Safety and Health Investment Projects
FINAL REPORT REQUIREMENTS

The purpose of the final report of your SHIP project is to:

1. Evaluate and document the achievements, challenges, and shortcomings of the project for the constructive benefit of others interested in learning from SHIP projects; and
2. Provide the Division of Occupational Safety and Health with information that shows:
   a. The outcomes specified in the project application were met; and
   b. The grant was used for the purpose(s) for which it was approved and in accordance with relevant WAC rules and any special conditions or requirements; and
   c. The outputs of the project have been disseminated as specified in the application.

The report format has four sections:

1. Cover Sheet
2. Narrative Report (part I)
3. Financial Information (part II)
4. Attachments (part III)

Please provide complete and detailed information in the final report. If you have questions, please call your SHIP grant manager.

REMINDER!!: All products produced, whether by the grantee or a subcontractor to the grantee, as a result of a SHIP grant are in the public domain and can not be copyrighted, patented, claimed as trade secrets, or otherwise restricted in any way.

SAFETY AND HEALTH INVESTMENT PROJECTS
FINAL REPORT

Health Hazards in Residential Construction Video Training Program

Grant # **2015XA00306**

February 1, 2016 to November 30, 2016

Kris Alberti
kris.alberti@gmail.com

Northwest Independent Contractors Association

12/05/16

Kris Alberti

Funding and support for this project has been provided by the State of Washington, Department of Labor & Industries, Safety & Health Investment Projects.

NICA is solely responsible for the content of and views expressed in this report and related materials unless they have been formally endorsed by the Washington State Department of Labor and Industries.

PART I

Narrative Report

Abstract:

Present a short overview of the nature and scope of the project and major findings (less than half a page).

The project was to develop a fall protection video to help educate residential contractors understand best practices for personal fall protection systems and related anchor systems. Many products and systems were covered to show contractors solutions for common fall protection challenges. Concepts like fall distance, swing fall, and rescue plans were covered in the video. The video was designed to supplement classroom training that covered compliance requirements of fall protection. The goal was to make a video that could be used in other classes, such as Competent Person Fall Protection and OSHA 10.

The major finding based on the materials created and surveys from participants in the trainings presented at Contractor Training Days, the Governor's Safety Conference, and Home Builders Associations are as follows:

- Contractors struggle to find resources available for training.
- The visuals were especially helpful for contractors needing alternative:
    - Anchor Placement Systems
    - Retractable Devices
    - Anchor in alternative locations
    - Harness Kits and Fitted Harness Use
- Attendees overwhelmingly attended training to prevent falls on jobsites and for the "Competent Person Card". Providing certificates of attendance increases participation in almost all of our training programs.

The Fall Protection Video and Competent Person training delivered through this program addresses all those findings.

Purpose of Project:

Describe what the project was intended to accomplish.

Our Purpose was to provide an ongoing training tool to reduce injuries and fatalities from falls.

The "Don't Hit the Ground" video becomes a resources for contractors to present a serious of challenges and solutions in Fall Protection for Residential construction. The focus was on the use of Personal Fall Protection systems due to their availability, cost, and flexibility in residential construction. Though there are some very good Commercial Fall Protection videos available, few of the concepts and products could be used in residential construction. Surveys indicated that the 'weak link' in Fall Protection is the lack of anchors.

Our video demonstrates the devastating impacts of a fall in construction by sharing a powerful testimony of the impact a fall can have on a family. Throughout the video, we emphasize how proper personal fall protection equipment use can prevent such a tragedy.

Challenges were paired with solutions throughout the video. Examples of these are:

New Construction Truss Installation – Use of the Safety Bar and Pre Installed Anchors

Remodel or Renovation work – Retrofit anchor and proper installation

No Anchors for later trades like Painters – Under eave or alternate placement anchor install

Concepts were illustrated to reinforce safety concepts. Examples of these are:

Fall Distance – slack over edge, deceleration distance, and height of worker were illustrated with a manikin dropping straight down off a roof

Swing Fall – injuries, additional fall distance, and forces involved were illustrated with a manikin fall at an angle from a roof

Rescue Plans – stabilizing a worker at height and getting treatment for a self-rescued worker were demonstrated in the video

Training – Training scenarios were discussed and demonstrated throughout the video.

Equipment and Inspection Techniques were demonstrated in the video: Examples of this was:

Fall Protection Kits that included an anchor, lifeline, deceleration device and harness were shown.

Several different types of harnesses, sizes, and related equipment was shown.

Equipment inspection and donning procedures were discussed in a step by step fashion.

Retractable equipment use was demonstrated in several settings.

A horizontal life lines was shown properly installed on a single family residence.

Proper anchor installation, including use of the right fasteners were shown several times.

Statement and Evidence of the Results:

Provide a clear statement of the results of the project include major findings and outcomes and provide evidence of how well the results met or fulfilled the intended objectives of the project.

We provided our 19-minute video both through live training at Contractor's Training Days and online posted at NICASAFETY.COM and on NICA's YOUTUBE channel.

195 people attended our Fall Protection Competent Person classes at the Contractor Training Days, the Governor's Industrial Safety and Health Conference, and special events held at HBAs around the state. Students represented a total of 104 different companies. Additional events are being planned in Tumwater to use the material after the final report is submitted.

Three of the contractors involved with our project immediately started using special anchors, harnesses, and retractable equipment that was shown in the video. During the competent person training, over fifty-nine workers commented that using retractable lines would be a solution to a common problem they faced. Increasing the use of fall restrain equipment in residential construction could significantly reduce the injuries related to falls that can still happen be using "fall arrest" equipment.

Survey results are attached showing the majority attendees prefer video and hands on for their training, and our video "Don't Hit the Ground" was ranked as a 5 (highest on a 1-5 scale) for the quality of the video for training. Many were attending fall protection training for the first time.

The evidence shows we identified a need in residential construction and remodel industries, as the majority noted the main reason they attended was out of concern about falls on the job site. The biggest challenge to workers actually using Fall Protection is either no anchors to tie to or not enough installed. Besides seeing solutions to this and other challenges in the video, we also brought many products and solutions to the training events to have attendees be able to physically touch and check out how they could be used in their specific situations. At several events we also had reps from 3M and Super Anchor to demonstrate products and answer questions.

Measures to Judge Success:

If relevant, state what measures or procedures were taken to judge whether/ how well the objectives were met and whether the project or some other qualified outside specialist conducted an evaluation.

Attendees at the Fall Protection Competent Person classes were given tests to determine their understanding of key concepts. The majority of the students scored over 80% on the final test, though noting verbally they could not have verbalized the fall distance concept.

Other training providers, such as Seattle Community College and Spokane Home Builders Association requested to use the materials in their construction education programs.

The survey produced the following measures of success:

The video was ranked 4 or 5 (out of 5) by all who viewed it in the competent person trainings.

The three most common reasons to attend the competent person training in order were:

- Concerned about falls on the jobsite
- Wanted Competent Person Card
- Cost was free

The majority of those taking the survey after the video found these as valuable solutions for fall protection challenges for their companies:

- Anchor placement plans
- Retractable equipment
- Anchors underneath eaves or dormers

The class was primarily attended by Residential Contractors, the majority of which also did Residential renovations.

The biggest current challenge on job sites for fall protection is lack of anchors to connect to.

Relevant Processes and Lessons Learned:

Specify all relevant processes, impact or other evaluation information which would be useful to others seeking to replicate, implement, or build on previous work

AND

Provide information on lessons learned through the implementation of your project. Include both positive and negative lessons. This may be helpful to other organizations interested in implementing a similar project.

Process 1: Research

Initial phase for the project was general on fall protection. The process included internet research on osha.gov and related fall protection websites. We also reviewed existing commercial based fall protection training videos available on youtube.com. Additional research confirmed the lack of residential construction solutions available in a video format. At the State level, we reviewed the WAC 296-155 part C-1 and all of the lni.wa.gov produced material on fall protection.

We reviewed a fall rescue plan in the video and in class from the perspective of our 7 years of experience in fall protection training and emergency medical response and considered the input from our technical expert before suggesting the rescue plan in the video. We found in live training, self-rescue using the L&I techniques was almost impossible for injured employees. This is why we demonstrated an alternate 'stabilization' on a ladder method. We also practiced it with the help of Ellensburg Solar and found it reasonably doable in the field.

The script was developed to address anticipated concerns in the field and reviewed by a technical expert, Paul Lagerstedt from Super anchor safety. After initial technical review, we divided the script into valuable concepts and shot lists based on expected locations and trades.

Process 2: Filming

We realized fall protection filming would require additional safety considerations for the film crew also. We also planned to use actual contractors working in their trades to show the true practical value of the concepts and products we were using. This involved flexibility in the logistics as we had to change our filming schedule to accommodate the job site conditions and schedules of the contractors.

While traveling to developments for filming, we found many other contractors were not in compliance and that permanent anchors were found on less than 10% of new construction. This illustrates the challenges trades like gutter installers, painters and siders have as they work on the buildings. Even if the framers and roofers did use anchors, they did not leave permanent ones for the following trades and the home owners. Our informal consensus is that DOSH encouraging General Contractors to include permanent anchors in the design could be the single most important thing that could be done to prevent falls in new construction.

Having enough footage was key in producing a successful video. Shooting multiple angles and camera shots allowed for easier editing and better visuals of the concepts presented. Shooting various scenarios allowed for technical review edits to be easily done.

We also saw the need to avoid tunnel vision when filming and be aware of other activities happening in the shots. This includes having enough equipment to make sure other contractors or actors have the proper personal protective equipment on and are in compliance while performing work. We took extra care to make sure other activities, though not part of the video purpose, were performed appropriately. An example of this was proper ladder use always being shown, including the 3' extension over the working surface and securing the ladder at the top and bottom.

Using our own in house crew to film was a more efficient way to create these products. Using the script and "storyboarding", we were able to establish shots based on step by step processes.

Having a technical review (by a subject matter expert) of the footage before filming at each location helped reduce lost footage due to technical inaccuracies.

Process 3 Presentation and Feedback

After the draft video was produced, the technical review gave suggestions to improve the video. Part of our process was to hold back enough filming budget to make any needed changes in the video. Though we would have made any required changes automatically, we even tried to incorporate suggestions by the technical reviewer.

NICA started using the video in Contractor Training Day presentation on Fall Protection Competent Person. Attendees were presented a survey and gave verbal feedback on the video during class.

This type of feedback was an invaluable part of the process. Getting feedback from contractors on the need for types of information before producing a final product turned out to be one of the most important lessons learned in this grant process.

Our presentation at the Governor's Safety Conference was attended by one of L&I's arbitration managers, who commented on the 'safety first' aspect of our teaching. She also mentioned how the training could be useful to contractors receiving violations for the fall protection standard.

SUMMARY OF LESSONS LEARNED:

Fall protection training will continue to be needed. Having good quality materials that motivate workers to use fall protection is extremely important. Contractors also need practical solutions to apply to their jobsites

In house filming is overall more efficient. Combining technical experts and creative partners in the same process lead to easier edits, better visual quality and an overall better product. Working with actual contractors, shooting a variety of locations, focusing on techniques and products for solutions, and covering concepts all added to the effectiveness of the safety video.

Creating a script and then storyboarding the materials is a helpful process.

Using 'DRAFT' material in classes and getting feedback from the audience was invaluable to make better products. This process allows both safety professionals and journey level workers the opportunity to comment on the video before its release.

Offering a Competent Person card or some sort of certification is helpful in getting attendance at training to events, maximizing the impact of SHIP created materials.

Involving technical review at the point in the process you can shoot additional footage is a crucial part of the process.

Product Dissemination:

Outline of how the products of the project have been shared or made transferrable.

A link to the video will be available at www.nicasafety.com. The video will be up on our NICA Safety YouTube channel.

We will continue to intermittently offer classes though Contractor Training Day, Home Builder's Association events, and Construction Safety Day using these materials.

Feedback:

Provide feedback from participants, trainees, individuals who have used your products/processes, as well as any reports from an independent evaluator on the project.

Please see above survey summary.

Project's Promotion of Prevention:

Explain how the results or outcomes of this project promote the prevention of workplace injuries, illnesses, and fatalities?

The video was designed to promote the prevention of workplace injuries and fatalities by using personal stories and specific solutions for fall protection. Products and training scenarios shown in the video were not available in safety trainings anywhere else before, and now with this video, contractors can visualize how to use and install them.

Having the video available on the NICA SAFETY CHANNEL on youtube.com and through L&I will expand the accessibility to quality RESIDENTIAL fall protection training and help contractors find best practices to improve their safety programs.

Other safety and training providers can now incorporate the video into their fall protection and even OSHA 10 training.

Uses:

How might the products of your project be used within the target industry at the end of your project?

Is there potential for the product of the project to be used in other industries or with different target audiences?

Contractors will have the ability to go online and download our products to provide in-house training on the topics covered. They will also have access to live training at one more upcoming Contractor Training Day in Bellingham in December of 2016. We are providing at least one additional training for Competent Person Fall Protection in Tumwater, WA in February of 2017 that was not included in the grant funding.

Safety training providers will also have open access to the products with the ability to use them in a variety of training programs.

Property management, education facilities, health care facilities and government agencies may also find the videos and training products useful.

Organization Profile:

For awarded organizations, to include partners and collaborators, provide a brief description of each organization. Mission, vision, and purpose for each of the organizations who applied (this includes partners and collaborators) for the grant.

Northwest Independent Contractors Association (NICA) is a non-profit 501(c) 6 trade organization formed in 2005 to provide training and compliance help for contractors in the Northwest. Since 2005, NICA has trained over 2000 individual students in safety, over 500 in business topics, and over 600 in Disaster Site Work safety and over 200 in GHS HAZCOM training. We also run a soft floor apprenticeship program through the Washington State Apprenticeship Training Council, and are an EPA/WA Dept. of Commerce accredited Certified Lead Renovator and Dust Sampling Technician provider. NICA provides HAZWOPER training and are a Medic First Aid/ASHI training center. NICA is dedicated to helping small businesses take on issues too daunting, complex or expensive to take on by themselves. We pool the resources of our members to provide easy to use compliance and training tools, such as our Small Business Basics book, Safety Calendar, and other training programs that give real world, simple solutions for meeting regulations and requirements.

Successful SHIP grant programs include:

- Residential Safety Training and Plan

- Disaster Site Worker Training Program and Curriculum
- GHS HAZCOM Video and Curriculum
- Health Hazards in Construction Video and Curriculum

NICA staff are regular presenters for organizations around the State. We have also presented at the

- Contractor Training Days
- DOSH Symposium
- Governor's Safety Conference
- Construction Safety Days
- Home Builders Association Events

NICA strives to use SHIP produced materials in as many outreach programs and events even after the initial projects are complete.

Additional Information

Project Type

☐ Best Practice
☐ Technical Innovation
X Training and Education Development
☐ Event
☐ Intervention
☐ Research
☐ Return to Work
☐ Other (Explain):

Target Audience: Statewide WA

Languages: English

Industry Classification (check industry(s) this project reached directly)

☐ 11 Agriculture, Forestry, Fishing and Hunting
☐ 21 Mining
☐ 22 Utilities
X 23 Construction
☐ 31-33 Manufacturing
☐ 42 Wholesale Trade
☐ 44-45 Retail Trade
☐ 48-49 Transportation and Warehousing
☐ 51 Information
☐ 52 Finance and Insurance
☐ 53 Real Estate and Rental and Leasing
☐ 54 Professional, Scientific, and Technical Services
☐ 55 Management of Companies and Enterprises
☐ 56 Administrative and Support and Waste Management and Remediation Services
☐ 61 Educational Services
☐ 62 Health Care and Social Assistance
☐ 71 Arts, Entertainment, and Recreation
☐ 72 Accommodation and Food Services
☐ 81 Other Services (except Public Administration)
☐ 92 Public Administration

Please provide the following information - - *(information may not apply to all projects)*

# classes/events:	7
# hours trained	35
# students under 18	0
# workers	182
# companies represented	92
# reached (if awareness activities)	106
Total reached	288

List, by number above, industries that project products could potentially be applied to.

53, 54, 62, 71, 81, 92

Potential impact (in number of persons or companies) after life of project?

4000 + (based on companies reached and on views of previous GHS Hazcom videos)

Have there been requests for project products from external sources?

If Yes, please indicate sources of requests: Seattle Central College

PART II

Financial Information
Budget Summary

Project Title:	Health Hazards in Residential Construction Video Training Program		
Project #:	**2015XA00306**	**Report Date:**	12/05/2016
Contact Person:	Kris Alberti	**Contact #:**	509-246-9080
Start Date:	February 1, 2016	**Completion Date:**	November 30, 2016

1.	**Total original budget for the project**	$ **103,788**
2.	**Total original SHIP Grant Award**	$ **103,788**
3.	**Total of SHIP Funds Used**	$ **103,788**
4.	**Budget Modifications (= or - if applicable)**	$ same amount
5.	**Total In-kind contributions**	$ 0
6.	**Total Expenditures (lines 3+4+5)**	$ **103,788**

Instructions:

- Complete the Supplemental Schedule (Budget) form first (on the next page).
- The final report must include all expenditures from date of completion of interim report through termination date of grant.
- Indicate period covered by report by specifying the inclusive dates.
- Report and itemize all expenditures during specified reporting period per the attached supplemental schedule.
- Forms must be signed by authorized person (see last page).
- Forward one copy of the report to **Grant Manager Name, SHIP Grant Manager** at **PO Box 44612, Olympia, WA 98504-4612**

PART II *(Continued)*

Financial Information
Supplemental Schedules (Budget)

Project Title: Health Hazards in Residential Construction Video Training Program

Project #: **2015XA00306** **Report Date:** 12/5/16

Contact Person: Kris Alberti **Contact #:** 509-246-9080

Total Awarded: $103,788

ITEMIZED BUDGET: How were SHIP award funds used to achieve the purpose of your project?

	Budgeted for Project	Amount Paid Out	Difference
A. PERSONNEL	70,578	72,300	-1722.00
Explanation for Difference and other relevant information: Additional editing and training done by staff.			

	Budgeted for Project	Amount Paid Out	Difference
B. SUBCONTRACTOR	8640.00	8652.00	-12.00
Explanation for Difference and other relevant information: Very close to estimate.			

	Budgeted for Project	Amount Paid Out	Difference
C. TRAVEL	13,170	11,541.78	1628.22
Explanation for Difference and other relevant information: Variation in anticipated filming locations			

	Budgeted for Project	Amount Paid Out	Difference
D. SUPPLIES	5000.00	5094.22	-94.22
Explanation for Difference and other relevant information: Very close to estimated amount, additional office supplies.			

	Budgeted for Project	Amount Paid Out	Difference
E. PUBLICATIONS	800.00	600.00	200.00
Explanation for Difference and other relevant information:			

	Budgeted for Project	Amount Paid Out	Difference
F. OTHER	5600.00	5600.00	0
Explanation for Difference and other relevant information:			

	Budgeted for Project	Amount Paid Out	Difference
TOTAL DIRECT COSTS	103.788	103.788	0
	Budgeted for Project	Amount Paid Out	Difference
TOTAL INDIRECT COSTS			
	Budgeted for Project	Amount Paid Out	Difference

TOTAL SHIP BUDGET	103.788	103.788	0

	Budgeted for Project	Amount Paid Out	Difference
G. IN-KIND			
Explanation for Difference and other relevant information:			

I hereby certify that the expenditures listed on this report were made with my approval:

12/5/16

Date

Signature of Project Manager

PART III
Attachments:

Provide resources such as written material, training packages, or video/ audio tapes, curriculum information, etc. produced under the grant.

Also include copies of publications, news releases, curriculum, posters, brochures, etc.

The above information should also be provided on a CD or DVD for inclusion in the file.

- DVD: must be in an MP4 format
  Other video files must be provided in uncompressed source files.

- Publications:
  PDF of publication should be provided. SHIP also needs the original publishing documents (design documents), .eps, and .psd (if any illustrations/graphics are used)

REMINDER!!: All products produced, whether by the grantee or a subcontractor to the grantee, as a result of a SHIP grant are in the public domain and can not be copyrighted, patented, claimed as trade secrets, or otherwise restricted in any way.