

Building Design & Construction Strategic Workforce Initiative (SWI) Proposal



Partnership—Weber State University (WSU), through the College of Engineering, Applied Science & Technology (EAST) and the Construction & Building Sciences, a departmental unit within the college, is applying for Strategic Workforce Initiative funding for a cooperative project between the following education partners:

- Weber State University—Dean David Ferro, College of Engineering, Applied Science & Technology; Jeremy Farner, Program Coordinator, Building Design & Construction
- Ogden-Weber Technical College – Roger Snow, Vice President
- Davis Technical College – Kinley Puzey, Director
- Davis School District—Jay Welk, CTE Director
- Weber School District—Rod Belnap, CTE Director
- Ogden School District—Tim Peters, CTE Director
- Morgan School District—Robert Kilmer, CTE Director

Proposal—Weber State University will partner with Ogden-Weber Technical College, Davis Technical College as well as Davis, Weber, Ogden, and Morgan School Districts; to provide a stackable credential pathway that incorporates work based learning for the high-demand, high-pay construction and design industry.

There is a huge shortage of people entering careers in Building Design & Construction. The construction industry contributed \$10.5 billion of the state’s GDP in 2017. There were more than 8,800 Building Design & Construction firms in 2015 and Utah is expected to double in population along the Wasatch Front by 2050. Nearly all of the Building Design & Construction firms in the state are reporting that finding their next generation of employees is their greatest challenge and concern. Due to the lack of qualified people entering the construction and design industry, firms are poaching each other’s best talent in an attempt to navigate the challenges of such a good economy.

There are two main issues that this consortium would like to address. First, getting more students engaged in hands on curriculum at the high school level that introduces them to a wide variety of career paths in the Building Design & Construction industry. Second, raising awareness within High Schools across the state that there are many career pathways that exist within this industry. Some require only the training or exposure they would receive in high school concurrent enrollment classes, others would require certificate or apprenticeship training offered at the Technical College level, and some would require formal Associates, Bachelors, and even Masters level education to be qualified. This grant would allow us to build a stackable credentialing pathway that has multiple entry and exit points along the way. It would allow students to exit the pathway for full time career opportunities and return at a later date to get more training and increase their earning potential. We want students to know that all of their training is valuable and

contributes to the pathway and they do not need to start over if they want to continue at any point in the future. The ultimate goal is to provide students a pathway to get the training and education they self-select that will allow the lifestyle they need to provide for their families.

WSU and its partners propose to increase the pipeline of students entering the Building Design & Construction industry by providing stackable credentials beginning with high school CE classes that produce industry certified entry level Building Design & Construction helpers, continue at the technical college certificate and apprenticeship level, and all coursework completed in high school and at the technical college is applied towards AAS and BS degrees at Weber State University. The courses in the industry certification have been designed as part of the Talent Ready Utah grant to develop the State's 5th Career Pathway entitled the Architecture, Engineering, & Construction AEC Pathway. The aim of this effort is to get students engaged in project based learning as early as the 8th grade, incentivize them to complete an industry and WSU certificate in their 10th-12th grades via CE classes, allow them to stack on that certification at the Technical Colleges or Weber State, and ultimately provide a defined pathway towards AAS and BS degrees in Building Design & Construction.

In order to address the awareness piece, Ogden-Weber Technical College has committed to offer summer camps to high school teachers, administrators, and school counselors. The goal of this effort would be to pay them a stipend in the summer to come to a fun and engaging camp to build hands on projects that they could then take back to the classroom. We would be developing recruiters in each high school that would then promote coursework and this pathway to their students. In conjunction with this effort, high school juniors and seniors will be recruited to attend a "Build to Success Boot Camp" where they will be engaged in various projects that introduce them to career opportunities in the construction and design industry. Students will build take home projects and participate in a larger project that they could bring their parents to experience at a closing social and awards ceremony. This will allow us to show the collaborative pathway that prepares their kids to enter a high-demand, high paying career. This pathway shows that this cohort are all on a united front addressing the need for more people to enter the largest driver of economic growth in the great State of Utah. We spend 90+% of our lives in the built environment participants in this pathway will design and construct for us and the population that is expected to come to Utah in the near future.

The Utah AEC Pathway developed through the Talent Ready Utah grant to build the 5th Career Pathway in the State is diagrammatically shown in Figures 1 and 2.

Figure 1: Pathway diagram

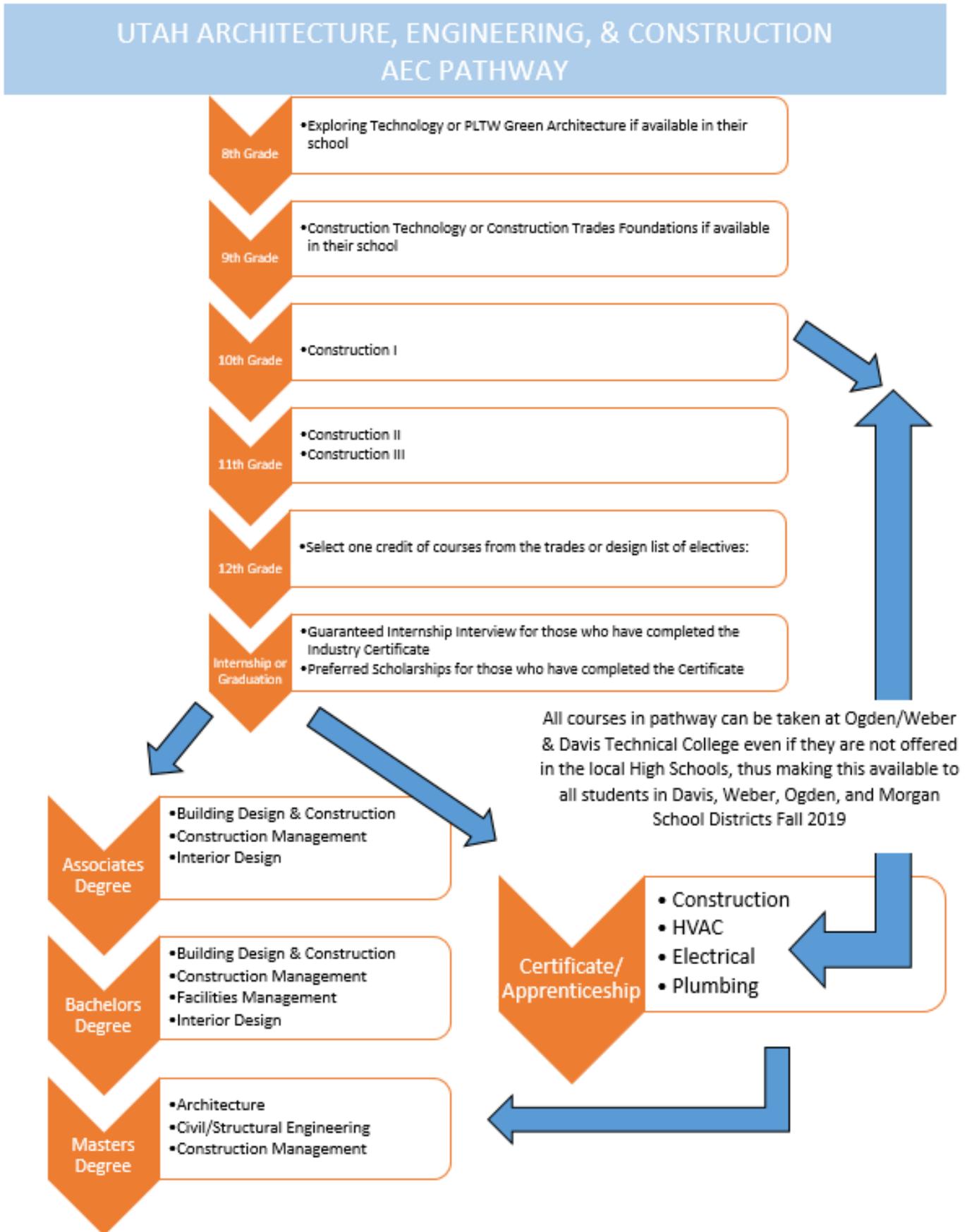
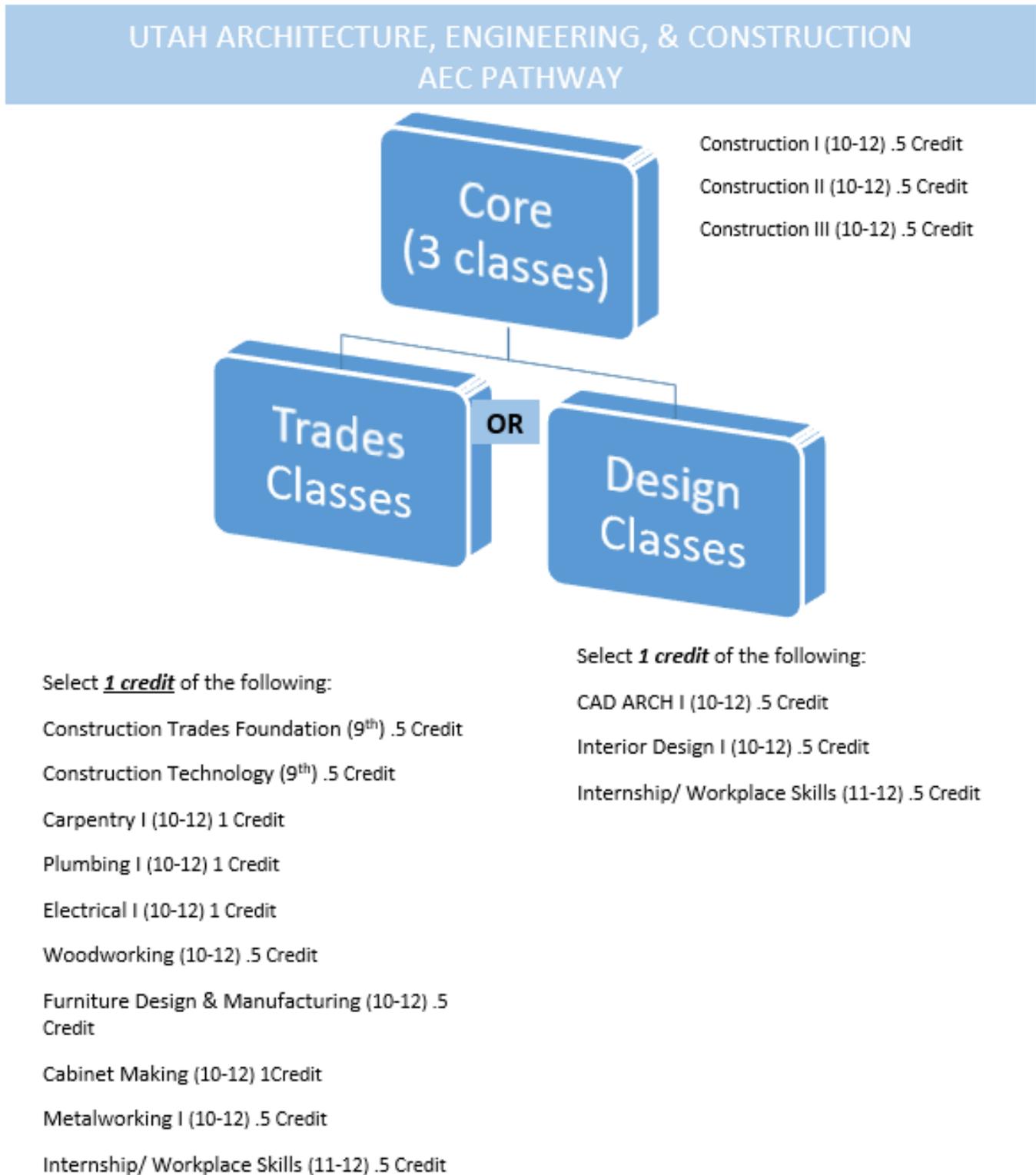


Figure 2: High School Course options to complete the pathway (.5 credits is a one semester class taught in a single class period, where 1 credit is either 2 semesters or two class periods in one semester)



The AEC Pathway Certificate of Completion will be granted by industry trade associations such as the Association of General Contractors, Associated Building Contractors, American Subcontractors Association of Utah, Home Builders Association of Utah, American Institute of Architects, and American Institute of Building Design. The Building Design & Construction Certificate will be granted by Weber State University and guarantee recipients the EDGE scholarship which is a \$2000 tuition waiver for 4 years so they can finish AAS and BS degrees that they started in high school CE classes. Certificates in Construction and Apprenticeships in; HVAC, Electrical, and Plumbing, will be granted by Ogden-Weber and Davis Technical Colleges. These offerings provide a number of entry and exit points for students with each successive step providing students access to an advanced degree and associated higher wages, as well as a skillset that allows for earlier access to available employment through internships, two of the goals of the Strategic Workforce Initiative.

Currently, high schools have a difficult time finding instructors to teach Building Design & Construction concurrent enrollment courses. Therefore, we propose offering annual week long summer training and in class support during the academic year to perspective candidates identified by our partnering school districts. This would allow school districts to get training for existing teachers to use WSU curriculum resources provided in these trainings and to expand the number of qualified teachers in their districts. Industry has also offered to employ teachers in summer externship opportunities that would expose them to various practices in the industry that they could take back to the classroom. This will better connect industry with educators and provide ongoing training opportunities for interested teachers that are recruited to teach coursework in this pathway. Resources to allow these training programs will be obtained through this grant.

We have connected with the Keys to Success program and will be hosting “Build to Success Boot Camps” at both the Davis and Ogden-Weber campuses to recruit students to this pathway and the construction and design industry. Students will be placed in summer internships as part of these “Build to Success Boot Camps”. To build in a safety net to ensure that any student within the Davis, Weber, Ogden, or Morgan school districts has immediate access to this pathway, we have collaboratively built curriculum through the Talent Ready Utah grant that is articulated between Weber State University, Davis Technical College, and Ogden-Weber Technical College. The ultimate goal is to have these courses offered at all high schools in these districts, but until that can be accomplished or for students that cannot accommodate this in their schedule, it will be available for any student after their 10th grade year at the Ogden-Weber and Davis Technical Colleges.

The five university courses that allow students to earn the Industry Sponsored AEC Pathway Certificate of Completion and Weber State Universities Building Design & Construction Certificate are:

- CMT 1100 (1), Introduction to Construction Management aligned with Construction Management I at the state level
- CMT 1310 (4), Materials & Methods of Construction aligned with Construction Management II & III at the state level
- BDC 1040 (3), Intro to Building Design & Construction aligned with CAD Architecture I at the state level
- BDC 1350 (3), Residential Design & Codes aligned with CAD Architecture II at the state level or Project Lead the Way Civil Engineering & Architecture first semester
- IDT 1010 CA (3), Intro to Interior Design aligned with Interior Design I at the state level

Thus, high school students could complete the industry certificate and up to 14 concurrent enrollment credits from Weber State University while attending high school. Moreover, students will have 14 of the 45 major course credits required for the Building Design & Construction Associate of Applied Science degree. These students can be even further ahead if they take other general education concurrent enrollment courses such as English and Mathematics.

Building Design & Construction Student Data— Table 1 illustrates the Fall Semester 2017-Fall Semester 2018 enrollment for Building Design & Construction concurrent enrollment courses in the regional area high schools as well as the 2017-18 student enrollment, attainment rates, and job placement rates for the BS degrees. The goal of this proposal is to connect with more high school Building Design & Construction students and get them to complete the first Stackable Credential in this high need area while in high school or quickly after graduating high school.

Table 1 Building Design & Construction Stackable Educational Credential Student Data

Building Design & Construction Stackable Educational Credential Student Data			
	Student Enrollment Fall 2018	Attainment Rates (2017-18 graduates)	Job Placement Rates
Utah AEC Pathway Completers Industry Certificate of Completion (high school students only) WSU Building Design & Construction Essentials Certificate of Proficiency	BDC 1040 - 201 BDC 1350 - 62 CMT 2360 - 31 IDT 1010 – 160 *CMT 1100 – 35 *CMT 1310 - 6	NA New proposal	NA
Building Design & Construction Associate of Applied Science	NA **	NA **	NA **
Construction Management Associates of Applied Science	328	38	95+%
Building Design & Construction Bachelor of Science***	132	15	93+ %
Construction Management Bachelors of Science	125	46	99%

*Piloted at Fremont and Park City HS as CE curriculum was being developed with the USOE and BDC pathway was being established

**AAS degree is being approved as part of the Talent Ready Utah grant and will be in place starting Fall semester 2019.

***BS degree in Building Design & Construction is being approved as part of the Talent Ready Utah grant and will be in place starting Fall 2019. The enrollment numbers listed reflect the current credential being offered which is a Bachelors of Integrated Studies and has had 35 graduates since 2015.

Stackable Sequence of Credentials— To meet the growing demand for Building Design & Construction professionals, students need to be exposed to career pathways earlier. Students need to experience various career opportunities along with their earning potential to show that these careers are in high-demand and can support their desired lifestyles. With stackable credentials starting in high school, added to at the Technical College level, and completed at Weber State University, these students can realistically become Building Design & Construction professionals who start their own companies, meet the high demand lack of skilled labor and management, and become industry leaders. As shown in the following stackable sequence, students enter during high school completing the Building Design & Construction Pathway which equates to an Industry Certificate of Completion. These concurrent enrollment courses can be used towards a Weber State University Building Design & Construction Essentials Certificate. These courses can also be used toward Technical College Certificates or Apprenticeships. All of this training and education can then be applied towards Associates and Bachelor’s degrees at Weber State University. The following are the four educational stackable credentials:

1. Governor Office of Economic Development Utah AEC Pathway Completion which equates to an Industry issued Certificate of Completion through trade associations (Association of General Contractors (AGC), Home Builders Association (HBA), Association of Building Contractors (ABC), Associated Subcontractors Association (ASA), American Institute of Architects (AIA), and American Institute of Building Designers (AIBD))
2. WSU Building Design & Construction Essentials Certificate if applicable
3. Davis and Ogden Weber Technical College Certificate/Apprenticeship programs in Construction, HVAC, Electrical, or Plumbing if applicable
4. WSU Associate of Applied Science Degree in Building Design & Construction or Construction Management
5. WSU Bachelor of Science Degree in Building Design & Construction or Construction Management

The detailed courses for the Construction & Design Stackable Credentials are shown in Figure 1.

Figure 1: Strategic Workforce Stackable Credentials

Building Design & Construction Stackable Credentials			
Step 1: GOED Utah AEC Pathway which equates to an industry certificate of completion			
Required USOE Courses	Credits	Optional USOE Credits (Select 1 Credit)	Credits
Construction I	0.5	Internship/ Workplace Skills	0.5
Construction II	0.5	Construction Trades Foundations	0.5
Construction III	0.5	Construction Technology	0.5
		Carpentry I	1
		Plumbing I	1
		Electrical I	1
		Woodworking	0.5
		Cabinet Making	1
		Metalworking	0.5
		Furniture Design & Manufacturing	0.5
		CAD ARCH I	0.5
		Interior Design I	0.5
Total	1.5	Total	8
Step 2: WSU Building Design & Construction Essentials Certificate (High School Concurrent Enrollment Courses) if applicable			
WSU Course Title (Select a minimum of 11 credits from the following courses)	CE Credits	USOE Course Title	HS Credits
CMT 1100 Into to Construction Management	1	Construction I	0.5
CMT 1310 Materials & Methods of Construction	4	Construction II & III	1
BDC 1040 Intro to Building Design & Construction	3	CAD ARCH I	0.5
BDC 1350 Residential Design & Codes	3	CAD ARCH II	0.5
CMT 2360 Commercial Design & Codes	4	CAD ARCH III	0.5
IDT 1010 Intro to Interior Design	3	Interior Design II	0.5
BDC 2830 Directed Studies	3	Varies	.5
Total	21	Total	3.5
Step 3 : Davis & Ogden/Weber Tech College Certificate/ Apprenticeships If applicable			
Construction Certificate		(3) Courses Articulated with WSU	
CAD Architecture Certificate		(6) Courses Articulated with WSU	
HVAC Apprenticeship		Articulated Apprenticeship with WSU	
Electrical Apprenticeship		Articulated Apprenticeship with WSU	
Plumbing Apprenticeship		Articulated Apprenticeship with WSU	

Step 4: Choose between the Building Design & Construction or Construction Management AAS at WSU

Building Design & Construction Associates of Applied Science

BDC Courses Required	Credits	Support Courses Required	Credits
CMT 1150 Construction Graphics	3	LIBS 1704 Information Navigator	1
IDT 1050 Architectural Drafting	3	COMM 2110 HU Interpersonal & Small Group Comm.	3
CMT 1220 Construction Contracts	3	Social Science/ Diversity Gen Ed.	3
IDT 1020 Presentation Techniques	3	Math 1080 QL Pre-Calculus	5
IDT 2050 Codes	2	BTNY 1403 LS Environmental Appreciation	4
CMT 2260 MEP	4	ENGL 2010 EN Intermediate College Writing	3
CMT 2640 Quantity Survey	2		
IDT 2035 Design Process/ Space Planning	3		
CMT 2340 Civil Design & Layout	4		
Total	27	Total	19

Construction Management Associates of Applied Science

CMT Courses Required	Credits	Support Courses Required	Credits
CMT 1150 Construction Graphics	3	LIBS 1704 Information Navigator	1
CMT 2990 Seminar (.5 credits taken twice)	1	COMM 2110 HU Interpersonal & Small Group Comm.	3
CMT 1220 Construction Contracts	3	Math 1080 QL Pre-Calculus	5
CMT 1330 Civil Materials	4	BTNY 1403 LS Environmental Appreciation	4
CMT 1550 Construction Safety	2	ENGL 2010 EN Intermediate College Writing	3
CMT 2260 MEP	4	BSAD 1010 Intro to Business	3
CMT 2360 Commercial Design & Codes	4	ACT 2010 Survey of Accounting I	3
CMT 2640 Quantity Survey	2	ECON 2010 SS Principles of Microeconomics	3
CMT 2210 Construction Jobsite Management	3	IST 2010 Business Computer Skills	1
CMT 2340 Civil Design & Layout	4		
CMT 2410 LEED GA Exam Prep	1		
Total	31	Total	26

Step 5: Choose between the Building Design & Construction or Construction Management BS at WSU

Building Design & Construction Bachelors of Science

BDC Courses Required	Credits	Support Courses Required	Credits
BDC 3400 Architectural Visualization	3	PHYS 2010 College Physics	5
CMT 3115 Construction Cost Estimating	3	Social Science Gen. Ed.	3
CMT 3130 Construction Planning & Scheduling	3	GEOG 4410 Sustainable Land Use & Planning	3
IDT 3040/4830 Perspective Rendering	3	Creative Arts or Humanities Gen. Ed.	3
CMT 2410 LEED GA Exam Prep	1	American Institutions Gen. Ed.	3
IDT 3000 Lighting Design	3	Upper Division Technical Elective	3
BDC 3000 Sustainable Building Design & Construction	3		
BDC 3660 Structural Design & Detailing	3		
IDT 3045 Residential Design	3		
BDC 4350 BIM Management & Coordination	3		
IDT 3025 Professional Practice	3		
IDT 3020 American & Modern Interiors	3		
BDC 4600 Senior Project	3		
Total	37	Total	20

Construction Management Bachelors of Science

CMT Courses Required	Credits	Support Courses Required	Credits
		IST 2020 Intro to Information Systems or SCM 3050 Operations & Supply Change Management	3
CMT 3115 Construction Cost Estimating	3	MGMT 3010 Organizational Behavior & Management	3
CMT 3130 Construction Planning & Scheduling	3	NET 3250 Business Communication	3
CMT 2990 Seminar (.5 credits taken twice)	1	BSAD 3200 Legal Environments of Business	3
CMT 3310 Leadership in the Construction Industry	2	PHYS 2010 College Physics	5
CMT 3370 Preconstruction Services	3	American Institutions Gen. Ed.	3
CMT 4120 Construction Accounting & Financial Mgmt.	3	MKTG 3010 Marketing Concepts & Practices	3
CMT 4330 Applied Structures	4	Creative Arts or Humanities Gen. Ed.	3
CMT 4510 Design Charrette or CMT 4520 ASC Student Competition	1	Social Science Gen. Ed.	3
CMT 4150 Construction Equipment & Methods	3		
CMT 4350 Temporary Structures	2		
CMT 4570 Approaches to Construction Contracting	2		
CMT 4620 Senior Project	2		
Total	29	Total	29

Figure 2 contains the employment opportunity path, strategic workforce on-ramps and off-ramps, for students.

Figure 2: Strategic Workforce On-Ramps and Off-Ramps



Evidence of Support from Industry Advisory Group/Local Industry--The WSU Construction Management & Building Design & Construction Advisory Boards and local industry have affirmed support for this proposal by supporting jobs and internships early in a student's educational path. Support of the project is wide ranging, from relatively small, privately held organizations, to large international firms and stakeholders in various industries.

Association of General Contractors.—Richard Thorn, President/ CEO, stated that “According to our members, the single largest challenge we’re facing as an industry is a trained workforce. AGC supports and endorses the tremendous work done by a dedicated team of professionals from industry, public and higher education as we have worked so hard in advancing the Construction & Design Strategic Workforce Initiative. The Construction & Design Pathway, we believe will help lead the way in addressing careers in construction and in helping our future workforce see the choices they made to enroll in these courses as an investment into their future and the future of our industry.”

Associated Building Contractors – Scott McKinnon, Work Force Development, stated that “The Associated Builders and Contractors of Utah fully supports this program.”

American Subcontractors Association of Utah — Jerry Allen, President, stated that “This is a much needed pathway that will enlighten High School Students and the opportunities and benefits of careers in Building Design and Construction. This program will also benefit the construction industry by providing a pool of students that are excited and ready to enter our industry after graduation.”

People Ready Skilled Trades— Vanessa Watson, Business Manager, stated that “The Construction & Design Pathway is a great way to rebrand construction and showcase the myriad of options available to students. Given the current shortage of tradesmen, PeopleReady supports this cause. We are excited to be part of a solution that will attract future tradesmen to this exciting industry!”

Hughes General Contractors— Dan Pratt, Vice President, stated that “For several years our firm has worked closely with the construction management program at Weber State University to develop construction managers who both supervise the construction of projects on site as well as professionally from the office as estimators, designers, project managers and other construction professionals. It has been our experience that students who attend classes in the evening or on line and then put into practice what they are learning during the day time through hands-on construction work whether it be wearing a tool belt or processing construction documents in an office learn and become proficient significantly faster than if they were only attending classes or if they were only working on a Jobsite. The synergy of doing both simultaneously for four years results in a graduating student who has the maturity and experience of someone with 10 years of experience.”

Staker Parson — Scott Parson, President, stated that “Utah’s continued growth and prosperity is dependent on a healthy construction industry. One of the biggest constraints to our company’s growth is the availability of a skilled workforce to build projects, operate equipment and drive trucks. We hire hundreds of skilled employees each year and the Building Design and Construction Strategic Workforce Initiative is a very innovative approach to attract and train young people to succeed in the vibrant, impactful and rewarding construction industry.”

Big-D Construction - Cory Moore, National President, stated that ““This Strategic Workforce Initiative is incredibly critical for the construction industry’s success. We suffer from a staggering shortage of skilled, qualified, and trained labor. This is due to a deficiency of available guidance and training, in addition to weak marketing and promotion of what is arguably one of the fastest growing industries in the country. Remarkably, the building industry provides high school and college graduates some of the highest paying jobs available right after graduation. The next generation needs to know that they can grow a career and earn a larger income in construction than many recently trendy occupations such as software developers, internet marketers, and financial analysts (to name a few). Not only that, there is a pronounced comradery in our industry - one that distinctly grows only through building something as a team; a sort of loyalty and honor for each other and the proud tradition of building. We need to support our future leaders in recognizing the significant opportunity the construction industry provides them.”

Utah Plumbing & Heating Contractors Association— Dave Hill, Executive Director, stated that “Through participating in this excellent program it will give students an appreciation of the construction industry especially the skilled trades and demonstrate that there is an exciting career opportunity available.”

Wadman Corporation— Brad Wilson, Safety Director, stated that “Wadman Corporation supports this program.”

R&O Construction— Slade Opeikens, President/CEO, stated that “R&O Construction is looking forward to the opportunity to support this new Building Design and Construction curriculum that can be offered to high school students. We understand the need our industry has and will support this in any way we can.”

Kier Construction— Steve Kier, President/CEO, stated that “Utah is leading the nation in both Job Growth and Population growth, The Strategic Workforce Initiative (SWI) will be the catalyst for building the workforce in our great state. Educating, Preparing and Attracting young people to our industry is the shot in the arm we have needed for some time. We support this program completely, congratulations to those who have worked so hard to put in place.”

Okland Construction— Nick Dyer, Integrated Construction Manager, stated that “A grant like this will allow us to interact with more students than we could with traditional internships.”

Okland Construction— Russ Mumford, Project Manager “Okland Construction has observed a significant negative impact on the construction industry and the economy as fewer and fewer students and youth are choosing construction as a career. Many of the people who do find their way into construction are doing so after initially choosing a different path, but later learn about construction's exciting, engaging, plentiful, and high paying career options. Okland sees this new Pathway program as a great way to teach young students about the options for a successful career that they can start as early as graduation from high school and even begin training in high school. “

Destination Homes— Corrinne Green, Design Manager, stated that “It’s really hard to find good talent in today’s market for the technical fields of construction. I think aligning Weber State with CE classes and technical colleges would be a great idea to better prepare students to be ready the day they graduate.”

Build to Success— Rick Folkerson, Construction App Manager, stated that “We are honored to support and promote your efforts with the building design and construction program!! We applaud the efforts of Weber State!!

Davis Tech College— Darin Brush, President & CEO, stated that “Davis Tech is in the process of developing a Construction Trades Certificate. Funding from this proposal will support the salary for a faculty position for this new Davis Tech program. This position is critical to the implementation and success of the pathway. This position will be responsible for teaching curriculum, developing and coordinating internships and jobs with industry partners, and ensuring a pipeline of students from secondary to post-secondary education.”

Ogden/ Weber Tech College— Jim Taggart, President, stated that “Ogden-Weber Tech is the largest provider of Apprenticeship training in Utah and is committed to meeting the workforce development needs of area employers. This Pathway provides an expanded link between educational providers and industry and will play a critical role in increasing access to high demand, high wage jobs. OWTC commits to providing construction summer camps for secondary teachers, counselors, and students. The budget will provide funding for teacher stipends and program consumables. WSU’s proposed program responds to the construction workforce needs of our region. We are committed to working with WSU and secondary school districts to ensure educational alignment and increased construction training and experience opportunities for students.”

Davis School District— Jay Welk, CTE Director, stated that “The members of this cohort have established a foundation of high quality training and significant resources in our educational community. They maintain long-standing relationships with many local industries, access to state-of-the-art equipment and excellent facilities, which lead to successful employment opportunities for students upon graduation. We know there are many of our students who will have the

opportunity to continue their post-secondary education with the assistance of this grant and appreciate the efforts the Department of Workforce Services and the Governor’s Office of Economic Development make to ensure that resources are available to everyone wishing to pursue their education goals.”

Weber School District— Rod Belnap, CTE Director, stated that “This construction partnership between secondary education, post-secondary, and industry is a perfect example of what great things can happen when collaboration takes place with a clear focus on opportunities for students. We in Weber School District are supportive of this great initiative and look forward to building opportunities for students throughout our district through outstanding instruction and extension opportunities.”

Ogden School District— Christine Hislop, CTE Coordinator, stated that “The creation of this pathway would help us to expand our course offerings at two of our junior highs and our three high schools. The building and design construction pathway would help us to garner student interest in these types of classes and would help us to create a pipeline from Ogden District to the Ogden Weber Tech College and the programs at Weber State University.”

Morgan School District— Robert Kilmer, CTE Director, stated that “We are grateful for the opportunity to partner with Weber State University to create strong career pathways that support the growing Construction industry in Utah. Morgan High School is invested in providing CTE and CE opportunities for students in Morgan County. As a rural community, it has been difficult to build the infrastructure needed to facilitate growth in this area. This grant will provide us with the opportunity to be fully engaged in designing, supporting and providing educational programs that support programs at Weber State University. We believe that this partnership will strengthen and diversify the workforce, enhance critical job skills, and promote the development of construction occupations in northern Utah.”

Board of Regents Support—The Board of Regents will send a separate message of support.

USTC Board of Trustees Support—The USTC Board of Trustees will send a separate message of support.

Building Design & Construction Workforce Needs—Table 2 illustrates the number of Utah job openings and wages for job titles at the various levels of education.

Table 2 Employment Information (Source: DWS)

Utah Building Design & Construction Employment Needs and Wages					
Stackable Educational Level	Job Title	Projected Annual Statewide Job Openings (2016 – 2026)			Median Wage
		Current Employment	Projected Employment	Total Annual Openings	
Building Design & Construction Essentials Pathway & Certificate of Completion	Construction Laborers	17,590	25,210	2,920	\$30,690
	Helpers, Electricians	1,360	1,950	290	\$28,170
	Helpers, Carpenter	280	400	130	\$29,400
	Helpers, Plumbers	870	1,290	190	\$29,110
	Helpers, Brick masons	590	880	130	\$32,720
	Helpers, Construction Trades All Other	80	110	20	\$29,420
	Sheet Metal Worker	2,080	2,490	280	\$51,720
	HVAC Installers	3,550	5,050	560	\$48,770
	*Intern Architectural Drafter/ BIM technician	No Data	No Data	No Data	No Data
Tech College Certificates & Apprenticeships	Carpenters	13,370	19,090	2,030	\$38,610
	Electricians	8,010	10,820	1,310	\$54,290
	Plumber, Pipefitter	5,790	8,480	1,010	\$52,690
	Operating Engineer (Equipment Operator)	5,030	6,920	830	\$45,640
	Cement Mason & Concrete Finisher	3,120	4,640	560	\$38,540
	Brick masons, Block masons	1,960	2,970	310	\$36,610
Building Design & Construction AAS & BS	Architectural & Civil Drafters (Modeler/BIM Technicians)	1,720	2,270	220	\$50,990
	Interior Designers	470	600	60	\$51,500
	Architect, Except Landscape and Naval	810	1,000	80	\$63,780
Construction Management AAS & BS	Surveyor	610	830	70	\$62,060
	First Line Supervisors of Construction Trades	8,170	11,520	1,270	\$57,910
	Construction Manager (Project Engineer)	3,870	5,140	430	\$75,330
	Cost Estimator	2,610	3,500	380	\$63,960
	First Line Supervisors of Construction Trades (Superintendent)	8,170	11,520	1,270	\$57,910
	Architectural & Engineering Managers	2,060	2,610	210	\$120,350
	Construction & Building Inspector	1,130	1,520	180	\$54,880

(Source: Utah Department of Workforce Services 2016 – 2016 Long-Term Projections, *Partner Employers may or may not report as employees included in data)

Funding Request Items—The budget requested to support this proposal is listed in Table 3.

Table 3 Budget

Weber State University	
Funding Need—Ongoing	Budget
<p><i>One Full Time Faculty or Instructor Position</i> A faculty position to bridge the gap of lack of qualified building design & construction teachers in the Secondary Schools. This person would</p> <ol style="list-style-type: none"> a. Facilitate the annual summer training and in class support for high school instructors to teach CE courses at schools where teachers are available and/or will be recruited to teach these classes. b. Teach a minimum of half time at the university to offset the increased demand at the university level. c. Provide marketing resources for all High Schools to recruit to CE courses and the Construction & Design Pathway d. Advise secondary students in pursuing additional educational (Certificate, AAS Degree) and employment opportunities. e. Coordinate/develop internships and summer externships for HS teachers with industry partners. f. Participate in the development and execution of “Build to Success Boot Camps” hosted at Davis and Ogden-Weber Technical Colleges. g. Host the Annual; Back to School Event for High School Administrators, counselors, and teachers; Career Networking event for HS students, teachers, and administrators held Fall Semester; WSU Design Build Internship event held Spring Semester to get kids into summer internships 	<p>\$100,000</p>
Davis Technical College	
<p><i>One Full Time or Two Part Time Instructor Position(s)</i> A faculty position to bridge the gap of lack of qualified building trades professionals in the construction industry.</p> <ol style="list-style-type: none"> a. Teach construction courses required for a new certificate to be developed (reinstated). b. Coordinate/develop internships and jobs with industry partners. c. Participate in the development and execution of “Build to Success Boot Camps” hosted at Davis and Ogden-Weber Technical Colleges. 	<p>\$80,000</p>
Ogden/Weber Technical College	
<p><i>Equipment, Materials, Field Trips, Site Visits, Training:</i></p> <ol style="list-style-type: none"> a. Host up to 20 teachers/counselors and pay them a stipend for participating as well as cover consumables for the building projects. This will include PPE for the teachers to take with them. 	<p>\$20,000</p>

Secondary Schools

Davis School District (9 High Schools)

<p><i>Equipment, Materials, Field Trips, Site Visits, Training:</i> Consumable materials needed to make CE courses engaging. Equipment needed for project based learning. Current high school teachers will receive training in order to teach concurrent enrollment courses in traditional high school classroom sections. As demand increases, this training provides more teachers for this high need area.</p>	\$25,000
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Weber School District (7 High Schools)

<p><i>Equipment, Materials, Field Trips, Site Visits, Training:</i> Consumable materials needed to make CE courses engaging. Equipment needed for project based learning. Current high school teachers will receive training in order to teach concurrent enrollment courses in traditional high school classroom sections. As demand increases, this training provides more teachers for this high need area.</p>	\$20,000
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Ogden School District (3 High Schools)

<p><i>Equipment, Materials, Field Trips, Site Visits, Training:</i> Consumable materials needed to make CE courses engaging. Equipment needed for project based learning. Current high school teachers will receive training in order to teach concurrent enrollment courses in traditional high school classroom sections. As demand increases, this training provides more teachers for this high need area.</p>	\$10,000
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Morgan School District (1 High School)

<p><i>Equipment, Materials, Field Trips, Site Visits, Training:</i> Consumable materials needed to make CE courses engaging. Equipment needed for project based learning. Current high school teachers will receive training in order to teach concurrent enrollment courses in traditional high school classroom sections. As demand increases, this training provides more teachers for this high need area.</p>	\$5000
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<p>Total On-Going Funding Weber State University, Tech Colleges, and Secondary Schools</p>	\$260,000
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