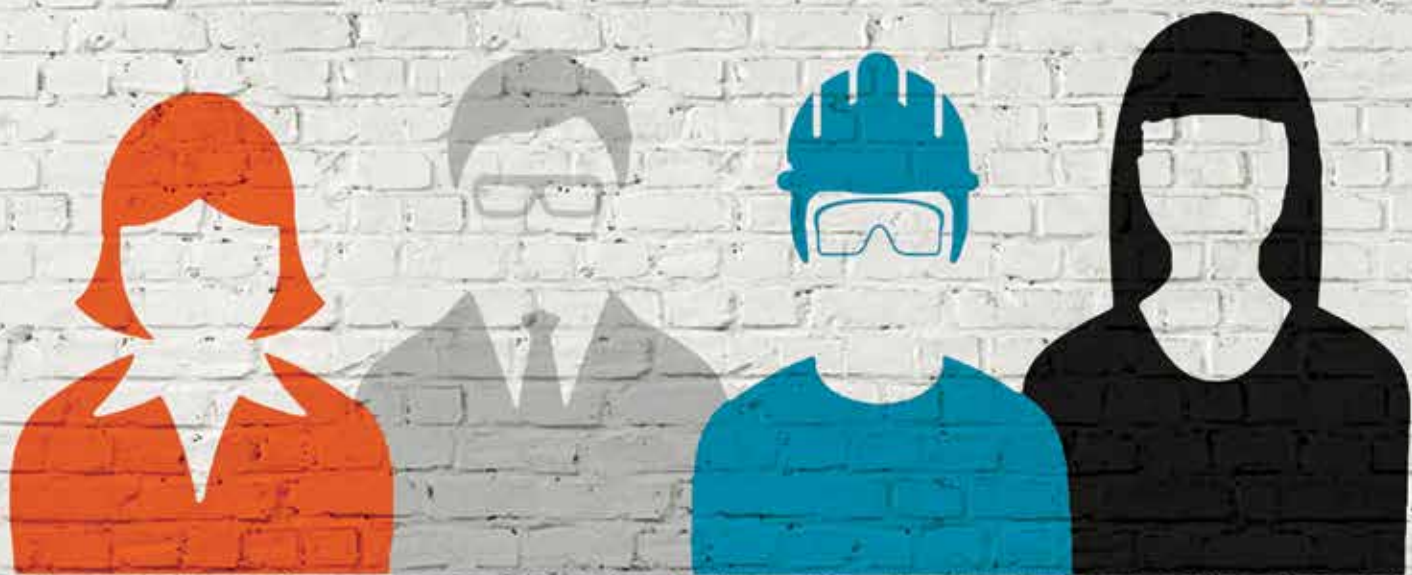


INSIDE

NIELSEN

A PUBLICATION OF NIELSEN BUILDERS WINTER 2016



WORKFORCE DEVELOPMENT

THE OPPORTUNITIES TO BUILD TOMORROW'S LEADERS



NIELSEN

Corporate Mission Statement

Our Vision

Nielsen will be recognized as a premier construction organization with a commitment toward optimal performance in serving clients within the Commonwealth of Virginia. We will achieve this by consistently “striving for excellence” in providing professional building services.

Our Values

People

Nielsen recognizes that our people are the critical element in achieving our vision. We will support a team approach through open communication among all employees. We will promote the growth and empowerment of our people and commit to human resource practices based on standards of excellence, safety awareness, fair treatment and equal opportunity.

Total Client Satisfaction

Nielsen will build on our reputation and commit to exceed the expectations of our clients by maintaining the highest level of skill and responsibility in providing professional services. We will deliver a superior price/value relationship in providing quality construction services with a profit objective at a fair level.

Leadership

Nielsen is committed to being a leader in the construction industry through innovative construction techniques and product development. We will strive to be a caring corporate citizen in enhancing the community and environment in which we do business.

Quality Assurance

Nielsen Builders, Inc.'s commitment to quality assurance is based on responsible craftsmanship, leadership, innovation, safety awareness and employee satisfaction. Our guarantee to furnish our clients with a total quality product is the heart of our company's existence.

Equal Employment Opportunity Policy

It is the policy of Nielsen Builders, Inc. not to discriminate and to provide equal employment opportunity to all qualified persons regardless of race, color, sex, religion, national origin, disability, marital status, sexual orientation, gender identity or Vietnam era veteran status. This policy is applied to all employment actions including but not limited to recruitment, hiring, upgrading, promotion, transfer, demotion, layoff, recall, termination, rates of pay, or other forms of compensation and selection for training including apprenticeship.

Nielsen Builders, Inc. is committed to the principles of affirmative action and equal employment opportunity. In order to ensure its dissemination and implementation throughout all levels of the company, Jean Hieber has been selected as Equal Employment Officer for Nielsen Builders, Inc.

In furtherance of our policy of affirmative action and equal employment opportunity, Nielsen Builders, Inc. has developed a written Executive Order Affirmative Action Program, which contains specific and results-oriented procedures to which Nielsen Builders, Inc. is committed to apply every good faith effort. Procedures without efforts to make them work are meaningless and effort undirected by specific and meaningful procedures is inadequate. Such elements of Nielsen Builders, Inc.'s Executive Order Affirmative Action Program will enable applicants and employees to know and avail themselves of its benefits. The policy is available for review, upon request, during normal business hours.

Applicants for employment and all employees are invited to become aware of the benefits provided by the Affirmative Action Program.



LETTER FROM THE PRESIDENT



Work is not a four-letter word.

OK, literally it is, but work can be one of the most personally satisfying activities in anyone's life. People spend almost one-third of their lives at their jobs, so it is extremely important that they are properly prepared and trained to do it well.

In this issue, we are pleased to have contributions from many of the community partners that are leaders in workforce development. These organizations are working with a diverse group, from elementary students to older individuals retraining to re-enter or advance in the workforce. These groups are using innovative techniques to inform students and their parents about opportunities in the business world. They are working with employers to create training programs catered to their specific needs. These stories and many more will give you a broad scope of the outstanding opportunities for the Valley workforce of the 21st century.

The strength of the Shenandoah Valley workforce is recognized as a huge asset for the employers in this area. The collaboration between these organizations and the industrial and business community is another reason for our success as a region. As we all work to improve our organizations, it is important to continually invest in our most important resource — people.

Tony E. Biller
President/CEO



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GO Virginia's Plan

GO Virginia is working to regain Virginia's position of economic leadership by growing and diversifying the state's economy. Our focus is the creation of state financial incentives, technical support and other assistance that will encourage collaboration on private-sector growth and job creation by business, education and government in each region. Three main points guide the coalition's work:

1. Virginia urgently needs strong private-sector growth.

For the first time in a half-century, Virginia is trailing the nation in economic recovery and job creation. Steep cutbacks in defense and other federal programs have exposed our over-dependence on public-sector and government-contractor jobs. For current and future generations to enjoy the kind of opportunity we have experienced, Virginia urgently needs strong private-sector growth and a more diversified economy.

2. Growth in Virginia's diverse regions requires collaboration.

Virginia does not have a single economy; our state's economy is the aggregate of our regions. Businesses typically provide jobs to qualified workers from throughout a region, serve customers across the region, use regional suppliers and vendors, and rely on regional transportation networks and other infrastructure. Because Virginia is a large and diverse state, the opportunities for private-sector growth vary significantly from one part of our state to another, requiring collaborative innovation among employers, entrepreneurs, investors, researchers, educators, governments and other leaders in each region. Too often this cooperation has been lacking, causing Virginia to lag behind other states.

3. State government must be a catalyst and partner.

While the innovation to spur private-sector growth must come from within each region, the commonwealth has a vital role to play.

State government aids business growth by keeping taxes and regulatory burdens low, supporting education and training, and addressing critical infrastructure needs, among other functions. But the state can and must do more to encourage strategic, job-focused collaboration in each region. Significant state funds currently flow to localities, schools and higher education institutions; the commonwealth should use such resources to promote joint efforts on economic and workforce development and to encourage collaboration that can improve performance and reduce costs. The state must be a reliable partner in these regional efforts, and state-funded initiatives should result in greater economic output and job creation in each region, rather than reallocating market share or picking winners and losers.

GO Virginia has identified five ways that state-funded incentives can have a significant positive impact on private-sector growth:

- **Innovation.** The state can promote innovation and growth in each region through start-up grant support for projects that promise substantial economic impact, leverage significant local, private, and other investment, and reflect regional cooperation on industry sector growth, alignment of education and training programs with employer demand, entrepreneurship, and other private sector-focused growth strategies.
- **Investment.** The state can encourage cooperation rather than competition among localities in the recruitment of new business investment and jobs to each region by returning a portion of the state tax revenues generated by projects to regions where localities share economic development-related costs and revenues.
- **Improvement.** The state can provide financial incentives for efficiency-enhancing and cost-saving collaboration between and among local governments, school divisions, and higher education

institutions, thereby improving performance, reducing pressures to increase the size and cost of government, and freeing up tax dollars for opportunity-focused initiatives in education, job training, and economic development.

- **Invention.** The state can encourage inventions and discoveries that lead to commercially viable products and services by providing matching-fund support for labs, equipment, and other research-related needs, thereby leveraging private and other R&D investments and generating economic benefits for the region.
- **Infrastructure.** The state can invest in capital projects of regional or broader significance that will produce strong returns in private-sector growth, diversification, and job creation through improved education and job-skills training, research, business site development, communications, and other vital infrastructure.

GO Virginia supports a voluntary, incentive-based approach as the best way to encourage regional cooperation on private-sector growth. To fund state incentives, the coalition favors use of growth revenues, re-purposed dollars, and efficiency savings. State funding should also leverage private, local, and other investment. **GO Virginia proposes NO new taxes, mandates, layers of government, or changes in local authority.** Our focus is creating more opportunity for Virginians through private-sector growth in each region.

Reprinted from GO Virginia's website, www.govirginia.org.

Learn more and join the coalition at www.govirginia.org.



Shenandoah Valley PARTNERSHIP

The Shenandoah Valley places a strong emphasis on developing a workforce trained to meet the needs of Valley employers. The Shenandoah Valley Partnership (SVP) acts as a liaison between businesses and training providers to identify training needs, obtain funding and guide curriculum development. Employers in the region cite the outstanding work ethic and productivity of the Valley's workforce as factors for existing industry expansions and new business development.

- The Valley's workforce is diverse, mobile and productive.
- PGI, McKee Foods, Cadence and Carded Graphics have cited the Valley's workforce as "most productive."
- The labor force consists of 184,000 employees, with an extended labor market of over 383,000.
- The area has low unionization in a right-to-work state.
- Over 8,000 college students graduate annually.
- The Valley has a cost competitive wage structure, with an average annual wage of \$34,571.
- Twelve colleges and universities are aware of industry needs and respond to industry requests.
- Virginia incentive programs work seamlessly with local service providers for maximum benefits.
- The Shenandoah Valley Workforce Investment Board (Valley Workforce) received over \$19 million in grants to fund training initiatives, such as Valley On-The-Job Training for health care and advanced manufacturing, and the Energy Partnership for renewable energy, construction and manufacturing training.
- Valley Workforce works with employers to fund registered apprenticeship instruction, on-the-job training, incumbent worker training and military-to-manufacturing training.
- The Shenandoah Valley Education and Training Database provides employers and training seekers with a one-stop resource for education and training programs.
- The SVP partnered with WHSV-TV3 on a campaign to promote in-demand local career opportunities in the Valley. Valley Career Hub is a collaborative effort among business, education and economic development communities in the Shenandoah Valley to broaden awareness of high-demand, high-growth, high-wage careers in our region and promote local training opportunities for these careers.

The SVP is a public-private partnership providing marketing and business assistance for the Shenandoah Valley region. Through regional cooperation, the SVP brings together business, government and education leaders to promote new investment, strengthen existing business and guide labor force development to ensure a healthy economic future for the region.





by Dr. John A.
Downey, President,
Blue Ridge
Community College

Community College Gears Up to Help Drive New Economy

As the commonwealth of Virginia continues to slowly rebound from the great recession of 2009, there is a growing employment sector that some have described as the “new middle jobs.” These are the kinds of jobs that local employers tell me are in high demand. Over the past decade, numerous local manufacturing plants have invested in large expansions or redesigns of existing plants. Those investments have spawned a new wave of high-wage jobs that require some postsecondary training but not necessarily a baccalaureate degree. Even more compelling for the future workforce of the Shenandoah Valley, education providers have begun to align training programs to provide lifelong learners with a “stackable” credential system, allowing for today’s training to eventually morph into tomorrow’s baccalaureate degree. So what’s missing?

Our educational system, at least in Virginia, is poised to lead the effort toward helping young people acquire these in-demand jobs and, if they choose to work hard, parlay those skills into more education and training, acquiring leadership positions in a vibrant economy. The missing link, in my view, is the lack of a widespread understanding among the unemployed, and especially the underemployed, of the benefits of these professions and the educational pathways available to get there.

I recently attended a public hearing sponsored by the Virginia Board of Education, which focused on the need for a new K-12 educational curriculum that emphasized science and mathematics while also ensuring students had room in the curriculum for internships and similar work experiences. That promising discussion left me with great hope that our elementary, middle and high school educational experiences in Virginia will soon emphasize the preparation of students for both postsecondary education and the world of work.

Virginia’s community colleges are already well-positioned to address the emerging workforce needs of the new economy. The community college strategic plan strives to triple the number of credentials awarded by 2021, including not only the transfer and workforce-oriented associate degrees that community colleges are well-known for but also the nondegree certifications that provide employable job skills for in-demand occupations. Last year, the Legislature approved funding, for the first time in the state’s history, to support these nondegree, high-demand certification training programs in all 23 Virginia community colleges. Our partnerships with four-year colleges and universities in the commonwealth allow for seamless transitions for our graduates to earn



short-term certifications in fields like welding, machining or in a variety of health professions, then have those experiences count toward credit-bearing associate degree programs, and finally have many of those associate degrees fully transfer to designated majors in particular universities. With a streamlined educational system like that, Virginia is poised to lead the country in the production of a highly skilled workforce that can help lead to a sustained economic recovery.

The single largest threat to this compelling story’s success is the lack of awareness among the general public that these new jobs exist and that they will be sustained over time. Lingering stereotypes about manufacturing jobs, lack of exposure to the world of work and societal pressure to pursue baccalaureate education devoid of any connection to future goals all persist in keeping young people in the dark about the range of opportunities available in a variety of career clusters. From agriculture to health care, from manufacturing to public service careers, there is an alarming lack of awareness of career and job options and even of a basic understanding about how business and industry work.

I am optimistic about the future when I see legislative officials, K-12 educators, business leaders, community colleges and universities all working together like never before to address these challenges. The educational system is gearing up to drive the new economy. All we need now is the future employees’ willingness to invest time in education and training programs that can help them forge a better future for themselves and all of Virginia.

Workforce Credential Grant Funds Job Training Discounts



Thanks to a new program created by the Virginia General Assembly, Virginia residents can receive reduced pricing for in-demand workforce training programs leading to industry credentials.

The New Economy Workforce Credential Grant (WCG) will pay two-thirds of the cost of approved training programs (including books) for Virginia residents who meet domicile requirements and any specific training program conditions.


Virginia “domicile” means that the individual has lived in Virginia and intends to stay here indefinitely for at least one year prior to applying for WCG training. Individuals who do not meet domicile requirements may still participate in training; however, they must pay the full price for each course.

Blue Ridge Community College programs currently approved for WCG funding include:

- Certified nurse aide
- Phlebotomy technician
- Certified professional coder
- Massage therapist
- Pharmacy technician
- Medical office assistant
- Certified clinical medical assistant
- Registered medical assistant
- Customer service and sales
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- Commercial driver's license, class B
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Two-Thirds of Contractors Have a Hard Time Finding **Qualified Craft Workers to Hire** Amid Growing Construction Demand, National Survey Finds

Labor shortages are prompting firms to increase pay and become more efficient but threaten to slow economic growth over the long-term, officials warn as they call for new workforce measures.

Two-thirds of construction firms report they are having a hard time filling hourly craft positions that represent the bulk of the construction workforce, according to the results of an industry-wide survey released today by the Associated General Contractors of America. Association officials said that many firms are changing the way they pay and operate to cope, but warned that labor shortages could undermine broader economic growth and called for new workforce measures to improve the pipeline for recruiting and training new craft workers.

“With the construction industry in most of the country now several years into a recovery, many firms have gone from worrying about not having enough work to not having enough workers,” said Stephen Sandherr, chief executive officer for the Associated General Contractors. “These shortages have the potential to undermine broader economic growth by forcing contractors to slow scheduled work or choose not to bid on projects, thereby inflating the cost of construction.”

Of the 1,459 survey respondents, 69 percent said they are having difficulty filling hourly craft positions, Sandherr noted. Craft worker shortages are the most severe in the Midwest, where 77 percent of contractors are having a hard time filling those positions. The region is followed by the South where 74 percent of contractors are having a hard time finding craft workers, 71 percent in the West and 57 percent in the Northeast.

The labor shortages come as demand for construction continues to grow. Sand-

herr noted that construction employment expanded in 239 out of 358 metro areas that the association tracks between July 2015 and July 2016, according to a new analysis of federal construction employment data the association also released today. Growing demand for construction workers helps explain why 75 percent of firms report it will continue to be hard, or get harder, to find hourly craft workers this year.

Tight labor market conditions are prompting nearly half of construction firms to increase base pay rates for craft workers because of the difficulty in filling positions. Twenty-two percent have improved employee benefits for craft workers and 20 percent report they are providing incentives and bonuses to attract workers.

Forty-eight percent of firms also report they are doing more in-house training to cope with workforce shortages while 47 percent report they are increasing over-time hours and 39 percent are increasing their use of subcontractors. In addition, 37 percent report getting involved with career-building programs in local schools. Twenty-one percent report they are increasing their use of labor-saving equipment, 13 percent are using offsite prefabrication and 7 percent are using virtual construction methods like Building Information Modeling.

Sandherr called on federal, state and local officials to outline on the measures in the association's Workforce Development Plan to address the growing worker shortages. In particular, he urged Congress to reform and increase funding for the Perkins Career and Technical Education Act, enact immigration reform and make it easier to set up charter schools and career academies that teach basic construction skills.

This article originally appeared on the AGC of America's website on August 16, 2016.



Internships Lead to Careers at Nielsen Builders

With the recession beginning to fade away, potential projects in the construction industry are on the rise again. That rise has allowed for great emphasis to be placed on students interested in venturing into a career in the industry. Starting in 2011 and lasting until 2015, employment in the construction industry took a hard hit by the recession due to the scarcity of projects available. With the minimal amount of work for construction companies to acquire, they were forced to lay off employees. The decrease in demand affected the plans of many students as they began college with their sights set on working in the construction industry. Jobs were few and far between. Thankfully, not long after 2015, the number of potential projects to bid or negotiate began to increase, bringing a renewed energy to everyone who had vested interest in the industry.

Now that the construction industry is alive again and thriving, colleges are educating a higher number of future construction workers. Whether these students are aspiring architects, engineers, estimators, developers, etc., they have great potential for contributing to the industry upon graduation. Jobs are not endless in the industry, but they are more plentiful than when we were in the deepest part of the recession.

Here in Virginia, there are several schools that offer areas of study related to the construction industry. In the heart of the Shenandoah Valley is James Madison University (JMU). The JMU programs offer extensive education in engineering, architectural design, graphic design and management — all fields that can be used in construction. While studying, most students seek internship opportunities to extend their learning outside of the classroom setting. In fact, most students who intern are more likely to be hired either after graduation or as their internship comes to an end.

At Nielsen Builders, we have noticed the success of interns and welcomed many to our team through that process. Currently working with our team, we have five employees who have been hired after completing internships with Nielsen. Jeremy Rhodes, an assistant project manager, talking about his experience at the JMU department of engineering, said, “A lot of things about the program appealed to me, mainly the small class size and how JMU’s program covered a wide variety of engineering topics during freshman/sophomore years and allowed students to focus on a specific discipline in their junior/senior years.” Through the engineering program, Rhodes was able to acquire an internship with General Motors that enabled him to hone his current skills and learn more that would help him in the future.



Matt Hulvey, another graduate of the JMU department of engineering and project manager at Nielsen Builders, spoke highly of interning and how it increased his knowledge of construction. Hulvey interned at JMU with the school’s facilities management team, where he was able to see the construction management side of the business. He said, “I was able to see everything that goes into the design and preconstruction of a project.” This was something that made his internship very valuable because he was able to join our team with a great

amount of firsthand knowledge. Both of these Nielsen employees have strengthened the company’s view on internships and how beneficial they really are to everyone involved.

T.J. Burkholder, a Nielsen project manager and Virginia Tech graduate, is also an employee who was hired upon graduation after completing an internship with us. Burkholder spent several summers working in the field and was able to gain valuable experience that helped him when he began his project management career. During his final summer as an intern, Burkholder worked with our project managers to learn more about what their jobs really consisted of. His work with our project managers and the knowledge acquired in school enabled him to build a skill set that made him a great fit for Nielsen. He was able to learn strategies and techniques that Nielsen uses to complete its work so that, when he did become a project manager, he was well-equipped to begin his career.

Internships are a benefit to business, and here at Nielsen Builders, we understand how vital they are to our business. Businesses are able to train interns to work in a manner that they prefer and determine whether that intern will be a good fit for the company. The demand for internships is high on both sides — many students are seeking opportunities to intern, and many businesses are searching for interns to work for them. Internships are found by reaching out to career services at universities and within community development programs. Both parties are able to help each other out and may even create a relationship that leads them to further success. With both parties actively pursuing one another, the outcomes are limitless when it comes to the uniting of intern and business.



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Massanutten Technical Center Creates Connection Between Students and Workforce Community

Massanutten Technical Center (MTC), located on Pleasant Valley Road in Harrisonburg, is a regional center servicing high school students and adults in both Rockingham County and the city of Harrisonburg. Offering three types of training (high school, continuing education and adult education), MTC offers programs that prepare students and enhance the skills they need to succeed in a growing industrial society. Founded in 1972, MTC has focused on the mission to provide high school and adult students with the skills, knowledge and industry-based experiences necessary to attain success in career and community. Currently offering 20 programs for high school students, from cosmetology to architectural and interior design, MTC enrollment has consistently risen each year, and the school served approximately 1,000 students in the 2015-16 school year. The continuing education department covers a broad range of adult training options in both trade and industrial areas. The center provides more than 75 courses annually, training more than 1,500 adults and preparing them for employment in an ever-changing job market. In addition to these programs, MTC offers a weeklong MTC Academy, which allows middle school students (grades six to eight) an opportunity to experience hands-on activities associated with potential career choices.

Popularity of the technical center programs has progressed each year, with the most popular programs for 2015-16 being health careers, computer repair and networking, collision repair, criminal justice, and cosmetology. Along with this boom in popularity, MTC noticed the need for a liaison between the community and the school to assist with job placement after graduation. In the 2014-15 school year, a job placement coordinator position was developed to connect students with local businesses to help find qualified employment opportunities. This coordinator contacts employers to create internships and open opportunities for both high school and adult students, maintains a job link website with updated posting and career resources for students, and keeps students informed through a "job opportunities" bulletin board at the school. The coordinator also holds student career fairs and business job fairs, and visits with the Virginia Employment Commission, the Workforce Center and alternative education programs in the local school districts. Needless to say, the job placement coordinator stays very busy ensuring that students in the center are given every opportunity to have job placement information and are prepared for the workforce upon leaving our program.

Success is the only goal for students and staff at MTC. MTC offers many choices for continued education upon graduation and has partnered with local community colleges to create dual enrollment opportunities in the majority of the high school programs. These partnerships include Blue Ridge Community College, Dabney Lancaster Community College, James Madison University and Mary Baldwin College. Within the past year, MTC has also begun a business partnership with Tenneco Incorporated, located in Harrisonburg. Tenneco is a leading designer and manufacturer of clean air and ride performance products and systems for auto, commercial truck and

aftermarket products. This partnership with MTC and Tenneco offers a welding apprenticeship program for those wanting to pursue a career in welding. This is offered to our adult students, with classes meeting one night per week, and scholarships/training grants are available for those who complete the MTC coursework. This opportunity also offers those who successfully complete the program to be eligible for employment at Tenneco with a competitive starting salary. The Shenandoah Valley Workforce Development Board was recently awarded a \$4 million American Apprenticeships Initiative grant as a result of this and other such partnerships.

Work-Based Learning

The work-based learning program at MTC is designed to link high school students to business and industry within an organized educational work-experience setting. This method of instruction combines career and technical education (CTE) with employment that is directly related to the classroom instruction. Both student instruction and employment are planned and supervised by the school and the employer so that each contributes to the student's career objectives and employability. Through this program, students must be recommended by their instructor, based on a set criteria relating to personal traits, work performance and skills related to employment. They must then complete the student application for admittance. The business will be contacted by the student, instructor or coordinator. There is an interview process for the student before establishing an agreement between the business and school. Those eligible students use their work-based program in addition to, or in lieu of, classroom hours and are supervised and evaluated regularly by their employer and the school coordinator/instructor. This experience gives the students the opportunity to learn useful employment skills on real jobs, learning from skilled professionals as well as developing an understanding and appreciation for the job and co-workers. The work-based learning program helps transition students from school to employment smoothly and personalizes their education to their interests and job skills. Many times, following graduation from MTC, students in this program are offered full-time job opportunities and a future with their company. There are also links to local businesses and industries right here within the community, helping to sustain our economy from within.

MTC has grown over the past two decades due to the support and connection with Rockingham County and Harrisonburg, such as the MTC Foundation. The MTC Foundation consists of local business and educational leaders who donate time and effort to promote the success of MTC and more importantly the students. Donations to the MTC Foundation are used to provide scholarships to high school seniors who wish to continue their education. Funds are also used to share important CTE and MTC programs with students, parents and business leaders across our community, as well as opportunities for education and employment.

For more information, please visit MTC online at www.mtcva.com, on Facebook at www.facebook.com/mtcva and on Twitter at www.twitter.com/MTC_VA.

American High Schools Need to **Start Asking**

by Roger Mello, Page County Technical Center

For decades in America, high school students have been faced with the decision of whether they are going to continue to college or not. Continuation to college has long been considered the pathway of the successful, and as such, many students consider it the natural next step in their educational journey. In 2009, the college-going rate peaked at about 70 percent, and then an interesting thing began to happen — the rate began to fall and has continued to decline. Several factors have certainly contributed to this shift. Some parents, following the housing market meltdown, were no longer in a position to get loans to cover the cost of college for their children. Some high school students watched siblings or friends return from college early, with no degree and college debt to pay. Others watched siblings or friends obtain degrees, only to find that there was not a market for the degree they earned. Those graduates are left with college debt and a job that is not commensurate with their education.

For years, American students have been asked *if* they are going to continue their education *or* enter the workforce. In Germany, students are not asked *if* they are going to continue their education; they are asked *how*. Ninety percent of German students continue their education beyond high school, which ends at the age of 16. About 30 percent of students continue on a university path that leads to jobs as doctors, lawyers, scientists and the like. Over 60 percent of students who decide to continue their education do so by choosing a vocational training pathway that leads to certification in a skilled field or to technical universities. This pathway typically takes four years and consists of a combination of theory (30 percent) and practical training on the job (70 percent), and it results in certification as a journeyman or craftsman or another professional certification, such as a banker. These students attend a *Berufsschule*, which translates as “job school” in English. These schools typically serve students between the ages of 16 and 21. Some students spend the entire first year at the *Berufsschule* learning skills that will enable them to be productive apprentices when they do start spending 70 percent of their time with their employer in the second year. Those who excel in a chosen pathway may go on to become masters of their trades, while others may choose to go to technical universities. Both the university pathway and apprenticeship pathway are highly respected by German culture and offer jobs that provide access to the middle class.

How we can improve upon the German system of education?

Step one: Schools need to identify the skills sought by their region’s leading employers who offer opportunities for young people to grow with the company. Remember, we are seeking pathways to the middle class.

Step two: High schools need to work with community colleges to ensure that there is a continuum of skills being taught that will allow students to develop the skills industries are seeking. The *Berufsschule* I toured last summer supported programs in masonry, auto tech, auto body, electricity, furniture building, carpentry, textiles,

advanced machining, cosmetology and more. They were in the midst of constructing a \$2 million mechatronics lab as well. The school also taught its 2,500 students lessons in German, math, science and religion. Businesses paid 70 percent of the cost of educating these students, while the state paid the remaining 30 percent. If American high schools align what they offer to the demands of the workforce, American students can utilize their already state-funded high school and community college to gain the skills that Germany’s industry has to pay to see developed. In America, our 14-year-olds have opportunities to take courses in small engine repair, manufacturing, drafting, robotics and many



the Right Questions

other electives German high schools don't offer. Community college offers many ways to advance those skills. Working together, American high schools and community colleges can re-create — and, in my opinion, improve upon — the Berufsschule model without asking industry to pay 70 percent of the cost.

Step three: American high schools must encourage — and American industry must create — opportunities for students who have developed essential skills to participate in internships. In Germany, corporations do not assume 70 percent of the cost of educating a 16-year-old out of a sense of civic duty. They do so because they know it is a chance for their company to ensure their future by getting the most talented young people. The German companies I spoke with reported that when they invest in a 16-year-old, they build a sense of loyalty to the company, which eliminates unwanted turnover. One director of apprenticeships at a major German corporation placed his turnover rate at about 3 percent — a figure that is astonishing to many American companies that are constantly hiring.

Step four: American companies that provide internships for young people must provide an apprenticeship pathway for those students who distinguish themselves. The Virginia Department of Labor can be of assistance here as it has already mapped out the responsibilities of all parties. In most apprenticeships, workers must work 2,000 hours and take one 140-hour class per year. For students apprenticed during their senior year of high school, the high schools can provide the required classroom instruction free of charge. Community colleges can also work with industry to provide the needed coursework locally on a schedule that allows apprentices to get practical experience without having to take days or weeks off for coursework. High schools, community colleges and companies must also become students of the latest legislation coming down from state and national agencies that is designed to support apprenticeships. The

disconnect between the skills graduates have and the skills industry needs is not a local problem. It is a national problem, and the state and nation are moving quickly to provide funding for innovative solutions to this problem.

The Page County Technical Center is committed to playing an active role in supporting local industries offering our young people pathways to the middle class. We believe that if a successful model is found in America, it will come from a place like Page County. Many of our young people love the beautiful county in which they are raised and learn important skills, such as respect and work ethic. We are committed to offering coursework that will prepare students for internships with local industry, as well as coursework that will provide the classroom portion of the registered apprenticeships industry creates. We know we can't do this alone, but working with our community college, we can create the Berufsschule model, which makes apprenticeships so successful in Germany, while sparing industry the expense of paying for the basic skills students need to possess to enter internships. By collaborating with industry, the high school-community college partnership can also ensure the local availability of necessary coursework to support a wide variety of apprenticeships.

We in Page County believe this can happen, are committed to making it happen and believe that our local Page County Technical Center (which is currently undergoing a \$1 million expansion) will be a vehicle to make it happen. But we are still at step one. We need to hear from industries about what the profile of an employable graduate should be. The leadership team in Page County is seeking opportunities to meet with local industry leaders to identify those needed skills. If you know of opportunities where we can listen to groups of industry leaders, please let us know of them by contacting the Page County Technical Center at 540.778.7282.



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PROJECT PORTRAITS

BATH COMMUNITY HOSPITAL – PHASE 2

Client: Bath Community Hospital
Location: Hot Springs, Virginia
Architect: Tom Mullinax, AIA
Contract: \$4.2 million
Completed: April 2016

SPECIAL FEATURES

Phase 2 is a new three-story addition directly adjacent to the phase 1 addition. The first floor consists of a new front entrance lobby with reception desks and privacy conference area. Also included on the first floor is a commercial kitchen open to the public with inside and outside dining areas. The second floor is an extension of the exam and patient rooms from the phase I second floor. The third-floor space is a shelled-in space for future expansion of the hospital services. This phase of the hospital project includes a new helipad for exporting emergency patients.

The structure consists of structural steel utilizing a slab-on-grade and slab-on-deck floor. The veneer of this building is a

mixture of curtain wall and natural stone along with an extension of the heavy timber canopy that was constructed during phase 1. The interior consists of a vast number of finish selections, including ceramic tile, sheet vinyl and carpet. A large amount of constructed millwork will be utilized to give the interior an old-fashioned and comfortable feel.

Nielsen estimated phase 2 along with phase 1 in 2012. After many design modifications, Nielsen was able to provide phase 2 within the previously budgeted values.



BELIEVERS VICTORY CENTER

Client: Believers Victory Center
Location: Moorefield, West Virginia
Architect: Mather Architects
Contract: \$3.2 million
Completed: 2016

SPECIAL FEATURES

This is a 25,000-square-foot, design-build church facility constructed of a concrete wall system known as tilt-up construction. All exterior walls are poured concrete formed on the floor slab, then “tilted” into place to create the perimeter of

the building. The roof structure is bar joist, metal decking and EPDM (ethylene propylene diene monomer) membrane roofing. The scope of work includes a 590-seat sanctuary with a state-of-the-art sound system and video presentation equipment. The narthex has a 22-foot clear height ceiling to create an open presence as members and visitors walk into the church. A partial second floor is used for offices.

The fellowship hall has an exposed bar joist ceiling and durable concrete walls. The education portion of the church includes a nursery and preschool area on the first floor, and youth and adult Sunday school classroom space on the second floor. The building is designed for a future kitchen off the fellowship hall.





ROCCO BUILDING SUPPLY WAREHOUSE ADDITION

Client: Rocco Building Supply
Location: Harrisonburg, Virginia
Architect: The Gaines Group
Contract: \$2.5 million
Completed: March 2016

SPECIAL FEATURES

Rocco Building Supplies, LLC teamed up with Nielsen to construct a 200-foot-by-210-foot warehouse with a 200-foot-by-50-foot canopy at the 560 Pleasant Valley Rd., Harrisonburg, Virginia, office and distribution center. The 42,000-square-foot warehouse utilizes the benefits of tilt-up wall panels, with steel bar joists, metal deck and a TPO (thermoplastic polyolefin) roof system. The building also includes a conditioned office space, a breakroom, restrooms and a storage closet. Nielsen organized a design team that includes The Gaines Group, PLC, Mid Valley Electric, A-Able Plumbing and Air Quality Systems for the design and building of their respective scopes of work.

Rocco Building Supplies contracted all civil engineering services and design for site permit and construction through Blackwell Engineering, Inc. Good's Services completed the earthwork portion of the project. The new warehouse facility accommodates the company's consistent increased sales volumes since the early 1970s.

UNIVERSITY OF VIRGINIA – BLANDY EXPERIMENTAL FARM GREENHOUSE AND HEADHOUSE

Client: University of Virginia
Location: Boyce, Virginia
Architect: Train Architects, P.C.
Contract: \$1.4 million
Completed: August 2016

SPECIAL FEATURES

This project is situated on the Blandy Experimental Farm in Boyce, Virginia. The farm's 700 acres were donated to the University of Virginia by Graham Blandy in 1926 and today are home to the State Arboretum of Virginia. The project includes a new greenhouse to be used for research and two cottages to allow growth to the resident research community. The 3,189-square-foot greenhouse is connected to a headhouse, has a block foundation, slab-on-grade, and sits on top of a block knee-wall. The headhouse is a wood-framed structure with HardiePlank siding, battens and a metal roof. On the other end of the property, two new 1,320-square-foot cottages were built next to the two existing. This area has some new grading, a pavement driveway, concrete sidewalks, utilities, an 8-foot-by-8-foot pumphouse shed, and septic and drain field systems. The cottages were built on block foundations, slab-on-grade,



with wood framing, HardiePlank siding with battens and metal roofs. Each cottage has two bedrooms, two bathrooms, a kitchen, a living room and a screened-in porch.

WADDELL ELEMENTARY SCHOOL

Client: Lexington Public Schools

Location: Lexington, Virginia

Architect: OWPR

Contract: \$12.5 million

Completed: March 2016

SPECIAL FEATURES

This \$12.5 million, 17-month project included the complete demolition and reconstruction of Waddell Elementary School in Lexington, Virginia. The existing steel and masonry structure demolition included all building materials and the footings as well. The new structure consists of a mixture of structural components, including concrete retaining walls, structural masonry and structural steel framing. The veneer of the building is composed of a CMU (concrete masonry unit) system with a brick veneer.

The new building has classroom space dedicated for kindergarten to fifth grade. The construction of a new gymnasium, along

with new art studios, a cafeteria, a media center and a music studio, is included in the overall scope of the project. The interior walls are both CMU and cold-formed metal framing with drywall coverings. Flooring finishes are mainly VCT (vinyl composition tile), ceramic tile and carpet tile.

Site upgrades include a renovated athletic/baseball field, new parking lots, new play areas, a rain garden and a “roots and shoots” garden for growing vegetables.



WHITE BIRCH ESTATES MEMORY CARE ADDITION

Client: White Birch Estates

Location: Bridgewater, Virginia

Architect: Mather Architects

Contract: \$2.3 million

Completed: January 2016

SPECIAL FEATURES

The scope of work includes adding a memory care addition to the existing assisted living community. The building was originally designed to be a two-story addition but was reduced to one level as part of a VE package to reduce costs. The project includes all

site work, which involves replacing the top 8 feet of soil with RDC (rolling dynamic compaction) material, and all utility connections were made through the existing building. The addition includes 16 resident rooms, a nurses' station, a kitchen, a beauty salon, a spa, a laundry room, a great/living room, a sunroom and some storage areas, as well as a fenced memory garden.

The outside of the building has HardiePlank siding and a stone “wainscot” veneer. White Birch also plans to replace the siding on the existing facility with HardiePlank to match the new addition. The new construction is situated between the existing facility and a small stream that follows the edge of the property. There will be a large concrete retaining wall and covered porch to give residents an area to sit and observe the stream.





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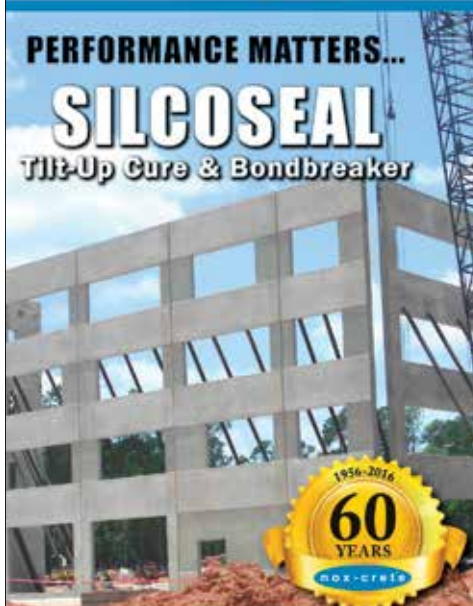
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