

APPLICATION COVER PAGE
(Please Print or Type – All Fields Must Be Completed)

Project Name: CTE and Career Pathways in Portland Public Schools		
Amount Requested: \$346,637		

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	Participating High School or Middle School Name (add additional rows as needed)	Lead Contact Name	Grade Levels	Student Enrollment
1.	ACCESS	David Wood	K-8	107
2.	Arleta	Seth Jones	K-8	146
3.	Astor	Karl Newsome	K-8	168
4.	Beach	Rebecca Torres	PK-8	158
5.	Beaumont Middle School	Liz Casson	6-8	591
6.	Beverly Cleary	Teri Geist	K-8	234
7.	Boise-Eliot/Humboldt	Kevin Bacon	K-8	93
8.	Bridger	Oscar Gilson	K-8	88
9.	Cesar Chavez	Lavert Robertson	K-8	231
10.	Creative Science	Filip Hristic	K-8	78
11.	Creston	Conrad Hurdle	K-8	96
12.	DaVinci Arts Middle School	Fred Locke	6-8	470
13.	Faubion	LaShawn Lee	PK-8	127
14.	George Middle School	Ben Keefer	6-8	385
15.	Robert Gray Middle School	Beth Madison	6-8	471
16.	Harrison Park	John Walden	K-8	263
17.	Hosford Middle School	Pamela Joyner	6-8	584
18.	Irvington	Lisa McCall	K-8	143
19.	Jackson Middle School	Kevin Crotchett	6-8	537
20.	King	Eryn Berg	PK-8	68
21.	Lane Middle School	Brenda Fox	6-8	519
22.	Laurelhurst	Karen Pinder	K-8	219
23.	Lee	Leslie O'Dell	K-8	150
24.	Lent	Sara Hahn	K-8	175
25.	Marysville	Lana Penley	K-8	137

26.	Metropolitan Learning Center	Macarre Traynham	K-12	158
27.	Mt. Tabor	Robi Osborn	6-8	636
28.	Chief Joseph/Ockley Green	Molly Chun	K-8	123
29.	Odyssey Program	Deanne Froehlich	K-8	85
30.	Peninsula	Carlos Galindo	K-8	111
31.	Roseway Heights	Sarah Lewins	K-8	211
32.	Sabin	Andrew Dauch	K-8	112
33.	Scott	Verenice Gutierrez	K-8	133
34.	Sellwood Middle School	Charlene Russell	6-8	485
35.	Skyline	Jill Sage	K-8	82
36.	Sunnyside Environmental	Amy Kleiner	K-8	223
37.	Vernon	Tina Acker	PK-8	93
38.	Vestal	Emily Glasgow	K-8	137
39.	West Sylvan Middle School	John Ferraro	6-8	949
40.	Winterhaven	Mark Sandilands	K-8	186
41.	Woodlawn	Robin Morrison	PK-8	102
42.	Alliance @ Meek	Lorna Fast Buffalo Horse	9-12	146
43.	Benson	Curtis Wilson	9-12	862
44.	Cleveland	Paul Cook	9-12	1549
45.	Franklin	Shay James	9-12	1481
46.	Grant	Carol Campbell	9-12	1498
47.	Jefferson	Margaret Calvert	9-12	551
48.	Lincoln	Peyton Chapman	9-12	1594
49.	Madison	Petra Callin	9-12	1140
50.	Metropolitan Learning Center	Macarre Traynham	K-12	135
51.	Roosevelt	Charlene Williams	9-12	953

52.	Wilson	Brian Chatard	9-12	1245
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Please check all that apply:

This project directly involves Career and Technical Student Organizations
Please note page of proposal that describes this relationship. Page: 31

This project has a clear connection to STEM
Please note page of proposal that describes this relationship. Page: 9 & 30

The Revival of Career & Technical Education throughout Portland Public Schools

PROJECT OVERVIEW

Purpose and Scope of the Project

Portland Public Schools is committed to preparing all students for college and career as evidenced by the adoption of the Common Core State Standards (CCSS) and supported by Oregon's 40-40-20. While recent years of challenging fiscal issues have stalled growth in the district's ability to provide robust career pathways and Career and Technical Education (CTE) Programs of Study (POS) for students in our seven community comprehensive high schools, new avenues open to support the progress and enhancement of existing career pathways and develop and implement new ones. *The Revival of Career & Technical Education throughout Portland Public Schools (CTE Revival)* will do just that – using innovative strategies and tested programs that braid industry and practitioners in programs and curriculum development, bring professional development and higher education into the decision-making teams, take teachers and school leaders into the workplace to understand the work on a deeper level, and address industry and needs of underrepresented students in school and in the workforce.

Framed by the district's *Diploma + College and Career Readiness* initiative and the work of the PPS High School Action Team, and fueled by a \$482 million school construction bond and the codicil that hired contractors would participate in the district's career learning programs, the opportunity to provide all students with knowledge and skills through experiential learning that will prepare them for high-need and high-wage careers and higher education is within reach.

Supporting the Overall Revitalization Project

True educational innovations are those products, processes, strategies and approaches that improve significantly upon the status quo and reach scale. How the project demonstrates innovation in the delivery of CTE:

CTE Revival will serve as a catalyst to jumpstart the district's efforts to establish a 7-12 system for career pathways and CTE in all schools. The project will significantly alter the *status quo* and expand the percent of students participating in CTE classes by:

- developing system-wide frameworks, protocols and procedures,
- growing career electives, pathways, and Programs of Study,
- expanding partnerships with industry, labor, and postsecondary education, and
- increasing opportunities for students to participate in relevant experiences.

CTE Revival completes these goals through innovative strategies. Creative strategists added a codicil to the \$482 school construction bond: contractors would collaborate with school CTE programs, in and out of the classroom. Industry practitioners will be working with students in the Exploratory class and facilitating field trips to their work sites. Innovation continues with a fully-integrated CTE/math option for students (Tech Geometry) to be followed by Tech Algebra and curriculum planning for more areas (i.e. science). The results from Benson's implementation show academic success. An increase in student achievement and student engagement was found, as well, in Georgia, where a Technology Integration in Mathematics program at Lanier Middle School resulted in increased achievement and later high school interests.

CTE Revival brings additional strategies aligned to the vision and will result in increased student engagement: a girls-only construction course, and the Educator Industry Partnership Series which will change the way teachers understand CTE.

How the project demonstrates the integration of the required and bonus elements into a coherent project including the integration of core academic content and community resources.

CTE Revival envisions seamless linkages among core academic subjects, career exploration courses and a wide variety of electives that are integrated with students' career interests. To facilitate this vision, the district will support schools in the design and implementation of a system framework to expand and enhance pathways and programs and CTE POS to provide career and work readiness knowledge and skills for every PPS student. The work will be framed by the district's common language for career learning:

- Career Awareness – learning opportunities that focus on helping students become aware of their preferred learning styles and personal interests. Heavily emphasized in the middle school years
- Career Exploration – all of the above plus, learning opportunities that focus on “real-world application”, “creative problem-solving” and “essential skills in the context of high wage, high demand career fields.
- Career Preparation – all of the above plus, provide some students with the opportunity to earn college credit; may provide students with the skills necessary to be immediately employable in a high wage occupation

As CTE programs have evolved to meet the demands for college and career preparation, projects have the unique opportunity to grow new and exciting programs to meet the need for a thriving economy. Description of how this project supports the expansion and growth of CTE in the district, region, and state.

In its 2010 report, *Help Wanted: Projections of Jobs and Education*

Requirements through 2018, the Georgetown University Center on Education and the Workforce stated:

- the ability of individuals to connect education, training, and careers has become key to employability and to attaining and maintaining middle class status, and
- In spite of its growing importance, our ability match education alternatives with career options is woefully underdeveloped.

CTE Revival represents a critical stage for Portland Public Schools in responding to the local, regional, and state needs for prepared students to enter the workforce and college. It is supported by the 2011 directive by the School Board that each of the district's seven comprehensive high schools offer CTE options for students. While most schools have courses in career pathways (64% in arts and communications), only the CTE flagship school prepares students with experience in a variety of CTE choices.

Design and planning teams within *CTE Revival* will develop an innovative two-course series for Career Exploration, each course providing some depth to three CTE programs of study. Faculty will be specifically trained and will co-teach with practitioners working on the ongoing school construction bond (when appropriate). Students may select which of the two courses (and set of CTE options) they prefer or enroll in both.

Adding to the expansion within the region and state is the development of the Educator Industry Partnership Series (EIPS), a unique and innovative approach to growing CTE programs that align with labor and business needs. Teams of school leaders meet regularly with industry leaders to improve the level of student preparation.

Providing students with authentic workplace experiences are a cornerstone of CTE; how this project ensures students are provided with experiential learning opportunities.

A hallmark of *CTE Revival* is an increased emphasis on experiential learning opportunities provided outside of classrooms. Schools will include explicit strategies for incorporating career learning opportunities in core and elective classes in the design of their pathways and POS. Supports for facilitating authentic workplace experiences are in place, assisted by each school's Career Coordinator. Opportunities focus on:

- Experiential learning both in the classroom and on school construction sites due to the district's *Career Learning Equity Policy* included in the \$482 million dollar school construction bond. Contractors must provide students with a variety of career learning opportunities (guest speakers, site tours, job shadows etc.), as well those related to the business side of organizations such as marketing, accounting, project management.
- Summer CTE programming that allows non-Benson students to focus on experiential, hands-on opportunities, co-led by partners in industry and labor.
- Expansion of partnerships with the Portland Workforce Alliance and BizConnect's online employer data tool, will link schools with industry, labor and community partners and readily connect students with career learning opportunities aligned with their personal interests. Well-designed pathways and POS will provide context and better prepare students to participate in activities such as the NW Youth Careers Expo.
- Targeted career learning supports for ESL and other underserved students participating in the NW Youth Careers Expo and the International Youth Leadership Conference. Strategies include a focus on minority-owned industry professionals where students can engage in relevant career learning activities, assistance developing work-readiness skills, and support in developing post-high school plans.

NARRATIVE

PROJECT DESCRIPTION

A. Project Outcomes and Progress Markers

CTE Revival is the interconnection and the strength of its programs and measurable outcomes. Within the framework of the goals identified below, the *CTE Revival* Planning Team developed measurable outcomes and associated short-term progress markers that will enable project leaders, participants, and evaluators to monitor the project for ongoing success.

CTE Revival supports the interconnection and the strength of the following areas:

- Building a district-wide systemic grade 7-12 framework for career pathways
- Building new and strengthening existing career programming, delivery, and partnerships
- Building a fully integrated program that braids traditional academics with external sources
- Building through expansion of new programs and growth of existing programs as well as the number and diversity of students served, and
- Building a district-wide outreach plan to enhance established networks and facilitate new partnerships

Within the framework of these goals, the district has identified five measurable outcomes and associated short-term progress markers that will enable project leaders, participants, and evaluators to monitor the project for ongoing success.

Measurable Outcome	Progress Marker
<i>Improved and sustainable partnerships with business, industry, labor, and educational providers.</i>	
By June 2015, the CTE Comprehensive	Bi-monthly Board meetings and quarterly

Advisory Board and District Working Groups in each of six pathway areas will be established including memberships representing business, industry, labor, and higher education.	Working Group meetings will ensure feedback from all key stakeholders; progress marker: eight sustained partnerships with industry by September 2014.
<i>Improved student access to CTE programs of study</i>	
7 high schools (Cleveland, Franklin, Grant, Lincoln, Madison, Roosevelt, Wilson) will participate in a minimum of two Educator Industry Partnership Series to design and implement career pathways programs in areas including Healthcare, Athletic & Outdoor, and Clean Tech.	By June 2015, 7 high schools will establish a minimum of two career pathway programs and enhance/expand one CTE POS
During the summer of 2014, the PPS programming will expand to include for credit CTE curriculum, open to students enrolled at all PPS high schools to provide access to currently unavailable CTE programs of study.	During the summer of 2014, a minimum of 30 PPS high school students other than Benson will have access to CTE POS.
During winter 2014 and spring 2015, the PPS Evening Scholars Program will expand to include for-credit CTE curriculum, open to students enrolled at all PPS high schools to provide access to currently unavailable CTE programs of study.	During winter 2014 and spring 2015, a minimum of 30 PPS high school students other than Benson will have access to CTE POS.
<i>Increased rigor in technical and academic content aligned to diploma requirements, industry-recognized technical standards, and employability skills.</i>	
By September 2014, a district system framework for career learning including grade level activities will be developed and adopted	During winter 2014 and spring 2015, CTE Revival planning teams will provide professional development for school teams
<i>Increased career opportunities for students.</i>	
Through the program, PPS students will participate in exploration and preparation level career learning experiences	By June 2015, the number of PPS students completing exploration and preparation level career learning experiences will increase by 20%
<i>Improved ability to meet workforce needs in the region.</i>	
By April 2014, the Educator Industry Partnership Series will have key members for three POS aligned with Exploratory course & developed a meeting schedule. Members from workforce identified who are knowledgeable about regional workforce needs.	By February 2014, key members of EIPS identified and contacted for March stakeholder meeting. Other potential members identified for contact by April 2014.
During the 2014-2015 year, 3 high schools	During the summer of 2014, teachers at

will offer an innovative Career Exploration class introducing 9 th grade students to 3 career pathways that meet regional workforce needs.	the three pilot high schools will participate in Professional Development, including curriculum development and iPad training (and app selection)
By June of 2015, two programs will be available specifically to increase non-traditional and minorities into the regional workforce.	Each summer of the program will offer a Construction credit-bearing opportunity only for girls starting in 2014. By June of 2014, one of four field trips to minority-owned businesses by minority or ELL students will occur.

B. Career and Technical Education Programs of Study Design

Portland Public Schools offers a total of 18 state-recognized Programs of Study; seven of them are located at Benson High School, the district’s flagship CTE high school. Among the remaining ten schools serving high school students, none offer more than four. Five schools have no approved programs. *CTE Revival* supports the development and implementation of an innovative introductory course for students and long-term planning and support for emerging CTE presence at district comprehensive high schools.

Career Exploration Class

The district will develop a course intended to expose students to career paths as they prepare for their future and the world of work. In addition to gaining useful career knowledge, students will have the opportunity to participate in a variety of career related and technology activities and will leave this class with the start of an e-Portfolio that will continue and become the basis of their Extended Application diploma requirement. The district will engage stakeholders to support course design, including the use of iPad technology, and plan for implementation in fall 2015.

Working with the Portland Metro Stem Partnership, a working team of curriculum experts, teachers, administrators, practitioners, and other stakeholders will develop a

two-year curriculum, each year introducing three programs of study already implemented within the district. The final curriculum will differ from a traditional introduction to CTE: it will not just reflect career choices, it will actively involve the practitioners in them through curriculum development, ongoing advisory and working teams, and in-class demonstrations and off-site field trips. In an innovative approach students would enroll in either one, in either their freshman or sophomore year. Implemented at three schools as a pilot program in fall 2015, both paired courses would be prepared for replication to other schools in 2016.

Applied Math Pilot

CTE Revival will integrate traditional CTE with academics through the replication of the successful *Tech Geometry* course at Benson High School co-taught by the electrical technology and geometry teachers at Wilson High School. The initial data indicates a high level of success: over 42% of the class of incoming freshmen initially indicated that they did not like math. After six weeks, 59% had a better attitude about math compared to *middle school* and 82% were enjoying the class. Assuming continued success, *Tech Algebra* will follow.

Enhanced and Expanded Career Learning Experiences

Last fall, the Board of Portland Public Schools approved a policy to include *Career Learning Equity* within the \$482 million dollar school construction bond approved by voters last November. The intent is to increase the numbers of students, in particular students of color and young women, in career learning programs. The bond provides an unprecedented opportunity to engage with a variety of contractors who are required to offer career learning experiences for students. *CTE Revival* will utilize the

BizConnect employer database system to coordinate and schedule activities such as speakers, site visits, job shadows, and other interactions between the contractors and student groups. The district will also continue to collaborate with the Portland Workforce Alliance to design, recruit and implement new and expanded career learning opportunities such as career day events. Grant funds will support schools in facilitating these career learning experiences by funding transportation and costs to release teachers to accompany students.

The goal of *CTE Revival* is to expand CTE opportunities to students across the district, particularly for those at those high schools with few, if any, current options for students. This goal requires the development of *additional infrastructure* to support the work of assessing the needs and interests of students, parents, and the local community and matching that assessment to the work force needs, focusing on high-need and high-wage jobs. This work is necessary to ensure that a district-level working group, with members from stakeholders that include the workforce and the community, adopt a systems-wide approach to CTE and that decisions and actions are based on policies adopted that maximize consistency and quality between and among district schools. This **CTE Comprehensive Advisory** will serve as a sounding board as well as a forum for feedback for all district CTE program, meeting quarterly with CTE and High School Directors and other leaders.

Co-enrollment in CTE Programming at Benson High School

With the guidance and facilitation of the CTE Comprehensive Advisory, district and school leaders will use *CTE Revival* to engage stakeholders in a plan to develop a process for the co-enrollment of non-Benson junior and senior students into CTE

courses at Benson High School. This educational option addresses the current lack of CTE opportunities in areas such as building construction, manufacturing, and automotive, in most district high schools. Interest in this possibility is high and expected to increase with the implementation of Career Exploration classes beginning in 2014.

Girls Construction Club

In support of non-traditional enrollment, the district will partner with the Oregon Tradeswomen to establish a Girls Construction Club at Wilson High School. The club will meet 12 times during the grant, and provide hands-on construction-based activities, include basic math and measurement, construction (i.e. measuring wood, using a skill saw, hammering nails), tools use and safety, as well as team-building activities. The club will also be involved in the development and delivery of after-school workshops at feeder middle schools and support the student organization in the field.

Educator Industry Partnership Series (EIPS)

Ensuring that all district students have experiences in the classroom and community to help them understand and imagine career possibilities is at the core of *CTE Revival*. The Portland metro area boasts an abundance of employers - small, medium and large, private and public, across all pathway areas – that fuel regional economic development. Many rewarding careers in business, industry and governmental organizations - and the requirements for entering these fields – are relatively unknown to teachers, counselors and administrators. The district will partner with the Portland Workforce Alliance to launch the Educator Industry Partnership Series (EIPS) focusing on multiple career pathway areas. EIPS will leverage industry and postsecondary partnerships to facilitate industry shadowing opportunities for school

teams (administrator, counselor, career coordinator, core and elective teachers), provide direct connections with postsecondary programs, and most importantly, provide planning time for school teams. This expansion of knowledge on all fronts has been successful at producing a level of engagement and enthusiasm among members far beyond expectations. It changes the mindset of teachers, the environment of the CTE classrooms, and the philosophy of school in which the teachers serve. Teams continue to meet, well beyond the funding period, with opportunities for planning, research, program development, and implementation of programs and innovation. Their work leads to greater engagement for students in the Career Exploration classes, success and further thinking in math and CTE joint classes, and how transferring students can master fundamental levels of knowledge needed for upper-level success in CTE.

C. Underserved Students

Portland Public Schools is a very diverse district: a diversity that is not reflected by the population of either the city or the state in which it resides (minority population of district: 45%, city: 24%, state: 16%, US Census, 2011), Within the district, there is a high correlation between the minority population (students of color) and low income (students qualifying for free or reduced meals). Even though 46% of the district's student total population is considered low-income, the figure increases to 83% for Black and 77% for Hispanic students (27% for White students).

Across the district, and in the seven comprehensive high schools, enrollment in general and in CTE courses varies significantly by demographics, including income, race/ethnicity, native language, and eligibility for special education services. Students

% of High School Students:				Race/Ethnicity						
Low	ELL	SPED	White	Hispanic	Black	Asian	Pac	Nat	Mult.	

	Income						Isl	Amer		
High Schools	40.7	4.8	12	55.3	14.5	12.6	10	1.1	1.1	5.4

identified as underserved in CTE and the activities to increase their enrollment and ensure their success and continuation in their programs include:

Underserved Population	Activities
Females in Construction	Summer girls-only Construction class, Girls Construction Club, visits to women-owned businesses.
Students of Color participation in specific CTE areas	Analysis by Career Coordinator, recruitment to existing classes, enrollment in Exploratory Class, visits to minority-owned businesses.
Language barrier	Translation of Exploratory Class materials, iPad apps in language needed, ELL Specialist, visits to businesses owned/operated by non-English speakers.
Special Education students	Involvement of the Educator Industry Partnership that will work with the school and businesses for opportunities for all students, including mentoring and internships.

D. Diploma Connections.

CTE Revival is designed to increase student knowledge and capacity for intelligent choices in future. Both the new required course introducing three potential career pathways and other CTE opportunities directly involve students in real work, increasing their capacity for self-motivation, personalized learning, and preparation for both high-demand and high-wage jobs and continued education. The *CTE Revival* project is designed, as well, to overlap the requirements of both the Oregon Diploma and the Portland Public School diploma (only a slight variation), making the path towards high school graduation a natural extension of ongoing work. The assistance provided through the project for students to meet these requirements includes both career-related learning experiences supporting Essential Skills and personalization of the educational experience.

Academic supports are available to all students within the district, but additional resources are offered for students enrolled in the CTE and career-oriented programs. Graduation requirements include four credits in English, three in each Math, Science, and Social Studies. *CTE Revival* informs and supports students in meeting Oregon's Personalized Learning Diploma requirements (Education Plan and Profile, Career Related Learning Experiences and Extended Application) by helping them to better understand their personal and career interests, develop education plans, participate in a wide variety of career learning experiences both in and outside of the school and ultimately apply their knowledge and skills to create informed post-high school goals.

CTE Revival will provide career-related learning experiences within each of the two introductory classes that support reading, writing, and math applications (the essential skills required for graduation) as well as other essential skills including speaking and listening, critical thinking, using technology, demonstrating personal management and teamwork skills. Examples include: (1) preparation of status and end reports, (2) development of teamwork skills as members of student teams in project-based learning, (3) use of computer programs to develop diagrams, schematics, visual projections, presentations, and other communications, and (4) individual and small team project-based learning assignments requiring critical thinking, teamwork, time management, and presentation (speaking and listening) skills.

CTE Revival offers each participating student, first at three pilot schools then expanded to all comprehensive high schools, an opportunity to identify three areas of career and technical education interest to investigate (and potentially enroll in the second course to investigate the second areas of interest) and get an idea of its future.

This course plan is included in the *Personal Education Plan* developed by each student

E. Sustainability and Communications

CTE Revival is built upon collaboration across conventional boundaries through intentional partnerships with industry, labor, higher education, parents, and alumni. Program strategies that invite various constituencies to collaborate, plan, develop, co-teach, and mentor are indicative of the district's desire to be a true partner in career and technical education. The establishment of a Pathways/CTE Comprehensive Advisory Board and related Working Groups that meet regularly with set goals and criteria will ensure continuous engagement and enhance the district and each high school's public profile, while at the same time improving programs and expanding resources to improve opportunities for students.

CTE Revival will actively involve services partners (media, web development) to work with teachers and students at multiple high schools to develop and design a variety of program materials to highlight student achievement, partnerships and other accomplishments.

The school district's Cable Access TV Channel 28 will also team with *CTE Revival* to produce and air quarterly *Video Diaries* that feature PPS students participating in career learning activities both in the classroom and in the community. These efforts will include career learning opportunities for students to gain hands-on experiences. The videos will document the hands-on and experiential learning transpiring through innovative interactions and be available to all cable viewers in the area. All of these tools will be used in conjunction with existing communication networks to educate a variety of stakeholders, including students, parents and the

community. Each school will offer two paid half-day internships to experienced and successful pathways/POS seniors to serve as Senior Ambassadors, using and advancing their knowledge and skills while leading tours, coordinating their peers serving as student Ambassadors, and serving as a student voice on various Working Groups. Student Ambassadors will serve a pivotal role in communicating with their peers and middle schools.

CTE Revival will host events to celebrate and recognize students, teachers, and industry/labor partners. At year's end, students within pathways at each school will identify partners, both organizations and individuals, for special recognition within the classrooms and across the school.

The expectation through these efforts is to build relationships that will support students, teachers and programs, but also to invite long-term commitment to each school and to engage their respective networks to help secure future funding, resources, and equipment.

The district will also convene various stakeholders (students, teachers, industry/labor, postsecondary and others) to identify metrics for pre and post surveys to measure the effectiveness and success of *CTE Revival* pathways and CTE POS. This includes reviews and data from area businesses and employment markets to determine if the personnel needs within labor and industry are being met and to identify areas needing improvement.

The long-term sustainability of a program of study, expansions into summer and evening programs, increased access to CTE for underserved (including non-traditional) students, and the enhancement of other CTE opportunities requires

commitments from within the district and from external partnerships. Many of those partnerships are at the forefront of the effort, recognizing the need for a seamless transition for students through high school and into college and careers. Those partners are identified within this proposal. They bring support in human, material, and financial resources and they are each committed to students and the community for the long term.

The State of Oregon, the US Department of Education (and other federal departments), the Oregon Community Foundation, and similar institutions find that grant opportunities often include funding for students preparing for college and careers and for careers in science, technology, engineering, and math (STEM). As these opportunities continue to become available, the school district will continue to pursue them.

F. Activities and Timeline

The design of *CTE Revival* includes both required program activities and those included in the project design for students. The charts below provide details:

Project Management Responsibilities and Timeline: January 2015 – June 2015

Activities/ Responsible Parties	2014												2015						
	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	+
Notify Superintendent and Partners of award (Director of High Schools: DHS)	√																		
Hire Coordinator (C)	√	√	√																
Set up Advisory Board, Working Teams; schedule meeting dates (DHS, C, CTE Director [CD])		√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	
Review of Budget Status and Compliance (DHS, C,CD, Grant	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√		

Accountant [GA]																				
Report to ODE (DHS, C, CD, GA, Evaluator [E]).																				√

Goals and Activities Timeline: January 2014 – June 2015

Goal 1: Build new and strengthen existing innovations in CTE delivery and partnerships																				
Activity	2014												2015						Rationale	
	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J		+
Meetings with key project partners, bond & district	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Ensure smooth implementation of innovations
Design new Career Exploration Class	√	√	√	√	√	√	√													Expose all 9 th graders to career paths
Implement new Career Exploration Class								√	√	√	√	√	√	√	√	√	√	√		
Add innovative delivery through access to bond partnership work				√	√	√		√	√	√	√	√	√	√	√	√	√	√	√	Change CTE delivery to more experiential learning through bond work
Bring 16 new partners into class rooms by 2015								√	√	√	√	√	√	√	√	√	√	√	√	Access to post HS jobs, onsite teaching, shared CTE delivery
Goal 2: Build a fully integrated program that braids traditional academics with traditional CTE while incorporating resources from within the district as well as external sources																				
Develop curriculum for Tech Algebra					√	√	√													Strengthen math through real-world applications
Implement Tech Algebra								√	√	√	√	√	√	√	√	√	√	√		
Plan and															√	√	√	√	Teachers	

Implement EIPS						√	√	√	√	√	√	√	√	√	√	√	√	√	√	labor
Develop career experiences with bond contractor partnership	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Increase student participation in career learning experiences	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Mentors assist students with experiential learning
Build Working Groups to support each POS	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Working group members use resources to identify optimal learning for students

B. Evaluation

CTE Revival includes a robust evaluation that will determine the success of its model. Both qualitative and quantitative results will be collected providing formative data, allowing program revisions during the implementation, and summative data for a final report. The chart below describes the plan for evaluation based on the earlier identified project outcomes.

Measurable Outcome	Progress Marker	Evaluation Method/Tool and Timeline
<i>Improved and sustainable partnerships with business, industry, labor, and educational providers</i>		
Establish Advisory and Working Groups	Advisory Board established by 4/14; Working Groups in place by 9/14	Rosters of Advisory Board and Working Groups; Meeting minutes
<i>Improved student access to CTE programs of study</i>		

EIPS school teams establish 2 pathways programs	Pathways described & courses available in school course guides in Winter 2015	Pathways plans, course syllabi developed by Winter 2015
CTE Summer program for non-Benson students in 2014 (credit-bearing)	In Year 1 (2014) at least 30 non-Benson students participate	Rosters of students, attendance (teacher logs), records every summer
CTE Evening class for non-Benson students in 2014-15 (credit-bearing)	First course available in Fall of 2014; three hours weekly	Course is available for online enrollment for the fall of 2014
<i>Increased rigor in technical and academic content aligned to diploma requirements, industry-recognized technical standards, and employability skills</i>		
Students master industry-recognized standards after two years	Students on track after first year	Measure of self -assessment for ongoing student use (to be developed) and Industry Standards Checklist measure used by faculty after each program year.
Success towards ten Employability Skills	Specific work on at least four Stemnet skills after Year 1	Self-assessment of employability skills (TBD) and improvement in classroom grades on these skills
<i>Increased career opportunities for students</i>		
Students participate in SummerWorks program	20 PPS students will secure paid internships	Report from SummerWorks to Coordinator
Students participate in the ACE Mentoring Program	30 PPS students will complete ACE	Report from ACE to Coordinator
<i>Increased career opportunities for students</i>		
Bond contractors will be involved in high school CTE programs	Within first term, bond contractors are present and working with students in 7 high schools	Student presentations after Year 1 illustrate student work with contractors

In addition to these specific measures, *CTE Revival* will regularly request feedback from stakeholders, including parents, community members, teachers, administrators, partners, members of Advisory and Working Groups, and students. All feedback will be used to improve the program and services to the students and to better meet the goals and outcomes identified above.

PARTNERSHIPS

The revitalization of career pathways and CTE is forged through partnerships at both the district and school level. Partners will be engaged in this effort to move the district and schools from *good* to *great* and will take leadership roles, along with teachers, parents, and local industry and labor eager for a deep pool of well-qualified and prepared applicants for high-need and well-paying jobs. Area colleges are ready to advance students in technical and academic skills; whichever direction they plan to go.

A primary partner for the past nine years has been the *Portland Workforce Alliance*, instrumental in developing robust career learning experiences for the district's students. PWA is comprised of twenty-seven industry and labor professionals. The organization hosts the annual NW Youth Careers Expo that is attended by over 2,000 students each year, and has been a key player in the district's career focused initiatives including the Blue Ribbon Taskforce for Career Learning and the District Pathways Advisory Council. PWA is committed to continuing its partnership with the district, focusing on expanding the number and kind of career learning activities.

The district will expand its partnership with Worksystems, an organization whose 34 member board representing industry, labor, government and community guides investments for the regional workforce system. Part of their portfolio includes BizConnect, an online tool that connects regional businesses in Portland, Multnomah, and Washington counties with schools through an online data system to help students become better prepared to enter tomorrow's workforce. Worksystems will support the district by expanding industry connections in the target areas of Manufacturing, Clean Tech, and Healthcare, to enhance and expand the number and kinds of career learning

opportunities available for students and teachers.

Worksystems also oversees SummerWorks, a public/private partnership that supports youth through their first work experience and gain critical workplace skills that can only come through real work experience. During the summer of 2014, Worksystems and the district will partner to fund and manage a SummerWorks internship pilot program for 20 students. Students will attend a *CTE Revival* class during the morning then participate in SummerWorks for work-readiness training, internship placement, ongoing coaching, and networking opportunities during the afternoon

Another partner directly and continuously involved in the development of career learning in PPS is the ACE (Architecture, Construction Management & Engineering) Mentor Program. Directed by a Board of twenty-two individuals from some of the largest architecture, construction and engineering companies in the metro area, ACE provides students with a 12-week after school program providing students with a hands-on introduction to careers in Architecture, Construction Management and Engineering. Their time is provided to the project as an in-kind contribution.

As a part of *CTE Revival*, leaders from the Oregon Tradeswomen have designed multiple activities for young women in the focus areas of construction and electrical technology including a construction club for girls, and will work with the district to develop a variety of strategies to engage middle school girls.

CTE Revival will establish an umbrella Advisory Board comprised of representatives of industry, labor, post-secondary, and community to provide oversight and guidance, set goals, address sustainability, secure resources, and help plan how

programs across the district will evolve over time. *CTE Revival* will expand resources to each current and prospective pathway and/or POS through the development of individual Working Teams that will focus on the quality, sustainability, business relationships, opportunities for students, and growth of their respective areas. Members of the Working Teams will take a hands-on approach to complement to work with schools and teachers, ensuring the active classroom and off-site involvement of labor and industry, higher education.

CTE Revival recognizes that the strength, stability, success, and sustainability of the career pathways and CTE rests on the relationships between the school program and the supporting partnerships formed within the community. The chart below illustrates the broad range, levels of commitment, and involvement of many of the projects partners.

Type of Partner	Partner	Involvement	Timeline & Support
Post-Secondary	Portland Community College	Direct collaboration on project development, Advisory and Working Teams, student tutors	Long-term sustainability, move students into higher education; in-kind time
Alumni & Parent	Alumni & Parent groups from each PPS high school	Direct collaboration on project development, Advisory & Working Teams	Long-term sustainability, Recruitment, in-kind time
Professional Organization	Women in Trades	Input on project development, Advisory Teams, support of summer Construction class	Long-term sustainability, Annual summer support, in-kind time
Local businesses	Bond Contractors*	Direct involvement in classrooms, curriculum, and onsite experiences	Through 2020 on bond work followed by other district projects; contractual support
	Industry and Labor Contractors**	Advisory, Work Teams, provide speakers, host tours, in-house critiques	Long-term sustainability, ongoing involvement in classrooms; in-kind time
Non-profits	Portland	Input on project development,	Long-term sustainability,

	Workforce Alliance	provides opportunities for students, represents labor and business organizations	In-kind time, area-wide commitment
	Portland Metro Stem Partnership	Input on curriculum for career exploration class; provides opportunities for students; represents STEM businesses	
	ACE Mentor Project	12-week after-school mentoring program for students in Architecture, Construction Management & Engineering	
Community Leaders	Work Systems	Oversee summer program, partnership with the City of Portland; manages Biz Connect (employer data base for career learning experiences), Advisory Team	Long-term sustainability, direct access to employers, in-kind time and support

*Examples include: P & C Construction Company, FFA Architecture, Oh Planning + Design, and Solarc

**Examples include: Group Mackenzie Architects, THA Architecture

BONUS SECTION

Career and Technical Student Organizations

CTE Revival provides high schools with the opportunity to develop and grow interest in careers and technical education and build and participate in the student organizations that support them. The district understands the value of providing multiple connections for students to critical skills. *CTE Revival* recognizes that student organizations are a way to augment the classroom by teaching employer-desired soft skills such as teamwork, critical thinking, leadership, communication and responsibility, The building of new pathways and POS, strengthening partnerships with industry, labor and higher education and the establishment of a district-wide Advisory Board and related Working Groups, will provide a framework for schools to explore resources and

establish CTSO programming in every comprehensive high school.

The *CTE Revival* Coordinator will assist in the development of CTSOs at each of the high schools by:

- providing information to students in the Career Exploration courses with presentations, materials, and the use of student Ambassadors representing CTSOs from Benson High School,
- training CTE teachers interested in becoming CTSO sponsors to maximize opportunities for students to develop their technical skills, but also progress in their academic skills,
- utilizing local practitioners - contractors, artists, allied health specialists, and STEM professionals – to visit classes and promote student organizations and the leadership skills they develop.

Middle School Component

CTE Revival recognizes the need to introduce middle school students to career pathways and CTE before they reach high school. Towards that end, the program includes the following components:

- Partner with local service providers such as Sun Schools to develop a summer career learning experience for mid-level students
- Coordinate with each high school's emerging student *Ambassadors* Program to facilitate visits to 42 middle-and K-8 schools middle-and K-8 schools. *Ambassadors* will discuss their school's pathways and programs of study and career goals and the opportunities afforded them through mentorships, internships and working with labor and industry specialists.

- Introduce *BizConnect*, the online employer database tool to mid-level counselors and teachers to enable them to contact industry and labor partners directly to schedule career learning experiences such as guest speakers and career fairs to inform students about careers.
- *Benson Tech Show*. The annual Tech Show is an exhibition of the success of Benson's progress in many arenas over the year, focusing on CTE. Middle school students will receive invitations to attend this event.

Out of School Time Programming

- *CTE Summer Sessions.* Offered as elective, credit-bearing courses, three-hour daily sessions for three weeks (45 in-class hours) options in specific CTE programs of study. Faculty include highly-qualified teachers plus bond contractors, labor and industry specialists. Courses include one construction-oriented course reserved for young women. Program is developed and implemented in partnership with the Portland Metro Stem Partnership. These courses are available to non-Benson district students with no access to these CTE opportunities at their home school.
- *CTE Evening Program.* Similar to the Summer Sessions, Evening Program courses meet weekly for three hours throughout a full term. Students may enroll for more than one course per term. Enrollment is limited to non-Benson district students.
- *ACE Mentorship Program.* *CTE Revival* will work closely with the Portland Workforce Alliance to increase the number of students participating in this off-site mentoring program.
- *Construction Girls Camp.* In support of non-traditional enrollment, the district will partner with the Oregon Tradeswomen to establish a Girls Construction Club at Wilson High School. The club will meet 12 times during the grant, and provide hands-on construction-based activities, include basic math and measurement, construction basics (such as measuring wood, using a skill saw, and hammering nails), tools use and safety, as well as team-building activities. The Club will also be involved in the development and delivery of after-school workshops at feeder middle schools

Focus on Regional, Statewide and System Changes

CTE Revival includes several innovative projects and strategies that will serve as pilots and models for other schools within the district as well as other districts and schools and districts within the region. As these projects and strategies are fully implemented, evaluated, revised as needed based on evaluation, and scaled up within the district, the information will be shared through reports, presentations to local groups (including industry and the community) and participation at local conferences. Teams sharing this information will include students as well as classroom teachers and partner practitioners.

Specific examples of programs and strategies that *CTE Revival* will initiate and expect to scale up to additional sites include:

- pilot program at three comprehensive high schools for Career Exploration, developing two courses, each focusing on three career pathways; students can enroll in either (or both) course taught in alternate years. Teachers will participate in professional development through the Portland Metro STEM Partnership and Benson High School faculty and co-teach with area practitioners, including bond contractors.
- integration of CTE and traditional academics. The district's comprehensive high schools will work with Benson High School to replicate their successful Tech Geometry and Tech Algebra curricula into the course selections for students. This process will be closely monitored with resources provided to other classes (i.e. science) to follow.
- use of digital device to maximize personalized learning in CTE and college and career advancement. Students in the schools piloting the Career Exploration class will have access to iPads and CTE-related apps to expand their resources and learning.

Science, Technology, Engineering, and Mathematics (STEM)

CTE Revival represents a total integration of all of the components within STEM: Science, Technology, Engineering, and Mathematics. Evidence of how these elements are interwoven throughout the project includes:

- Development and implementation of Tech Geometry co-taught by CTE faculty and math faculty. Students will learn the direct integration and application of hands on technical experience with the state standards of geometry.
- Curriculum development and professional development for teachers through the Portland Metro Stem Partnership. This partnership will bring higher education and the local workforce into the feedback loop to ensure accurate, timely, and relevant material and opportunities for both students and CTE teachers to ensure a high-quality learning experience and post-secondary success.
- Introduction of real construction projects into pathways and CTE classrooms through contractual agreements with bond contractors. Work Groups will enable teachers to collaborate with contractors in the development of curriculum and site-based experiences that require knowledge of science, technology, engineering, and mathematics.