

The Masonry Foundation Grant Application

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Project Description

Every construction trade is finding it more difficult to secure a trained workforce. As the state association for the masonry industry, the Masonry Institute of Iowa (MII) has worked to increase awareness of the masonry trade and masonry training in Iowa high schools and community colleges. With the current labor shortage, MII has been examining other alternatives in workforce development, including a partnership with the Iowa Prison System to bring masonry training into the untapped prison population.

Project Objective

To create a workforce development initiative within the Iowa Department of Corrections that introduces and trains current inmates in masonry using the NCCER masonry curriculum. Through this initiative, our goal is to increase the Iowa masonry workforce and provide sustainable career options for inmates upon release.

Background Information

NCCER: The National Center for Construction Education and Research (NCCER) is a not-for-profit 501(c)(3) education foundation created in 1996. It was developed with the support of more than 125 construction CEOs and various association and academic leaders who united to revolutionize training for the construction industry.

Iowa's Prison System: The Iowa Department of Corrections (DOC) currently has nine prisons that house a total of nearly 9,000. Recidivism, or the probability of a convicted criminal to reoffend, is more than 37% in the Iowa prison population. One of the ways the DOC is working to lower this statistic is with quality training programs to help inmates become employable once released.

Currently, the Department of Corrections offers five skilled trade apprenticeships within its system with nearly 350 inmates going through skilled trades training. The instructors for these programs are full-time DOC employees. At this time, the prison system does not have funds to hire outside instructors to teach additional skilled trades, nor do they have anyone qualified to teach masonry within the system at this time. Because of this lack of funding, the prison system is looking to partner with industry to offer training.

Masonry Institute of Iowa (MII): MII is the only non-profit association for masonry promotion in the state. Membership includes contractors, suppliers and distributors, and one of the Association's initiatives is workforce development. MII is 60 members strong including several donors to the MCAA Foundation. MII is currently working towards NCCER accreditation.

Scope of Project

Inmates incarcerated in the Iowa prison system will have the opportunity receive masonry training. Once the inmate is released, MII will work to place them as a bricklayer. Mason contractors that support the program with volunteer hours will have first opportunity in hiring. Because MII member contractors do not cover every area of the state, this will be an initiative that relies on all mason contractors around the state. In conversations with mason contractors, they are willing to hire applicants who have been incarcerated. Every effort will be made to place a bricklayer on the jobsite, but the inmate must also hold themselves accountable for their

job performance to keep employment. There are also several tax credits and other incentives for employers to hire those with a record; MII will make sure to educate prospective employers on the benefits.

MI will start by introducing the NCCER masonry training program in one prison, Anamosa State Penitentiary, which houses approximately 950 inmates and has the capacity to host a masonry training program. The program will be facilitated annually, and it will take three to four years for a student to complete the entire curriculum.

The NCCER masonry training program includes:

- 70 hours of Core Curricula
- 123.5 hours of Level 1 Masonry
- 152.5 hours of Level 2 Masonry
- 168.5 hours of Level 3 Masonry

All Level 1 NCCER curriculum includes Core Curricula, a 70-hour introduction to the skilled trades. This introduction will help give a baseline to those entering the training that have never worked in construction. Each module will include a ten-question exam and performance profiles (that tests actual skill) to pass that module. After each level, the student will receive a certificate of completion and a transcript of completed NCCER courses.

Core Curricula and Level 1 Masonry Module descriptions are listed below (in gray).

All inmates will be taught the same material no matter who provides the instruction. NCCER supplies the PowerPoints, teaching lessons and tests so that instruction stays parallel no matter who is teaching. Some of the material will need to be taught in person and some can be taught remotely as recorded webinars. MI will create recorded webinars for several of the modules, so an instructor does not have to be present and the inmates can watch and study on their own time. MI is currently working with the Department of Corrections to create a plan on which modules can have an online/self-study component. Training will be done in the prison system using space (classroom included) provided by the Department of Corrections.

The Department of Corrections will register this program with the Department of Labor and is currently working to file the paperwork. For it to be a registered apprenticeship program, there must be 2,000 to 8,000 hours of on-the-job training and instruction, depending on the length of the apprenticeship. Once coursework has been completed, the inmate will need to have additional on-the-job training. The plan will be to use one of the older prisons as a job site with opportunity at other prisons for potential work release programs. At this time the goal will be to start the Level 1 training at Anamosa Penitentiary. As interest and budget allows, the goal will be to increase the training at one or two additional locations.

If an inmate will not be incarcerated for the length of time to complete the entire training program, that inmate may start the program and study for as long as they are incarcerated.

Implementation timeline:

- Summer 2019: register apprenticeship with the state

- Fall 2019: offer Core Curriculum/ host masonry job fair for inmates to learn about masonry
- Spring 2020: offer Level 1 Masonry
- Spring 2021: offer Level 2 Masonry along with Level 1 Masonry
- Spring 2022: offer Level 3 Masonry along with Level 1 & 2 Masonry
- Spring 2023: on the job training as well as all levels of masonry training

MII is seeking a grant from The Masonry Foundation to supplement the cost of instruction (along with the industry volunteering hours to teach). MII will use money from the grant in combination with MII and partner resources to get the program launched. With the success of finding more workforce, the goal will be to make the program self-sustainable with industry support going forward. Another opportunity will be to identify and recruit inmates who were former bricklayers to help instruct the students, especially to lead bricklaying practice times.

Summary of Qualifications

Masonry Institute of Iowa, Director: Jenny Stephenson, Masonry Institute of Iowa, will be the point of contact for the program and the liaison with the Department of Corrections and the masonry industry. The Masonry Institute of Iowa is currently working on accreditation with NCCER and Jenny is already a Master trainer with the NCCER to certify craft instructors and coordinate NCCER paperwork.

Mark Schmit, Instructor: Mark Schmit is currently an industrial technology instructor at Hampton-Dumont HS. He had the only masonry program at the high school level in the state. Prior to teaching, Mark was an independent contractor for more than twenty years. During the summers, he will be the primary instructor at the prison system.

Department of Corrections, Partner: The prison system has several highly skilled instructors that will teach the core curriculum. Dane Sulentic will be the point of contact at the Department of Corrections. The Department of Corrections will coordinate signing up inmates for the program, logistics within the prison system and scheduling of the training times.

Other Partners/Volunteers: Mason contractors and suppliers throughout Iowa will be supporting this initiative and donate their time and materials for training. MII will also recruit retired bricklayers to donate time to instruct.

Anticipated Impact

Though this program is only being implemented in Iowa, it will be a good model for other states to replicate and show how industry is leading the training in the prison system. Masonry is a highly skilled craft and not everyone in the construction industry can pick up a trowel and start teaching – many instructors in the prison system teach a variety of construction, however, none teach masonry. Because of this, MII and its partners have the opportunity to introduce a skilled trade to the prison population that otherwise would not have the chance to explore as a career.

Budget

MII is asking for \$37,000 over five years with approximately \$9,000 needed the first year to jump start the program. Approximately \$2,000 would be for equipment while the rest of the funds will be used to pay instructors. Over the course of five years, the hands-on instruction costs will continue to increase as students continue to work their way through the levels, and new inmates will start the program. Instruction cost is calculated at \$35/hour.

- Seedorff Masonry, Inc.: 40-60 hours a year
- Other mason contractors: donation of time as needed
- TCC Materials: 24 hours a year
- TCC Materials: practice mortar – up to \$500 per year
- King's Material: donation of brick and block – up to \$750 per year

Requested Payment Procedure

MII will handle finances, including the distribution of payment for instructors. Instructors will become an independent contractor of the MII. MII would like disbursement annually as follows:

- Year 1: \$9,950
- Year 2: \$5,200
- Year 3: \$6,250
- Year 4: \$8,000
- Year 5: \$8,000

Reporting Schedule

Semi-annual updates will be provided to The Masonry Foundation and will include breakdown of instructional hours as well as data on the student training levels (test scores/performance profile data, etc). It will take approximately three to four years for an inmate to complete the masonry training within the prison system. Within a five year timeframe, there will be trained bricklayers entering the workforce with many still going through the program at different levels. Reporting for five years will be sufficient time to show results.

Core Curricula Objectives

00101-09 Basic Safety (12.5 Hours)

Complies with OSHA-10 training requirements. Explains the safety obligations of workers, supervisors, and managers to ensure a safe workplace. Discusses the causes and results of accidents and the impact of accident costs. Defines safe work procedures, proper use of personal protective equipment, and working with hazardous chemicals. Identifies other potential construction hazards, including hazardous material exposures, welding and cutting hazards and confined spaces.

00102-09 Introduction to Construction Math (10 Hours)

Reviews basic mathematical functions and explains their applications to the construction trades. Explains how to use and read various length measurement tools, including standard and metric rulers and tape measures, and the architect's and engineer's scales. Explains decimal-fraction conversions and the metric system, using practical examples. Also reviews basic geometry as applied to common shapes and forms.

00103-09 Introduction to Hand Tools (10 Hours)

Introduces trainees to hand tools that are widely used in the construction industry, such as hammers, saws, levels, pullers, and clamps. Explains the specific applications of each tool and

shows how to use them properly. Also discusses important safety and maintenance issues related to hand tools.

00104-09 Introduction to Power Tools (10 Hours)

Provides detailed descriptions of commonly used power tools, such as drills, saws, grinders, and sanders. Reviews applications, proper use, safety, and maintenance. Many illustrations show power tools used in on-the-job settings.

00105-09 Introduction to Construction Drawings (10 Hours)

Familiarizes trainees with basic terms for construction drawings, components, and symbols. Explains the different types of drawings (civil, architectural, structural, mechanical, plumbing/piping, electrical, and fire protection) and instructs trainees on how to interpret and use drawing dimensions. Four oversized drawings are included.

00107-09 Basic Communication Skills (7.5 Hours)

Provides trainees with techniques for communicating effectively with co-workers and supervisors. Includes practical examples that emphasize the importance of verbal and written information and instructions on the job. Also discusses effective telephone and e-mail communication skills.

00108-09 Basic Employability Skills (7.5 Hours)

Identifies the roles of individuals and companies in the construction industry. Introduces trainees to critical thinking and problem solving skills and computer systems and their industry applications. Also reviews effective relationship skills, effective self-presentation, and key workplace issues such as sexual harassment, stress, and substance abuse.

NEW! 00109-09 Introduction to Materials Handling (5 Hours)

Recognizes hazards associated with materials handling and explains proper materials handling techniques and procedures. Also introduces materials handling equipment, and identifies appropriate equipment for common job-site tasks.

MASONRY LEVEL 1

Details/objectives for Level 1 (more details for the modules) :

https://www.nccer.org/docs/default-source/Course-Planning-Tools/masonry_4e_l1_ceps.pdf?sfvrsn=86700e4f_0

Introduction to Masonry (12.5 Hours)

Provides information about basic masonry materials, tools, techniques, and safety precautions; explains how to mix mortar by hand and lay masonry units; and describes the skills, attitudes, and abilities of successful masons.

Masonry Safety (15 Hours)

Describes how to identify the common causes of accidents and the hazards associated with masonry tools, equipment, mortar, and concrete. Provides information on using personal protective equipment, working safely from elevated surfaces, properly using masonry tools and equipment, and handling masonry materials safely.

Masonry Tools & Equipment (15 Hours)

Describes a variety of hand tools, measuring tools, mortar equipment, power tools and

equipment, and lifting equipment that masons use on the job, and explains how to use these tools correctly and safely. Provides instructions for assembling and disassembling scaffolds.

Measurements, Drawings, and Specifications (10 Hours)

Reviews the calculation of distances and areas common in masonry work, describes the information found on residential construction drawings, and explains the role of specifications, standards, and codes.

Mortar (10 Hours)

Explains the types and properties of mortar and the materials used in the mixture, including admixtures; provides instructions for mixing mortar by machine; and describes how to properly apply and store mortar.

Masonry Units and Installation Techniques (60 Hours)

(Module 28105-13) Describes characteristics of block and brick; how to set up, lay out, and bond block and brick; how to cut block and brick; how to lay and tool block and brick; and how to clean block and brick once they have been laid. Provides information about masonry reinforcements and accessories used to lay block and brick professionally and safely

To learn more about Level 2 & 3 Masonry: https://www.nccer.org/docs/default-source/Course-Planning-Tools/c-masonry.pdf?sfvrsn=bf700e4f_0