hot Springs Junior Academy	GARLAND	D
Hot Springs World Class High School	GARLAND	D
Jessieville Elementary School	GARLAND	C
Jessieville High School	GARLAND	B
Jessieville Middle School	GARLAND	C
Lake Hamilton Elementary School	GARLAND	C
Lake Hamilton High School	GARLAND	C
Lake Hamilton Junior High School	GARLAND	B
Lake Hamilton Intermediate. School	GARLAND	C
Lake Hamilton Middle School	GARLAND	C
Lake Hamilton Primary School	GARLAND	C
Lakeside Primary School	GARLAND	B
Lakeside Intermediate School	GARLAND	B
Lakeside Middle School	GARLAND	B
Lakeside High School	GARLAND	B
Lakeside Junior High School	GARLAND	C
Mountain Pine Elementary School	GARLAND	D
Mountain Pine High School	GARLAND	C
Poyen Elementary School	GRANT	B
Poyen High School	GRANT	C
East End Elementary School	GRANT	C
Sheridan Elementary School	GRANT	C
Sheridan Middle School	GRANT	C
Sheridan High School	GRANT	C
Sheridan Intermediate School	GRANT	C
East End Intermediate School	GRANT	C
East End Middle School	GRANT	D
Marmaduke Elementary School	GREENE	C
Marmaduke High School	GREENE	B
Greene County Tech Elementary School	GREENE	C
Greene County Tech Middle School	GREENE	B
Greene County Tech High School	GREENE	C
Greene County Tech Junior High School	GREENE	C
Greene County Tech Primary School	GREENE	C
Greene County Tech Intermediate School	GREENE	C
Baldwin Elementary School	GREENE	F
Woodrow Wilson Elementary School	GREENE	B
Oak Grove Middle School	GREENE	C
Paragould Junior High	GREENE	C
Paragould High School	GREENE	C
Paragould Primary School	GREENE	C
Oak Grove Elementary School	GREENE	D
Randy Hughes Elementary School	HEMPSTEAD	F
Blevins High School	HEMPSTEAD	C
Wm. Jefferson Clinton Primary School	HEMPSTEAD	F
Beryl Henry Upper Elementary School	HEMPSTEAD	D
Yerger Junior High School	HEMPSTEAD	D
Hope High School	HEMPSTEAD	D
Hope Academy of Public Service	HEMPSTEAD	B
Creative Action Team School	HEMPSTEAD	N/A
Spring Hill Elementary School	HEMPSTEAD	C
Spring Hill High School	HEMPSTEAD	C
Bismarck Elementary School	HOT SPRING	B
Bismarck Middle School	HOT SPRING	B
Bismarck High School	HOT SPRING	A
Glen Rose Elementary School	HOT SPRING	C
Glen Rose High School	HOT SPRING	C
Glen Rose Middle School	HOT SPRING	C
Magnet Cove Elementary School	HOT SPRING	C
Magnet Cove High School	HOT SPRING	C
Malvern Elementary School	HOT SPRING	D
Malvern Middle School	HOT SPRING	D
Malvern High School	HOT SPRING	D
Wilson Intermediate School	HOT SPRING	D
Ouachita Elementary School	HOT SPRING	B
Ouachita High School	HOT SPRING	B
Joann Walters Elementary Sch	HOWARD	C
Dierks High School	HOWARD	C
Mineral Springs Elementary School	HOWARD	F
Mineral Springs High School	HOWARD	D
Nashville Elementary School	HOWARD	C
Nashville Junior High School	HOWARD	C
Nashville High School	HOWARD	C
Nashville Primary School	HOWARD	B
West Magnet Elementary School	INDEPENDENCE	C
Batesville Junior High School	INDEPENDENCE	C
Eagle Mountain Magnet Elementary School	INDEPENDENCE	B
Sulphur Rock Magnet Elementary School	INDEPENDENCE	C
Batesville High School Charter	INDEPENDENCE	C
Southside Elementary School	INDEPENDENCE	C
Southside Middle School	INDEPENDENCE	C
Southside Junior High School	INDEPENDENCE	C
Southside Charter High School	INDEPENDENCE	B
Midland Elementary School	INDEPENDENCE	C
Midland High School	INDEPENDENCE	D
Cedar Ridge Elementary School	INDEPENDENCE	C
Cedar Ridge High School	INDEPENDENCE	C
Calico Rock Elementary School	IZARD	B
Calico Rock High School	IZARD	C
Melbourne Elementary School	IZARD	B
Melbourne High School	IZARD	A
Izard Co. Cons. Elementary School	IZARD	C
Izard County Consolidated High School	IZARD	C
Izard County Consolidated Middle School	IZARD	D
Newport High School	JACKSON	D
Newport Elementary School	JACKSON	D
Swifton Middle School	JACKSON	C
Tuckerman Elementary School	JACKSON	B
Tuckerman High School	JACKSON	B
Matthews Elementary School	JEFFERSON	F
Robert F. Morehead Middle School	JEFFERSON	D
Dollarway High School	JEFFERSON	F
Broadmoor Elementary School	JEFFERSON	F
Thirty-Fourth Street Elementary School	JEFFERSON	F
Pine Bluff High School	JEFFERSON	F
Jack Robey Middle School	JEFFERSON	D
Forrest Park/Greenville Preschool	N/A	N/A
Southwood Elementary School	JEFFERSON	F
Edgewood Elementary School	JEFFERSON	D
L. L. Owen Elementary School	JEFFERSON	F
Coleman Elementary School	JEFFERSON	F
Watson Chapel High School	JEFFERSON	F
Watson Chapel Junior High School	JEFFERSON	D
White Hall High School	JEFFERSON	C
Hardin Elementary School	JEFFERSON	B
Moody Elementary School	JEFFERSON	C
Taylor Elementary School	JEFFERSON	C
White Hall Middle School	JEFFERSON	C
Gandy Elementary School	JEFFERSON	C
Friendship Aspire Academy	JEFFERSON	C
Friendship Aspire Academy Southeast Pine Bluff High	JEFFERSON	N/A

School	County	Grade
Clarksville Elementary School	JOHNSON	C
Clarksville Middle School	JOHNSON	C
Clarksville Primary School	JOHNSON	C
Clarksville Junior High School	JOHNSON	C
Clarksville High School	JOHNSON	C
Lamar Elementary School	JOHNSON	C
Lamar High School	JOHNSON	C
Lamar Middle School	JOHNSON	B
Westside Elementary School	JOHNSON	D
Westside High School	JOHNSON	D
Lafayette County Elementary	LAFAYETTE	F
Lafayette County High School	LAFAYETTE	D
Hoxie Elementary School	LAWRENCE	C
Hoxie High School	LAWRENCE	C
Sloan-Hendrix Elementary School	LAWRENCE	C
Sloan-Hendrix High School	LAWRENCE	C
Hillcrest Elementary School	LAWRENCE	C
Hillcrest High School	LAWRENCE	B
Walnut Ridge Elementary School	LAWRENCE	D
Walnut Ridge High School	LAWRENCE	C
Imboden Area Charter School	LAWRENCE	D
Anna Strong Learning Academy	LEE	F
Lee High School	LEE	F
Star City Jimmy Brown Elementary School	LINCOLN	D
Star City Middle School	LINCOLN	C
Star City High School	LINCOLN	D
Ashdown Junior High School	LITTLE RIVER	D
Ashdown High School	LITTLE RIVER	C
Ashdown Elementary School	LITTLE RIVER	D
Oscar Hamilton Elementary School	LITTLE RIVER	C
Foreman High School	LITTLE RIVER	C
Booneville Elementary School	LOGAN	C
Booneville High School	LOGAN	C
Booneville Junior High School	LOGAN	C
Magazine Elementary School	LOGAN	C
Magazine High School	LOGAN	C
Paris Elementary School	LOGAN	C
Paris High School	LOGAN	C
Paris Middle School	LOGAN	C
Scranton Elementary School	LOGAN	C
Scranton High School	LOGAN	B
Lonoke Elementary School	LONOKE	C
Lonoke Middle School	LONOKE	C
Lonoke High School	LONOKE	C
Lonoke Primary School	LONOKE	B
England Elementary School	LONOKE	C
England High School	LONOKE	C
Carlisle Elementary School	LONOKE	C
Carlisle High School	LONOKE	C
Eastside Elementary School	LONOKE	B
Central Elementary School	LONOKE	C
Cabot Junior High South	LONOKE	C
Cabot High School	LONOKE	B
Westside Elementary School	LONOKE	A
Southside Elementary School	LONOKE	B
Northside Elementary School	LONOKE	C
Ward Central Elementary	LONOKE	B
Cabot Middle School South	LONOKE	B
Cabot Junior High North	LONOKE	B
Cabot Middle School North	LONOKE	B
Magness Creek Elementary	LONOKE	B
Stagecoach Elementary School	LONOKE	B
Mountain Springs Elementary School	LONOKE	B
Cabot Freshman Academy	LONOKE	B
Academic Center for Excellence	LONOKE	N/A
Watson Primary School	MADISON	C
Huntsville Middle School	MADISON	B
Huntsville High School	MADISON	C
Huntsville Intermediate School	MADISON	D
St. Paul Elementary School	MADISON	D
St. Paul High School	MADISON	C
Flippin Elementary School	MARION	F
Flippin High School	MARION	C
Flippin Middle School	MARION	D
Yellville-Summit Elementary School	MARION	C
Yellville-Summit High School	MARION	C
Genoa Central Elementary School	MILLER	A
Genoa Central High School	MILLER	B
Gary E. Cobb Middle School	MILLER	A
Fouke Elementary School	MILLER	D
Fouke High School	MILLER	C
Paulette Smith Middle School	MILLER	C
Fairview Elementary School	MILLER	D
Vera Kilpatrick Elementary School	MILLER	D
Arkansas High School	MILLER	D
Edward D. Trice Elementary School	MILLER	D
College Hill Harmony Leadership Academy	MILLER	F
College Hill Pre-K Center	N/A	N/A
North Heights Community School	MILLER	C
Arkansas Middle School	MILLER	C
Armorel Elementary School	MISSISSIPPI	B
Armorel High School	MISSISSIPPI	C
Blytheville Elementary School	MISSISSIPPI	F
Blytheville Primary School	MISSISSIPPI	F
Blytheville Middle School	MISSISSIPPI	F
Blytheville High School	MISSISSIPPI	F
Rivercrest Elementary School	MISSISSIPPI	C
Rivercrest Junior High	MISSISSIPPI	D
Academies at Rivercrest High School	MISSISSIPPI	D
Gosnell Elementary School	MISSISSIPPI	B
Gosnell High School	MISSISSIPPI	C
Manila Elementary School	MISSISSIPPI	C
Manila High School	MISSISSIPPI	C
Osceola High School	MISSISSIPPI	F
North Elementary School	MISSISSIPPI	D
Carroll Smith Elementary School	MISSISSIPPI	D
Osceola Middle School	MISSISSIPPI	D
C.B. Partee Elementary School	MONROE	D
Brinkley High School	MONROE	F
Clarendon Elementary School	MONROE	F
Clarendon High School	MONROE	D
Caddo Hills Elementary School	MONTGOMERY	C
Caddo Hills High School	MONTGOMERY	C
Bobby Barrett Elementary School	MONTGOMERY	C
Mount Ida High School	MONTGOMERY	C
Prescott Elementary School	NEVADA	D
Prescott High School	NEVADA	D
Prescott Junior High School	NEVADA	D
Nevada Elementary School	NEVADA	D
Nevada High School	NEVADA	D
Jasper Elementary School	NEWTON	C
Jasper High School	NEWTON	B

School	County	Grade
Kingston Elementary School	NEWTON	C
Kingston High School	NEWTON	B
Park Elementary School	NEWTON	F
Park High School	NEWTON	C
Deer K-12 School	NEWTON	C
Mt. Judea K-12 School	NEWTON	D
Bearden Elementary School	OUACHITA	D
Bearden High School	OUACHITA	D
Fairview Elementary School	OUACHITA	D
Camden Fairview High School	OUACHITA	D
Ivory Primary School	OUACHITA	F
Camden Fairview Intermediate	OUACHITA	F
Camden Fairview Middle School	OUACHITA	F
Sparkman K-12 School	OUACHITA	C
Harmony Grove Elementary School	OUACHITA	B
Harmony Grove High School	OUACHITA	A
Anne Watson Elementary School	PERRY	C
Bigelow High School	PERRY	B
Perryville Elementary School	PERRY	C
Perryville High School	PERRY	C
Barton Elementary School	PHILLIPS	D
Barton High School	PHILLIPS	D
Central High School	PHILLIPS	F
J.F. Wahl Elementary School	PHILLIPS	F
Marvell-Elaine Elementary School	PHILLIPS	F
Marvell-Elaine High School	PHILLIPS	F
Kipp Delta Elementary Literacy Academy	PHILLIPS	F
Kipp Delta College Prep School	PHILLIPS	D
Kipp Delta Collegiate High School	PHILLIPS	D
Kipp Blytheville College Prep	PHILLIPS	F
Kipp Blytheville Collegiate High School	PHILLIPS	D
Centerpoint Elementary School	PIKE	C
Centerpoint High School	PIKE	B
Centerpoint Academy of Agriculture & Skilled Trade	PIKE	C
Kirby Elementary School	PIKE	D
Kirby High School	PIKE	C
Murfreesboro Elementary School	PIKE	C
Murfreesboro High School	PIKE	C
Harrisburg Elementary School	POINSETT	C
Harrisburg High School	POINSETT	C
Weiner Elementary	POINSETT	A
Marked Tree Elementary School	POINSETT	C
Marked Tree High School	POINSETT	D
Trumann Elementary School	POINSETT	D
Trumann High School	POINSETT	C
Trumann Middle School	POINSETT	D
Trumann Prep and Parent Center	N/A	N/A
Lepanto Elementary School	POINSETT	C
Tyronza Elementary School	POINSETT	C
East Poinsett Co. High School	POINSETT	C
Louise Durham Elementary School	POLK	B
Holly Harshman Elementary School	POLK	C
Mena Middle School	POLK	B
Mena High School	POLK	C
Polk County Virtual Academy	POLK	D
Acorn Elementary School	POLK	C
Acorn High School	POLK	C
Oden Schools	POLK	C
Van Cove Elementary School	POLK	D
Wickes Elementary School	POLK	B
Cossatot River High School	POLK	C
Umpire K-12 School	POLK	B
Atkins Elementary School	POPE	C
Atkins High School	POPE	C
Atkins Middle School	POPE	B
Dover High School	POPE	C
Dover Middle School	POPE	B
Dover Elementary School	POPE	B
Hector Elementary School	POPE	C
Hector High School	POPE	C
Pottsville Elementary School	POPE	B
Pottsville High School	POPE	B
Pottsville Middle Grade	POPE	B
Pottsville Junior High School	POPE	B
Crawford Elementary School	POPE	D
Dwight Elementary School	POPE	C
London Elementary School	POPE	C
Oakland Heights Elementary School	POPE	D
Sequoyah Elementary School	POPE	A
Russellville Middle School	POPE	B
Russellville Junior High School	POPE	B
Russellville High School	POPE	C
Center Valley Elementary School	POPE	B
Russellville Intermediate School	POPE	C
Des Arc Elementary School	PRAIRIE	A
Des Arc High School	PRAIRIE	A
Hazen Elementary School	PRAIRIE	D
Hazen High School	PRAIRIE	C
Central High School	PULASKI	C
Mann Magnet Middle School	PULASKI	D
Parkview Magnet High School	PULASKI	C
Booker Arts Magnet Elementary School	PULASKI	F
Dunbar Magnet Middle School	PULASKI	F
Pulaski Heights Middle School	PULASKI	C
Bale Elementary School	PULASKI	F
Brady Elementary School	PULASKI	F
McDermott Elementary School	PULASKI	F
Carver Magnet Elementary School	PULASKI	F
Fair Park Early Childhood Center	N/A	N/A
Forest Park Elementary School	PULASKI	A
Gibbs Magnet Elementary School	PULASKI	B
Western Hills Elementary School	PULASKI	F
Jefferson Elementary School	PULASKI	A
Meadowcliff Elementary School	PULASKI	F
M.L. King Elementary School	PULASKI	F
Pulaski Heights Elementary School	PULASKI	B
Stephens Elementary	PULASKI	F
Washington Elementary School	PULASKI	F
Williams Magnet Elementary School	PULASKI	C
Terry Elementary School	PULASKI	F
Fulbright Elementary School	PULASKI	C
Baseline Elementary School	PULASKI	F
Mabelvale Elementary School	PULASKI	F
Otter Creek Elementary School	PULASKI	F
Wakefield Elementary School	PULASKI	D
Mabelvale Middle School	PULASKI	F
Don Roberts Elementary School	PULASKI	A
Forest Heights STEM Academy	PULASKI	B
Pinnacle View Middle School	PULASKI	C
Cloverdale Middle School	PULASKI	F
Watson Elementary School	PULASKI	F

School	County	Grade
Chicot Elementary School	PULASKI	D
Geyer Springs Early Childhood Center	N/A	N/A
Little Rock West High School of Innovation	PULASKI	D
Little Rock Southwest High School	PULASKI	F
Little Rock Hall STEAM Magnet High School	PULASKI	D
Rockefeller Early Childhood Center	N/A	N/A
J.A. Fair K8 Preparatory School	PULASKI	F
Romine Early Childhood Center	N/A	N/A
Amboy Elementary School	PULASKI	F
Boone Park Elementary School	PULASKI	F
Crestwood Elementary School	PULASKI	B
Glenview Elementary School	PULASKI	F
Indian Hills Elementary School	PULASKI	D
Lakewood Elementary School	PULASKI	C
Meadow Park Elementary School	PULASKI	D
Pike View Early Childhood Center	N/A	N/A
Seventh Street Elementary School	PULASKI	F
North Little Rock Middle School	PULASKI	D
North Little Rock Middle School 6th Grade Campus	PULASKI	D
North Little Rock High School	PULASKI	D
Ridge Road Elementary School	PULASKI	D
North Little Rock Center of Excellence	PULASKI	C
Baker Interdistrict Elementary School	PULASKI	A
Crystal Hill Elementary	PULASKI	D
Clinton Elementary School	PULASKI	D
Harris Elementary School	PULASKI	F
Landmark Elementary School	PULASKI	D
Lawson Elementary School	PULASKI	D
Oak Grove Elementary School	PULASKI	D
Joe T. Robinson Elementary School	PULASKI	C
Sherwood Elementary School	PULASKI	B
Sylvan Hills Elementary School	PULASKI	B
Mills Middle School	PULASKI	D
Sylvan Hills Middle School	PULASKI	C
Mills University Studies High School	PULASKI	F
Joe T. Robinson High School	PULASKI	D
Sylvan Hills High School	PULASKI	C
Cato Elementary School	PULASKI	C
College Station Elementary School	PULASKI	F
Oakbrooke Elementary School	PULASKI	C
Pine Forest Elementary School	PULASKI	C
Joe T. Robinson Middle School	PULASKI	B
Bates Elementary School	PULASKI	D
Maumelle Middle School	PULASKI	C
Chenal Elementary School	PULASKI	A
Maumelle High School	PULASKI	D
Sylvan Hills Junior High School	PULASKI	C
Driven Virtual Academy	PULASKI	D
Adkins Preschool Center	PULASKI	N/A
Bayou Meto Elementary School	PULASKI	D
Murrell Taylor Elementary School	PULASKI	F
Jacksonville Middle School	PULASKI	D
Jacksonville High School	PULASKI	D
Bobby G Lester Elementary School	PULASKI	D
Jacksonville Elementary School	PULASKI	F
Maumelle Charter Elementary	PULASKI	A
Maumelle Charter High School	PULASKI	B
Scott Charter School	PULASKI	D
Lisa Academy North Elementary School	PULASKI	C
Lisa Academy West Middle School	PULASKI	C
Lisa Academy West High School	PULASKI	C
Lisa Academy North Middle School	PULASKI	C
Lisa Academy North High School	PULASKI	B
Lisa Academy West Elementary School	PULASKI	C
Lisa Academy Springdale	PULASKI	C
Lisa Academy Arkansas Hybrid School	PULASKI	D
Ark Virtual Academy Elementary	PULASKI	F
Ark Virtual Academy Middle School	PULASKI	D
Arkansas Virtual Academy High School	PULASKI	D
Estem Elementary School	PULASKI	D
Estem Junior High Public Charter School	PULASKI	C
Estem High School	PULASKI	C
Estem East Village Elementary Public Charter School	PULASKI	D
Estem East Village Junior High Public Charter School	PULASKI	C
Jacksonville Lighthouse Elementary Academy	PULASKI	F
Jacksonville Lighthouse High School Academy	PULASKI	D
Pine Bluff Lighthouse Elementary Academy	PULASKI	F
Jacksonville Lighthouse Flightline Academy	PULASKI	C
Capital City Lighthouse Elementary Academy	PULASKI	F
Pine Bluff Lighthouse Middle School Academy	PULASKI	F
Graduate Arkansas Charter High	PULASKI	N/A
Premier High School of Little Rock	PULASKI	N/A
Exalt Academy of Southwest Little Rock	PULASKI	D
The Excel Center	PULASKI	N/A
Ivy Hill Academy of Scholarship	PULASKI	D
Nichols Intermediate Academy of Leadership	PULASKI	F
Prodigy Preparatory Academy of Service	PULASKI	D
Friendship Aspire Elementary Academy Little Rock	PULASKI	C
Friendship Aspire Middle Academy Little Rock	PULASKI	D
Premier High School of North Little Rock	PULASKI	N/A
Westwind School for Performing Arts	PULASKI	D
Arkansas School for the Blind Elementary	PULASKI	N/A
Arkansas School for the Blind High School	PULASKI	N/A
School for the Deaf	PULASKI	N/A
Arkansas Consolidated High School-Alexander	PULASKI	N/A
Arkansas Consolidated High School-Dermott	PULASKI	N/A
Arkansas Consolidated High School-Mansfield	PULASKI	N/A
Arkansas Consolidated High School-Harrisburg	PULASKI	N/A
Civilian Student Training Program (CSTP)	PULASKI	N/A
Maynard Elementary School	RANDOLPH	D
Maynard High School	RANDOLPH	C
Pocahontas Elementary School	RANDOLPH	D
Pocahontas High School	RANDOLPH	C
Pocahontas Upper Elementary School	RANDOLPH	D
Pocahontas Junior High School	RANDOLPH	D
Central Elementary School	ST FRANCIS	D
Forrest City Junior High	ST FRANCIS	D
Forrest City High School	ST FRANCIS	D
Stewart Elementary School	ST FRANCIS	F
Lincoln Academy	ST FRANCIS	D
Palestine-Wheatley Elementary School	ST FRANCIS	C
Palestine-Wheatley Senior High	ST FRANCIS	C

Pine Haven Elementary School	SALINE	C
Bauxite High School	SALINE	C
Bauxite Middle School	SALINE	B
Miner Academy	SALINE	C
Caldwell Elementary School	SALINE	C
Angie Grant Elementary School	SALINE	D
Perrin Elementary School	SALINE	B
Ringgold Elementary School	SALINE	C
Benton Junior High School	SALINE	B
Benton Middle School	SALINE	B
Benton High School	SALINE	B
Bryant Junior High School	SALINE	B
Hill Farm Elementary School	SALINE	C
Bryant Elementary School	SALINE	B
Bryant High School	SALINE	C
Salem Elementary School	SALINE	B
Robert L. Davis Elementary School	SALINE	C
Springhill Elementary School	SALINE	A
Bryant Middle School	SALINE	B
Collegeville Elementary School	SALINE	B
Bethel Middle School	SALINE	A
Hurricane Creek Elementary	SALINE	B
Parkway Elementary School	SALINE	B
Westbrook Elementary School	SALINE	B
Harmony Grove High School	SALINE	C
Harmony Grove Middle School	SALINE	B
Harmony Grove Junior High School	SALINE	C
Waldron Elementary School	SCOTT	D
Waldron High School	SCOTT	D
Waldron Middle School	SCOTT	C
Adventure Online Academy	SCOTT	F
Leslie Intermediate School	SEARCY	C
Marshall Elementary School	SEARCY	D
Marshall High School	SEARCY	C
St. Joe K-12 School	SEARCY	B
Western Grove K-12 School	SEARCY	C
Bruno-Pyatt K-12 School	SEARCY	C
Ballman Elementary School	SEBASTIAN	C
Barling Elementary School	SEBASTIAN	C
Beard Elementary School	SEBASTIAN	B
Belle Point Alternative Center	SEBASTIAN	N/A
Bonneville Elementary School	SEBASTIAN	C
Carnall Elementary School	SEBASTIAN	D
Cavanaugh Elementary School	SEBASTIAN	B
Fairview Elementary School	SEBASTIAN	D
Howard Elementary School	SEBASTIAN	D
Raymond F. Orr Elementary School	SEBASTIAN	D
Park Elementary School	SEBASTIAN	D
Spradling Elementary School	SEBASTIAN	D
Sunnymede Elementary School	SEBASTIAN	D
Sutton Elementary School	SEBASTIAN	F
Trusty Elementary School	SEBASTIAN	D
L. A. Chaffin Middle School	SEBASTIAN	A
William O. Darby Middle School	SEBASTIAN	D
Dora Kimmons Middle School	SEBASTIAN	D
Ramsey Middle School	SEBASTIAN	C
Northside High School	SEBASTIAN	D
Southside High School	SEBASTIAN	C
John P. Woods Elementary School	SEBASTIAN	A
Harry C. Morrison Elementary School	SEBASTIAN	D
Elmer H. Cook Elementary School	SEBASTIAN	B

Tilles Elementary School	SEBASTIAN	D
Euper Lane Elementary School	SEBASTIAN	B
Greenwood Junior High School	SEBASTIAN	A
Greenwood High School	SEBASTIAN	B
Westwood Elementary School	SEBASTIAN	B
East Hills Middle School	SEBASTIAN	B
East Pointe Elementary School	SEBASTIAN	B
Greenwood Freshman Center	SEBASTIAN	A
Hackett Elementary School	SEBASTIAN	D
Hackett High School	SEBASTIAN	C
Lavaca Elementary School	SEBASTIAN	C
Lavaca High School	SEBASTIAN	C
Lavaca Middle School	SEBASTIAN	C
Mansfield Elementary School	SEBASTIAN	D
Mansfield Middle School	SEBASTIAN	B
Mansfield High School	SEBASTIAN	C
Future School of Fort Smith	SEBASTIAN	D
Dequeen Elementary School	SEVIER	C
Dequeen Primary	SEVIER	C
Dequeen High School	SEVIER	C
Dequeen Middle School	SEVIER	B
Dequeen Junior High School	SEVIER	B
Horatio Elementary School	SEVIER	C
Horatio High School	SEVIER	B
Cave City Elementary School	SHARP	C
Cave City Middle School Career and Collegiate Preparatory	SHARP	B
Cave City High Career & Collegiate Preparatory School	SHARP	B
Cherokee Elementary School	SHARP	B
Highland High School	SHARP	C
Highland Middle School	SHARP	B
Mountain View Elementary School	STONE	C
Mountain View Middle School	STONE	B
Mountain View High School	STONE	C
Rural Special Elementary School	STONE	C
Rural Special High School	STONE	B
Timbo Elementary School	STONE	B
Timbo High School	STONE	C
Hugh Goodwin Elementary School	UNION	B
Northwest Elementary School	UNION	C
Yocum Elementary School	UNION	D
Barton Junior High School	UNION	D
Washington Middle School	UNION	C
El Dorado High School	UNION	C
Junction City Elementary School	UNION	D
Junction City High School	UNION	C
Parkers Chapel Elementary School	UNION	B
Parkers Chapel High School	UNION	B
Norphlet Middle School	UNION	C
Smackover Elementary School	UNION	C
Smackover High School	UNION	C
Strong-Huttig Schools	UNION	F
Clinton Elementary School	VAN BUREN	C
Clinton High School	VAN BUREN	B
Clinton Junior High School	VAN BUREN	C
Shirley Elementary School	VAN BUREN	F
Shirley High School	VAN BUREN	D
South Side Elementary School	VAN BUREN	C
South Side High School	VAN BUREN	C
Elkins Elementary School	WASHINGTON	B

School	County	Grade
Elkins High School	WASHINGTON	C
Elkins Middle School	WASHINGTON	B
Elkins Primary School	WASHINGTON	B
Jerry "Pop" Williams Elementary School	WASHINGTON	B
Bob Folsom Elementary School	WASHINGTON	B
Farmington Junior High School	WASHINGTON	C
Randall G. Lynch Middle School	WASHINGTON	B
Farmington High School	WASHINGTON	C
Asbell Elementary School	WASHINGTON	C
Butterfield Elementary School	WASHINGTON	B
Happy Hollow Elementary School	WASHINGTON	C
Leverett Elementary School	WASHINGTON	C
Root Elementary School	WASHINGTON	A
Washington Elementary School	WASHINGTON	C
Ramay Junior High School	WASHINGTON	D
Woodland Junior High School	WASHINGTON	A
Fayetteville High School	WASHINGTON	C
Holcomb Elementary School	WASHINGTON	B
Vandergriff Elementary School	WASHINGTON	A
McNair Middle School	WASHINGTON	A
Holt Middle School	WASHINGTON	B
Owl Creek School	WASHINGTON	D
Agee Lierly Life Preparation Services School	WASHINGTON	N/A
Fayetteville Virtual Academy A District Conversion Charter School	WASHINGTON	B
Greenland Elementary School	WASHINGTON	D
Greenland High School	WASHINGTON	D
Greenland Middle School	WASHINGTON	D
Lincoln Elementary School	WASHINGTON	D
Lincoln Middle School	WASHINGTON	C
Lincoln High School	WASHINGTON	D
Prairie Grove Elementary School	WASHINGTON	C
Prairie Grove Middle School	WASHINGTON	B
Prairie Grove Junior High School	WASHINGTON	C
Prairie Grove High School	WASHINGTON	C
Elmdale Elementary School	WASHINGTON	D
Jones Elementary School	WASHINGTON	D
John Tyson Elementary School	WASHINGTON	B
Westwood Elementary School	WASHINGTON	D
Central Junior High School	WASHINGTON	B
Southwest Junior High School	WASHINGTON	C
Springdale High School	WASHINGTON	D
Parson Hills Elementary School	WASHINGTON	D
Thurman G. Smith Elementary School	WASHINGTON	C
Walker Elementary School	WASHINGTON	C
George Elementary School	WASHINGTON	C
J. O. Kelly Middle School	WASHINGTON	D
Helen Tyson Middle School	WASHINGTON	C
Bernice Young Elementary	WASHINGTON	A
Harp Elementary School	WASHINGTON	C
Bayyari Elementary School	WASHINGTON	C
George Junior High School	WASHINGTON	D
Hellstern Middle School	WASHINGTON	A
Har-Ber High School	WASHINGTON	C
Hunt Elementary School	WASHINGTON	B
Turnbow Elementary School	WASHINGTON	C
Monitor Elementary	WASHINGTON	C
Willis Shaw Elementary School	WASHINGTON	B
Sonora Elementary School	WASHINGTON	C
Sonora Middle School	WASHINGTON	D
Lakeside Junior High School	WASHINGTON	D
Linda Childers Knapp Elementary School	WASHINGTON	C
Jim D. Rollins Elementary School of Innovation	WASHINGTON	B
Don Tyson School of Innovation	WASHINGTON	B
West Fork Elementary School	WASHINGTON	C
West Fork Middle School	WASHINGTON	D
West Fork High School	WASHINGTON	D
Haas Hall Academy	WASHINGTON	A
Haas Hall Academy Jones Center	WASHINGTON	A
Haas Hall Academy at the Lane	WASHINGTON	A
Haas Hall Bentonville	WASHINGTON	A
Responsive Ed Solutions Premier High School of Springdale	WASHINGTON	N/A
H.L. Lubker Elementary School	WHITE	C
Bald Knob High School	WHITE	C
Bald Knob Middle School	WHITE	C
Beebe Elementary School	WHITE	C
Beebe Junior High School	WHITE	B
Beebe High School	WHITE	B
Beebe Middle School	WHITE	B
Beebe Early Childhood	WHITE	C
Bradford Elementary School	WHITE	D
Bradford High School	WHITE	C
White Co. Central Elementary School	WHITE	C
White Co. Central High School	WHITE	C
Judsonia Elementary School	WHITE	D
Kensett Elementary School	WHITE	D
Riverview High School	WHITE	C
Riverview Junior High School	WHITE	D
Pangburn Elementary School	WHITE	C
Pangburn High School	WHITE	B
Rose Bud Elementary School	WHITE	D
Rose Bud High School	WHITE	C
Sidney Deener Elementary School	WHITE	C
McRae Elementary School	WHITE	C
Ahlf Junior High School	WHITE	C
Searcy High School	WHITE	B
Westside Elementary School	WHITE	A
Southwest Middle School	WHITE	C
Augusta Elementary School	WOODRUFF	D
Augusta High School	WOODRUFF	D
McCrory Elementary School	WOODRUFF	C
McCrory High School	WOODRUFF	B
S.C. Tucker Elementary School	YELL	A
Danville High School	YELL	B
Danville Middle School	YELL	B
Dardanelle Intermediate School	YELL	C
Dardanelle Middle School	YELL	C
Dardanelle High School	YELL	B
Dardanelle Primary School	YELL	C
Western Yell Co. Elementary School	YELL	C
Western Yell Co. High School	YELL	C
Two Rivers High School	YELL	C
Two Rivers Elementary School	YELL	D

Appendix G: Broadband Coverage Map

County Map Files
Scenario 2 Coverage

Legend:
- ACAM/CAF
- ARC
- RDOF (wired)
- RDOF (wireless)
- NTIA
- USDA
- Served 100+
- Underserved
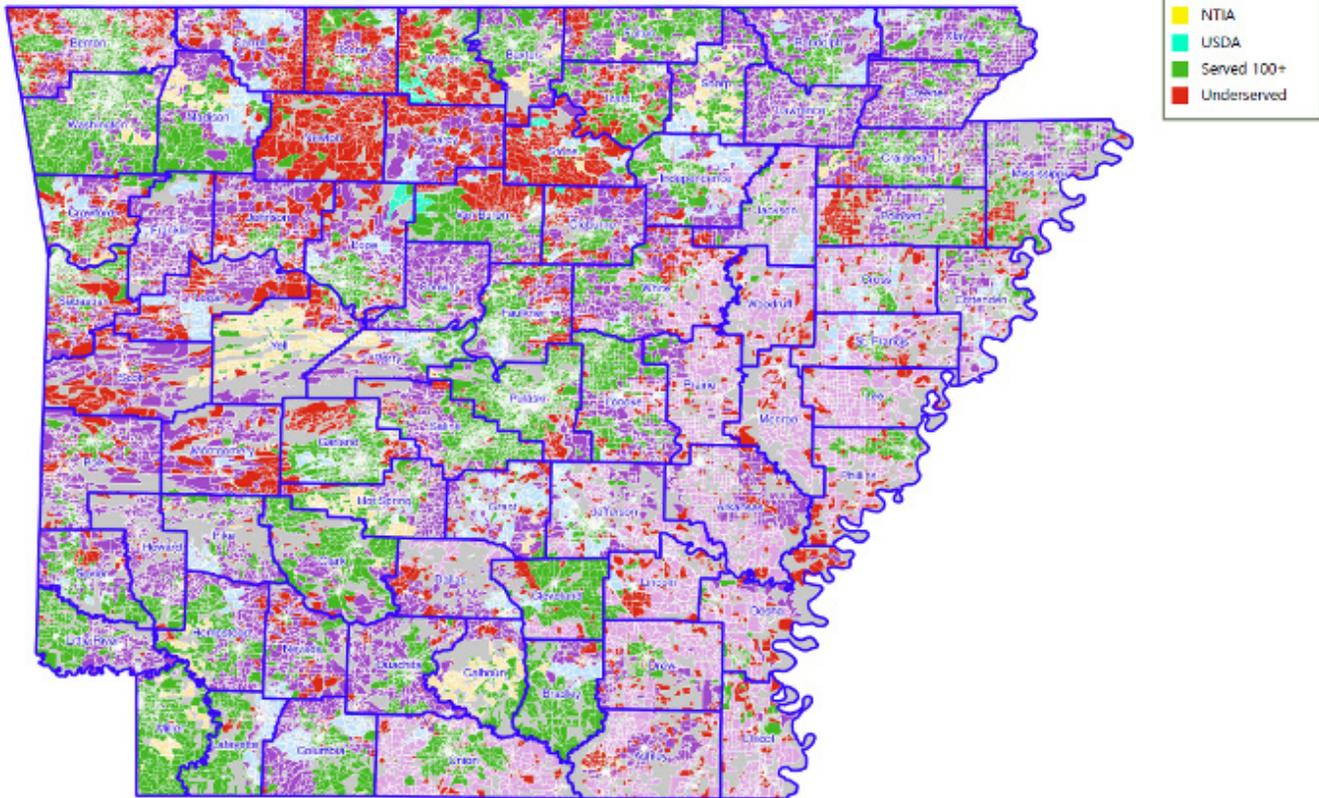
Appendix H: County Per Capita Income vs. Median Home Prices

Information in this section is derived from the Statewide Manufacturing Market Analysis.

Northwest Region (per capita income / median housing price)				
Baxter $39,950 / $163,640	Benton $94,289 / $281,250	Boone $38,108 / $154,760	Carroll $34,692 / $174,710	Cleburne $41,656 / $153,780
Fulton $31,840 / $102,680	Izard $32,606 / $99,640	Madison $34,012 / $154,480	Marion $33,493 / $160,840	Newton $32,731 / $154,640
Searcy $31,657 / $120,450	Stone $32,753 / $165,220	Van Buren $34,482 / $128,360	Washington $43,817 / $247,090	

Western Region (per capita income / median housing price)				
Crawford $35,919 / $154,350	Franklin $33,885 / $120,810	Johnson $30,728 / $130,910	Logan $34,433 / $122,270	Montgomery $32,125 / $135,780
Polk $32,573 / $126,170	Pope $36,617 / $156,950	Scott $32,290 / $99,640	Sebastian $45,586 / $167,080	Yell $33,506 / $134,200

Southwest Region (per capita income / median housing price)

Calhoun $38,509 / $88,940	Clark $39,450 / $141,250	Columbia $38,806 / $106,700	Dallas $40,611 / $95,140	Hempstead $33,760 / $106,700
Howard $34,751 / $122,880	Lafayette $38,307 / $73,970	Little River $37,075 / $94,170	Miller $37,065 / $137,270	Nevada $35,808 / $80,790
Pike $33,920 / $104,750	Ouachita $41,877 / $93,560	Sevier $32,926 / $115,580	Union $48,669 / $109,130	

Central Region (per capita income / median housing price)

Conway $40,633 / $138,090	Faulkner $41,943 / $189,320	Garland $44,358 / $175,840	Grant $41,674 / $146,510	Hot Spring $34,110 / $124,580
Jefferson $39,443 / $137,090	Lonoke $43,537 / $189,320	Perry $38,404 / $137,430	Pulaski $55,563 / $201,930	Saline $45,692 / $214,340
White $39,598 / $152,450				

Northeast Region (per capita income / median housing price)

Clay $39,157 / $96,840	Craighead $40,728 / $176,470	Greene $38,560 / $151,840	Independence $38,266 / $119,110	Jackson $41,646 / $86,750
Lawrence $38,065 / $91,740	Mississippi $37,730 / $113,150	Poinsett $37,307 / $95,720	Randolph $36,401 / $112,540	Sharp $35,612 / $91,490

Eastern Region (per capita income / median housing price)

Crittenden $41,474 / $156,060	Cross $41,715 / $101,950	Lee $32,359 / $92,950	Monroe $40,475 / $89,420	Phillips $38,155 / $98,300
Prairie $42,843 / $87,360	St. Francis $30,903 / $79,330	Woodruff $45,248 / $90,400		

Southeast Region (per capita income / median housing price)

|				
Arkansas $50,534 / $119,060	Ashley $38,489 / $92,710	Bradley $42,037 /$106,580	Chicot $44,762 / $82,730	Cleveland $40,366 / $110,600
Desha $44,920 / $100,370	Drew $40,726 / $124,460	Lincoln $29,008 / $110,840		

Appendix I: Available Dwellings Per County

Information in this section is derived from the Statewide Manufacturing Market Analysis

County	Total Dwellings	Occupied	Vacant
Arkansas	8,671	7,293	1,378
Ashley	9,371	8,019	1,352
Baxter	22,699	18,936	3,763
Benton	113,088	104,111	8,977
Boone	17,368	15,455	1,913
Bradley	5,073	4,277	796
Calhoun	2,444	2,019	425
Carroll	13,853	11,727	2,126
Chicot	5,104	4,142	962
Clark	9,977	8,170	1,807
Clay	7,470	6,176	1,294
Cleburne	15,527	10,819	4,708
Cleveland	3,570	3,101	469
Columbia	10,999	9,082	1,917
Conway	9,646	8,387	1,259
Craighead	46,739	43,221	3,518
Crawford	25,300	22,986	2,314
Crittenden	21,291	18,885	2,406
Cross	7,585	6,711	874
Dallas	3,468	2,770	698
Desha	5,795	4,891	904
Drew	8,259	7,133	1,126
Faulkner	51,685	47,622	4,063
Franklin	7,716	6,706	1,010
Fulton	6,185	4,991	1,194
Garland	52,326	42,997	9,329
Grant	7,839	7,091	748
Greene	19,159	17,673	1,486
Hempstead	9,601	7,992	1,609
Hot Springs	14,179	12,473	1,706
Howard	6,152	5,096	1,056
Independence	16,667	14,934	1,733
Izard	6,721	5,494	1,227
Jackson	7,079	6,203	876
Jefferson	30,573	26,264	4,309
Johnson	11,475	9,902	1,573
Lafayette	3,916	2,842	1,074
Lawrence	7,489	6,514	975

County	Total Dwellings	Occupied	Vacant
Lee	3,695	3,103	592
Lincoln	4,366	3,807	559
Little River	6,043	5,098	945
Logan	9,744	8,449	1,295
Lonoke	30,112	27,841	2,271
Madison	7,611	6,437	1,174
Marion	9,461	7,480	1,981
Miller	19,779	17,068	2,711
Mississippi	19,075	16,036	3,039
Monroe	3,828	3,040	788
Montgomery	5,435	3,651	1,784
Nevada	4,298	3,427	871
Newton	4,086	3,169	917
Ouachita	11,837	9,944	1,893
Perry	4,933	4,085	848
Phillips	8,315	6,890	1,425
Pike	5,289	4,128	1,161
Poinsett	10,327	9,254	1,073
Polk	9,612	7,992	1,620
Pope	26,902	24,196	2,706
Prairie	4,071	3,502	569
Pulaski	190,511	170,622	19,889
Randolph	8,562	7,322	1,240
St. Francis	9,565	8,470	1,095
Saline	51,879	48,232	3,647
Scott	4,851	3,930	921
Searcy	4,705	3,441	1,264
Sebastian	56,749	51,312	5,437
Sevier	6,741	5,731	1,010
Sharp	9,499	7,356	2,143
Stone	6,784	5,333	1,451
Union	18,599	16,182	2,417
Van Buren	9,668	7,012	2,656
Washington	100,508	92,548	7,960
White	33,270	29,705	3,565
Woodruff	3,250	2,775	475
Yell	9,246	7,722	1,524

Appendix J. Work and Education Intentions by Regions in Arkansas (Heatmaps) – Population Household Income Below $50,000 Annually

### East Region
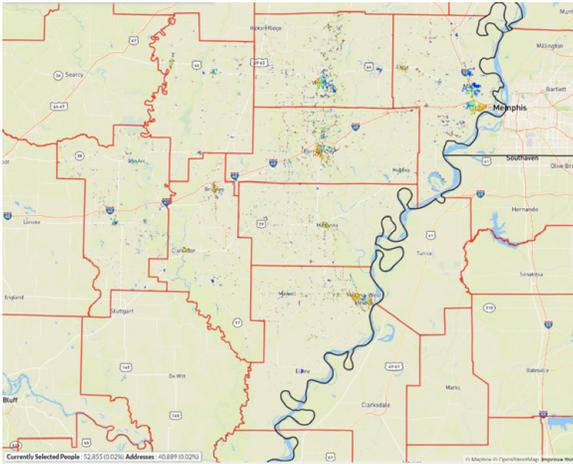
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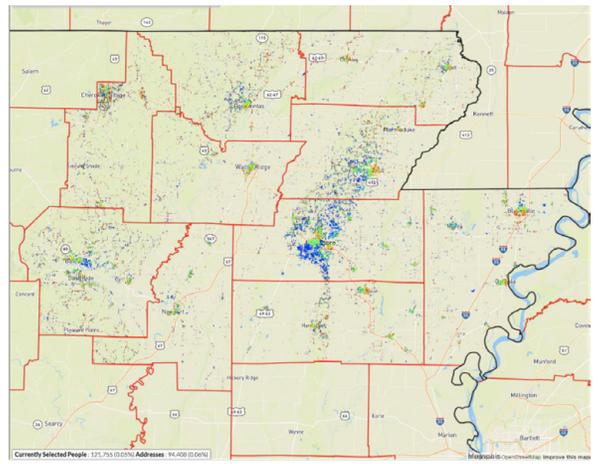
Northwest Region
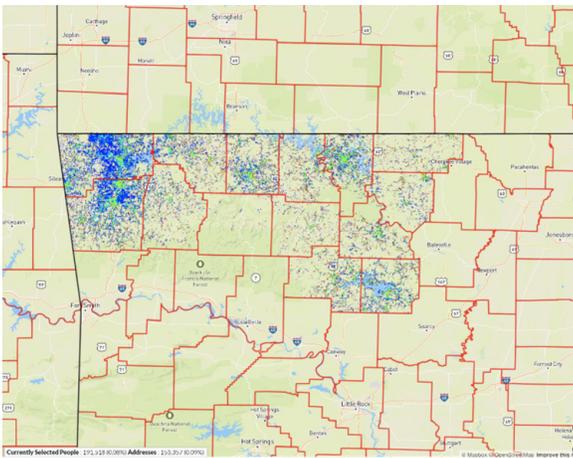
Southeast Region
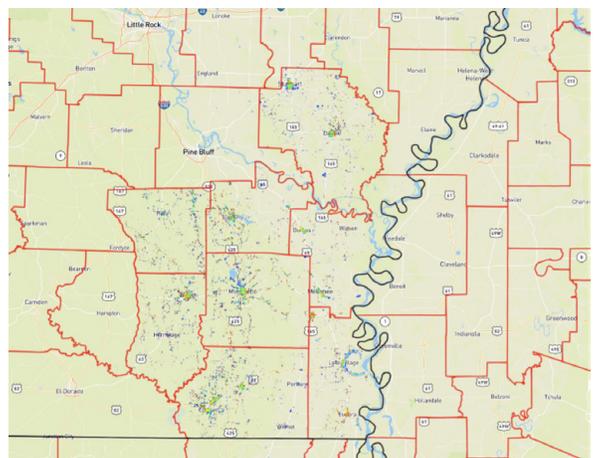
Southwest Region
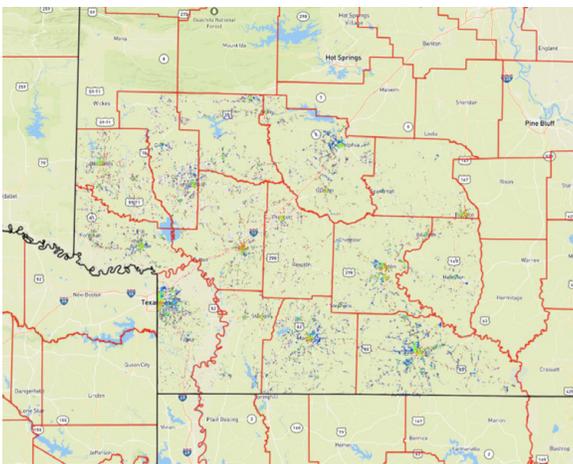
West Region
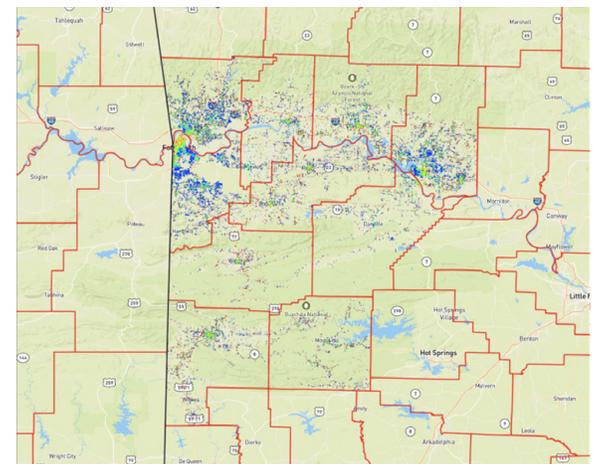
Appendix K. Educational Institutions by County

County	School	Type	City
Ashley	University of Arkansas at Monticello, College of Technology-Crossett	College/University - 4 year	Crossett
Baxter	Arkansas State University - Mountain Home	Community College	Mountain Home
Benton	NorthWest Arkansas Community College	Community College	Bentonville
Benton	University of Arkansas Global Campus	College/University - 4 year	Bentonville
Boone	North Arkansas College	Community College	Harrison
Cleburne	West Side School District	High School/Tech Center	Greers Ferry
Conway	University of Arkansas Community College at Morrilton	Community College	Morrilton
Craighead	Northeast Arkansas Career & Technical Center	High School/Tech Center	Jonesboro
Crittenden	Arkansas State University - Mid-South Community College	Community College	West Memphis
Desha	University of Arkansas at Monticello	Community College	McGehee
Drew	Monticello Occupational Education Center	High School/Tech Center	Monticello
Faulkner	Conway Career Center	High School/Tech Center	Conway
Garland	National Park College	Community College	Hot Springs National Park
Hempstead	University of Arkansas Community College at Hope	Community College	Hope
Hot Spring	College of the Ouachitas	Community College	Malvern
Independence	University of Arkansas Community College Batesville	Community College	Batesville
Izard	Ozarka College	College/University - 4 year	Melbourne
Jackson	Arkansas State University - Newport	College/University - 4 year	Newport
Jefferson	Southeast Arkansas College	Community College	Pine Bluff
Jefferson	University of Arkansas at Pine Bluff	College/University - 4 year	Pine Bluff
Mississippi	Arkansas Northeastern College	Community College	Blytheville
Mississippi	Harry L. Crisp Center (TSC) of Arkansas NE College	Community College	Blytheville
Ouachita	Southern Arkansas University Tech (SAU Tech)	Community College	Camden
Philips	Phillips Community College of U of Arkansas	Community College	Helena
Polk	Rich Mountain Community College	Community College	Mena
Pope	Area Vo-Tech Center - Arkansas	High School/Tech Center	Russellville
Pope	Arkansas Tech University	Community College	Russellville
Pulaski	Pulaski Technical College	Community College	North Little Rock
Pulaski	University of Arkansas at Little Rock	College/University - 4 year	Little Rock
Randolph	Black River Technical College	Community College	Pocahontas
Sebastian	University of Arkansas - Fort Smith	Community College	Fort Smith
Sevier	Cassatot Community College of the University of Arkansas	Community College	De Queen
St. Francis	East Arkansas Community College	Community College	Forest City
Union	South Arkansas Community College	Community College	El Dorado
Washington	Northwest Technical Institute	High School/Tech Center	Springdale
White	Arkansas State University- Searcy	Community College	Searcy
White	Arkansas State University-Beebe	Community College	Beebe
White	ASU Beebe (Searcy Campus)	College/University - 4 year	Searcy
White	Foothill Technical Institute	Community College	Searcy

Appendix L. Manufacturing Pathway Program Alignment

School	Workplace Principles	Industrial Maintenance	Welding	Machining & Fabrication	Mechatronics & Robotics	Advanced Technology	Industrial Technology (Eng. Process)
University of Arkansas at Monticello, College of Tech-Crossett	Certificate	Associates / Certificate	Certificate	x	x	Associates / Certificate	Associates
Arkansas State University - Mountain Home	x	x	Associates / Certificate	Certificate	Associates / Certificate	x	x
NorthWest Arkansas Community College	Certificate	x	x	x	x	x	x
University of Arkansas Global Campus	x	x	x	x	x	x	x
North Arkansas College	x	x	Certificate	x	x	x	Certificate
University of Arkansas Community College at Morrilton	x	Associates / Certificate	Associates / Certificate	x	x	x	x
Northeast Arkansas Career & Technical Center	x	x	Certificate	x	Certificate	Certificate	x
Arkansas State University - Mid-South Community College	x	x	Certificate	Certificate	Certificate	x	x
University of Arkansas at Monticello	Certificate	Certificate	Certificate	x	x	Associates / Certificate	Associates
Monticello Occupational Education Center	x	x	Certificate	x	x	Certificate	x
Conway Career Center	x	x	Certificate	x	x	Certificate	x
National Park College	x	Certificate	Certificate	x	Certificate	x	x
University of Arkansas Community College at Hope		Certificate	Certificate	x	x	x	x
College of the Ouachitas	x	x	Certificate	Certificate	Certificate	x	x
University of Arkansas Community College Batesville	x	x	Certificate	Certificate	Certificate	x	Associates
Ozarka College	x	x	Certificate	Certificate	x	x	x
Arkansas State University - Newport	x	Certificate	Certificate	Certificate	x	Certificate	x
Southeast Arkansas College	x	Certificate	Certificate	x	x	x	x
University of Arkansas at Pine Bluff	x	x	x	x	x	x	Baccalaureate
Arkansas Northeastern College	x	Certificate	Associates / Certificate	x	x	Associates / Certificate	Certificate
Harry L. Crisp Center (TSC) of Arkansas NE College	x	Certificate	Associates / Certificate	x	x	Associates / Certificate	Certificate
Southern Arkansas University Tech (SAU Tech)	Certificate	Associates / Certificate	Associates	x	Associates	x	x
Phillips Community College of U of Arkansas	x	x	Certificate	x	x	Certificate	x
Rich Mountain Community College	x	x	Associates / Certificate	Associates / Certificate	x	Associates	x
Area Vo-Tech Center - AR	x	x	Associates	x	Certificate	x	x

School	Workplace Principles	Industrial Maintenance	Welding	Machining & Fabrication	Mechatronics & Robotics	Advanced Technology	Industrial Technology (Eng. Process)
Arkansas Tech University	x	x	Associates / Certificate	Certificate	x	Associates	x
Pulaski Technical College	Certificate	Certificate	Certificate	Certificate	Certificate	Associates / Certificate	Certificate
University of Arkansas at Little Rock	x	x	x	x	x	x	Associates / Baccalaureate
Black River Technical College	x	Certificate	Certificate	Certificate	x	x	x
University of Arkansas - Fort Smith	x	x	Associates	x	x	x	x
Cassatot Community College of the University of Arkansas	x	Certificate	Certificate	x	Certificate	x	x
East Arkansas Community College	x	Certificate	Certificate	x	x	x	x
South Arkansas Community College	x	Certificate	Certificate	x	x	x	x
Northwest Technical Institute	x	Certificate	Certificate	x	x	x	x
Arkansas State University-Searcy	x	Certificate	Associates / Certificate	Certificate	x	x	x
Arkansas State University-Beebe	x	Certificate	Associates / Certificate	Certificate	x	x	x
Foothill Technical Institute	x	x	x	x	x	x	x

About the Arkansas Economic Development Commission:

The mission of the Arkansas Economic Development Commission is to create economic opportunity by attracting higher-paying jobs, expanding and diversifying our state and local economies, increasing incomes and investment, and generating positive growth throughout Arkansas.

Arkansas is a pro-business environment that operates leaner, faster and with more focus through a streamlined state government designed to act on corporate interests quickly and decisively. Come join us in this amazing business venture we call Arkansas Inc. With four homegrown Fortune 500 companies and countless other business success stories, you'll be in good company.

About SME:

We believe in the power of technology and the innovation of people to advance our nation and solve the world's greatest problems. For 90 years, SME has been leading the manufacturing ecosystem to elevate manufacturers, academia, professionals, and the communities in which they operate. We build the bridge from today to the future by developing the next generation of manufacturing talent and informing industry on technology advances that can propel their operations into excellence.
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