

**Small Business Economic Impact Statement  
for Fall Protection Rules**

**Washington State Department of Labor and Industries**

**May, 2012**

## Table of Contents

<b>1. INTRODUCTION TO THE COST SURVEY .....</b>	<b>1</b>
<b>1.1. Survey methodology .....</b>	<b>1</b>
<b>1.1.1. Sampling frame.....</b>	<b>2</b>
<b>1.1.2. Sample size .....</b>	<b>2</b>
<b>1.1.3. Sampling method.....</b>	<b>3</b>
<b>1.1.4. Survey development and response rate.....</b>	<b>4</b>
<b>1.2. Survey contents.....</b>	<b>5</b>
<b>2. ASSESSING ECONOMIC IMPACT BY EMPLOYMENT SIZE .....</b>	<b>7</b>
<b>2.1. Cost per FTE associated with fall protection for form and rebar work .....</b>	<b>8</b>
<b>2.2. Cost per FTE associated with fall protection for employees working on         hazardous slopes.....</b>	<b>8</b>
<b>2.3. Cost per FTE associated with fall protection for employees using stilts or         working on platform above the protection of the guardrail system .....</b>	<b>8</b>
<b>2.4. Cost per FTE associated with the installation of a catch platform within 4 feet of         the work area .....</b>	<b>9</b>
<b>2.5. Cost per FTE associated with the exclusion of using a moveable barrier as fall         protection around floor openings.....</b>	<b>9</b>
<b>2.6. Cost per FTE associated with the exclusion of using body belts as part of fall         protection system .....</b>	<b>9</b>
<b>2.7. Cost per FTE associated with fall protection for work on a roof .....</b>	<b>10</b>
<b>3. ACTIONS TAKEN TO REDUCE THE IMPACT OF THE PROPOSED RULES ON SMALL BUSINESS .....</b>	<b>11</b>
<b>3.1. Reduced fines for small businesses .....</b>	<b>11</b>
<b>3.2. Enhanced training and education opportunities for small businesses .....</b>	<b>11</b>
<b>3.3. Prioritized consultation services for small businesses.....</b>	<b>11</b>
<b>3.4. Exempted recordkeeping and reporting requirements for small businesses.....</b>	<b>12</b>
<b>4. SMALL BUSINESS INVOLVEMENT IN THE RULEMAKING PROCESS.....</b>	<b>12</b>
<b>5. INDUSTRIES LIKELY TO BE REQUIRED TO COMPLY WITH THE RULES ..</b>	<b>13</b>
<b>6. NUMBER OF JOBS CREATED OR LOST .....</b>	<b>13</b>
<b>7. CONCLUSIONS .....</b>	<b>13</b>

**8. REFERENCES.....14**

**9. APPENDIX .....16**

**Table A1. Response rates of previous surveys for rulemaking projects by L&I.....16**

**Table A2. Industries likely to be required to comply with the rule .....17**

**Table A3. Stratified random samples for survey by NAICS .....18**

**Table A4. Key survey response information .....19**

**Table A5. Comparison of costs to small businesses and 10% of the largest businesses  
    for each increased requirement under the proposed rules .....19**

The Division of Occupational Safety and Health (DOSH) of the Washington State Department of Labor & Industries (L&I) is proposing new rules under chapter 296-155 WAC, Part C-1 and Part K, regarding the regulation of fall protection for the construction industry in the state of Washington. The overarching scope and application of the proposed rules is set forth in WAC 296-155-24601, which reads as follows:

*Chapter 296-155WAC, Part C-1 sets forth requirements for employers to provide and enforce the use of fall protection for employees performing activities covered under chapter 296-155 WAC.*

The following Small Business Economic Impact Statement (SBEIS) was prepared in compliance with the Regulatory Fairness Act (RFA), RCW 19.85.040, and provides an analysis of the cost per full-time equivalent (FTE) for small businesses compared to large businesses associated with implementation of WAC 296-155-WAC, Part C-1. In particular, the following provisions of the proposed rules, which have been identified as the components possibly imposing the increased compliance costs on the affected businesses, were analyzed in this report:

WAC 296-155-24609(2): Guarding of walking/working surfaces with unprotected sides and edges

WAC 296-155-24609(7): Fall protection during form and rebar work.

WAC 296-155-24609(9): Hazardous slopes

WAC 296-155-24613(3): Catch platforms

WAC 296-155-24615(1): Personal fall restraint systems

WAC 296-155-24617: Positioning device system specifications

## **1. INTRODUCTION TO THE COST SURVEY**

### **1.1 Survey methodology**

To estimate the probable incurred cost of proposed rule changes to the construction industry for both this report and the cost-benefit analysis, L&I developed and conducted a

survey in May 2010. L&I designed this survey in collaboration with the ad hoc committee established for this rulemaking. All the survey questions were reviewed by the ad hoc committee and interested stakeholders before being sent out to the businesses. The survey is used to gauge all the probable new compliance costs that businesses would incur if the proposed rules were adopted.

### **1.1.1 Sampling frame**

The development of the sampling strategy for the fall protection cost survey requires the identification of the set of businesses in the construction industry that will most likely be impacted by the proposed rule changes. To sample the businesses that best represent the underlying population, L&I extracted the most recent citation data for violations of fall protection rules in construction industry. This data showed that each of the selected 17 industries (See table A2) within the construction sector individually accounted for more than 0.5% of the total number of citations during 2004-2008. Combined, these industries were responsible for over 91% of citations issued during this period. A similar distribution was seen in the L&I claim data, which showed that these industries accounted for 90% of total fall related claims. Additionally, according to a report released by L&I's SHARP program, 38 out of 40 fatal construction falls in Washington State occurred in these industries during 1998-2005. Drawing on all the above factors, we determined these industries to be representative of those that stand to be affected by the proposed rules and selected employers in these industries as the survey respondents.

### **1.1.2 Sample size**

In determining the appropriate sample size needed to obtain valid estimates of the costs to comply with the proposed fall protection rules, L&I considered several factors including the desired confidence level, uncertainty in the cost estimates, and the expected response rate.

The Department first selected the acceptable confidence level and uncertainty in order to ensure the most rigorous and statistically valid estimates of compliance costs. The conventional levels of 95% confidence with  $\pm 5\%$  uncertainty were chosen. The Department next considered the size of the business account population from which the sample would be selected. After screening out businesses that had inactive accounts, L&I pulled 21,752

accounts from those 17 major industries within Washington construction sector from its administrative Data Warehouse (refreshed as of February, 2010).

In determining the requisite sample size, L&I also took into account the relatively low response rates it has reported for previous surveys to businesses regarding the compliance costs of new rules. Table A1 in the appendix presents a summary of survey results conducted during the rulemaking process over the past couple of years, including sample size, sampling methods, number of respondents, and response rate for each survey. Of the nine self-administered, mail-in cost surveys included in this review, sample sizes ranged from 323 to 5,644 and response rates ranged from 8% to 25%.

The final determination of sample size was based on the following factors: (1) the population is 21,752 active employers, who will most likely be affected by the proposed rules, (2) the desirable confidence level is 95% (with +/- 5% uncertainty), and (3) the response rate for similar surveys has been fairly low. The department ultimately chose a sample size of 8,000 because it was sufficient to yield statistically significant cost estimates, assuming a 7.3% response rate and conventional levels for statistical validity. That is, if assumptions were to hold, a returned sample size of 585 would allow for statistically valid estimates of the overall compliance costs.

### **1.1.3 Sampling method**

In conjunction with determining the desired sample size and the appropriate sampling frame, the department also needed to select a sampling method that would yield the most accurate cost estimates. To achieve this goal, employers ought to be randomly selected and their industrial distribution ought to be proportionate to the overall sampling frame. Given this, L&I adopted proportionate stratified random sampling by industry. This method allowed the department to create strata at the industry level that pattern the underlying population, thereby helping to reduce sampling variability (Pedhazur & Schmelkin, 1991: 331). To implement this method, L&I determined the sample size needed for each industry by multiplying that industry's proportion of the sampling frame by the overall desired sample size ( $n = 8,000$ ). The resulting sample sizes by industry are listed in Table A3 in the appendix.

In order to randomly select businesses, the department used SAS software and employed the SURVEYSELECT function and SRS method to “grab” businesses randomly within each industry, up to the total number prescribed by each sample size. In the end, 8000 employers were selected for the total sample (see Table A3 in the appendix).

#### **1.1.4 Survey development and response rate**

The survey was first reviewed in the ad hoc committee meeting in Nov, 2009. The revised version of the survey was then reviewed and pre-tested in the survey stakeholder meeting on March 8, 2010. It was finalized based on the inputs from the meeting and sent to randomly selected businesses by mail on May 13, 2010. Given the relatively large sample size, L&I originally suggested the survey end June 13, 2010, but shortened the final deadline for completing the survey to June 1, 2010 due to the change in timeline for this rulemaking.

Between May 13 and June 1, 2010, L&I received 1,017 completed surveys from businesses out of the 8,000 surveys sent. Seven out of these 1,017 respondents indicated that they had either closed or sold businesses. Five hundred and twenty respondents reported that they did not have employees performing any of the work asked in the survey or their employees were not exposed to a fall hazard of 4 feet or more. Another 200 employers indicated none of the rule changes in the survey would apply to them. The remaining 290 businesses indicated they were subject to at least one rule change described in the survey. All told, the response rate for those presumed to have been contacted was 13% (please see Table A4 in the appendix for details). Given that there may have been some unsuccessful deliveries due to possible errors in the preparation or the delivery process, the actual response rate is likely to be higher. It is important to note that the 290 “quantitatively useable” surveys represent 4% of the total surveys sent and 29% of the 1,017 completed surveys that the department received. These rates are reasonable and acceptable given the fact that the survey was conducted at a time when the nation was struggling with the toughest economy since the 1930s and the construction industry was taking the hardest hit.

Of the 290 respondents who were subject to at least one rule change described in the survey, approximately 93% (270) were small businesses based on the definition under the Regulatory Fairness Act (RCW 19.85) as “any business entity that has 50 or fewer employees”. This percentage is exact the same as the one shown in an interagency joint

report in the state of Washington (GMAP, 2007) and slightly higher than the nationwide percentage (The Construction Chart Book, 2007). The employment size was determined based on two questions in the survey: (1) the reported total number of full-time equivalents (FTEs) in 2009, and (2) the reported total hours that part-time or seasonal employees, if any, worked in 2009. The part-time or seasonal hours were then converted into FTEs using the formula “1.0 FTE  $\approx$  2000 hours per year.”

## **1.2 Survey contents**

A large proportion of the proposed rules (clarifying the current standards, updating definitions, etc.) are intended to clarify the current rules without introducing any additional costs. In fact, these rule amendments will benefit businesses by helping them avoid noncompliance due to possible confusion over the current requirements. Failure to comply can result in costly fines or penalties. The first section of the survey is designed to obtain the background information of each employer including the number of employees, the primary business operations, and the work activities involved. The second and the last section are designed to estimate the probable new compliance costs. Specifically, these include the following seven subsections:

### **(1). Identifying & evaluating the cost associated with the trigger height of fall protection for form and rebar work.**

Under the proposed rules, employers will be required to provide and make sure their employees use fall protection starting at 4 feet instead of 6 feet when they are placing or tying reinforcing steels. This increased requirement is expected to reduce fall injuries but may impose additional costs on the affected employers. Question 7b in the survey is designed to obtain the compliance cost of this provision.

### **(2). Identifying & evaluating the cost associated with the new trigger height for fall protection for working on a hazardous slope.**

Workers performing tasks on hazardous slopes have greater risk of falling from elevation than the ones working on other surfaces. Therefore, more stringent fall protection appears necessary unless the increased compliance cost is unaffordable to the businesses.

Question 8b in the survey is aimed to gather the cost data from the respondents regarding this change.

**(3). Identifying & evaluating the cost associated with the requirement of increasing the height of the guardrail if employees are using stilts or working on platforms around the guardrail.**

This requirement is shown as a note under the current rules but this rulemaking incorporates it directly into the rule language. Question 9b in the survey is designed to gather the cost data concerning this change.

**(4). Identifying & evaluating the cost associated with the height requirement for catch platform installation.**

Under the proposed rules, employers are required to install the catch platform within 4 vertical feet of the work area, instead of 10 feet. This new standard provides better protection to the workers but is expected to impose new costs on the employers. Question 11b in the survey is designed to estimate the new compliance costs.

**(5). Identifying & evaluating the cost associated with the elimination of the option of using moveable barriers to cover floor openings.**

The elimination of using moveable barriers is necessary in that this definition is not clear and may create confusion. Question 12c in the survey is expected to provide the cost data related to this rule change.

**(6). Identifying & evaluating the cost associated with the elimination of body belts as part of fall restraint systems and positioning device systems.**

The cost of excluding the use of body belts in a fall protection system is expected to be moderate as L&I believes that most of the businesses in the construction industry have already abandoned the use of body belts due to safety concerns. Question 13a in the survey asks the employers to estimate the cost associated with this rule change.

**(7). Identifying & evaluating the cost associated with fall protection while working on a roof, it starts at 4 feet except for the roofing work or leading edge work on low pitched roofs.**

Due to the frequency and the severity of fall accidents from roofs, the proposed rules explicitly and clearly set the trigger height for fall protection for work activities on roofs at 4 feet, except for roofing and leading edge work on low pitched roofs. This actually does not represent an increased requirement because under the current WAC 296-155-505(6)(a), working on a walking working surface requires fall protection starting at 4 feet and a roof is a type of a walking working surface unless it is under construction and the workers are doing roofing or leading edge work. It is worth noting that the specific exemption of roofing work from this requirement in the proposed rule is intended to correct an error that currently exists in WAC 296-155-24515(1) stating a trigger height of 10 feet during the performance of work on low pitched roofs.

While it is difficult to directly monetize the new costs attributable to this rule component, the cost information collected from the survey is indirectly used to estimate these costs.

The remainder of the survey is designed to estimate the reduced compliance cost, or the increased benefit of being allowed to use a safety watch system for any repair or service equipment work on a low-pitched roof. The survey also asks the employers what type of protection they are currently using to protect the workers engaged in these work activities.

## **2. ASSESSING ECONOMIC IMPACT BY EMPLOYMENT SIZE**

The Regulatory Fairness Act, RCW 19.85.040(1) requires the department to determine whether a proposed rule will have a disproportionate cost impact on small businesses. The act directs the department to compare “the cost of compliance for small businesses with the cost of compliance for the ten percent of businesses that are the largest businesses required to comply with the proposed rule”. A convenient and easy way to make this comparison is to compare the compliance cost per employee for these two groups. For each rule component described in the survey, the unit cost for the small businesses is compared to the unit cost for the largest 10% of all businesses in the affected group.<sup>1</sup>

This Small Business Economic Impact Statement (SBEIS) compares the weighted average cost per FTE for each component that represents increased requirements. This method is selected rather than the median cost we adopted in the cost-benefit analysis

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<sup>1</sup> If the number of respondents representing the 10% of the largest businesses from the survey is less than 10, we select 10 respondents with the largest business sizes in order to have enough samples for the purpose of comparison. In addition, we exclude the respondents with no FTEs from the comparison due to large variances of these samples.

because insufficient sample sizes for the group of largest businesses in many cases makes it more practical. As a result, the cost estimates in the following sections may not be comparable to the ones presented in the CBA report. The purpose here is to best estimate the extent to which the disproportionate impact, if any, is on small businesses rather than to estimate the total costs to the affected businesses as a whole.

### **2.1 Cost per FTE associated with fall protection for form and rebar work.**

On the survey sent to employers, Question 7b asked respondents, how much the annual cost would be if the proposed new standard regarding fall protection for employees placing or tying reinforcing steel were adopted. Thirty-three respondents indicated this new requirement applied to them and provided their estimates of the cost of compliance. Of these 33 respondents, 28 businesses were small businesses and the average annual cost per FTE was \$354. The corresponding cost for the largest 10% of businesses required to comply with this new standard was \$144. In light of this, the cost per FTE for small businesses is estimated to be approximately 2.5 times the cost for the 10% of the largest businesses.

### **2.2 Cost per FTE associated with fall protection for employees working on hazardous slopes**

On the survey sent to employers, Question 8b asked respondents, how much the annual cost would be if the proposed new standard regarding fall protection for work on hazardous slopes were adopted. One hundred thirty-seven respondents indicated this new requirement applied to them and provided their estimates of the cost to do so. Of these 137 respondents, 123 businesses were small businesses and the annual cost per FTE was \$378. The corresponding cost for the largest 10% of businesses required to comply with this new standard was \$53. In light of this, the cost per FTE for small businesses is estimated to be approximately 7.2 times the cost for the 10% of the largest businesses.

### **2.3 Cost per FTE associated with fall protection for employees using stilts or working on platform above the protection of the guardrail system**

On the survey sent to employers, Question 9b asked respondents, how much the annual cost would be if the proposed new standard regarding fall protection for employees using stilts or working on platform above the protection of the guardrail system were adopted. Thirty-six respondents indicated this new requirement applied to them and provided their

estimates of the cost to do so. Of these 36 respondents, 30 businesses were small businesses and the annual cost per FTE was \$310. The corresponding cost for the largest 10% of businesses required to comply with this new standard was \$33. In light of this, the cost per FTE for small businesses is estimated to be approximately 9.3 times the cost for the 10% of the largest businesses.

#### **2.4 Cost per FTE associated with the installation of a catch platform within 4 feet of the work area**

On the survey sent to employers, Question 11b asked respondents, how much the annual cost would be if the proposed new standard regarding the installation of a catch platform within 4 feet of the work area were adopted. 30 respondents indicated this new requirement applied to them and provided their estimates of the cost to do so. Of these 30 respondents, 28 businesses were small businesses and the annual cost per FTE was \$611. The corresponding cost for the largest 10% of businesses required to comply with this new standard was \$207. In light of this, the cost per FTE for small businesses is estimated to be approximately 2.9 times the cost for the 10% of the largest businesses.

#### **2.5 Cost per FTE associated with the exclusion of using a moveable barrier as fall protection around floor openings**

On the survey sent to employers, Question 12c asked respondents, how much the annual cost would be if the proposed new standard regarding the elimination of using a moveable barrier as fall protection around floor openings were adopted. Seventy-two respondents indicated this new requirement applied to them and provided their estimates of the cost to do so. Of these 72 respondents, 65 businesses were small businesses and the annual cost per FTE was \$439. The corresponding cost for the largest 10% of businesses required to comply with this new standard was \$180. In light of this, the cost per FTE for small businesses is estimated to be approximately 2.4 times the cost for the 10% of the largest businesses.

#### **2.6 Cost per FTE associated with the exclusion of using body belts as part of fall protection system**

On the survey sent to employers, Question 13a asked respondents, how much the annual cost would be if the proposed new standard regarding fall protection for employees placing

or tying reinforcing steel were adopted. Fifty-seven respondents indicated this new requirement applied to them and provided their estimates of the cost to do so. In addition, all of these 57 businesses were small businesses and the annual cost per FTE was \$952. The corresponding cost for the largest 10% of businesses required to comply with this new standard was \$778. In light of this, the cost per FTE for small businesses is estimated to be approximately 1.2 times the cost for the 10% of the largest businesses.

In summary, the proposed rules will have a disproportionate cost impact on small businesses but the extent of this impact varies among different provisions of the proposed rule (see Table A5 in the Appendix). Small businesses could incur approximately the same cost in compliance as larger firms with the standard that eliminates the use of body belts to 9 times greater cost in compliance than large firms with the standard that requires the increase of guardrail height on certain conditions. Larger businesses, on the other hand, may be able to spread the costs out among a larger number of employees or more frequent use of the equipments.

## **2.7 Cost per FTE associated with fall protection for work on a roof**

As stated in the Cost-Benefit Analysis, this rule component essentially does not represent an increased requirement. This rule change is proposed to correct an inconsistency that existed in the current rule language. Therefore, the only possible new costs will be those incurred in training employees and updating relevant materials to be in line with the proposed rules that correctly and clearly set forth the requirement as well as the exemptions from this requirement. Data on the cost of training staff and updating material as a result of this rule change is not directly available to the department. However, the cost information collected from the survey on the hazardous slopes section can serve as a proxy for two reasons. First, both requirements apply to specific work conditions rather than worker activities and both are intended to specify a clear-cut trigger height for fall protection. In light of this fact, the training and material updating costs for these two rule components are expected to be similar. Second, the hazardous slopes section has more responses than any other section in the survey (147 responses) so the cost data from this section is expected to be more reliable than from other sections. Based on this part of survey data, the annual training and material update costs per FTE for small businesses were \$54. The corresponding costs for the largest 10% of businesses required to comply with this requirement were \$9. In light of this, the cost per

FTE for small businesses is projected to be approximately 6.0 times the cost for the 10% of the largest businesses.

### **3. ACTIONS TAKEN TO REDUCE THE IMPACT OF THE PROPOSED RULES ON SMALL BUSINESS**

The above analysis indicates that small businesses are likely to bear a disproportionate share of regulatory burden from the proposed rules. This conclusion is consistent with many existing research findings (Crain, 2005; Hopkins, 1995). The law requires L&I to mitigate the cost for small business if it is legal and feasible to do so. In response to this requirement, L&I believes the following rules and practices will help to reduce the impact of the proposed fall protection rules on small businesses.

#### **3.1 Reduced fines for small businesses**

RCW 49.17.180(7) requires the department give consideration in the penalty assessment to factors including the size of the employer's business. Table 5 in the section of WAC 296-900-14015 spells out the specific process for penalty adjustments including employment size. Based on these standards, an employer with 25 or fewer employees can request up to 60% reduction in a penalty issued against him/her.

#### **3.2 Enhanced training and education opportunities for small businesses**

The department has made a concerted effort to focus its training and education campaign on small businesses. This will include providing employers with materials that will help develop their fall protection work plan (FPWP), free training courses, train-the-trainer meetings and other related services.

#### **3.3 Prioritized consultation services for small businesses**

The department has developed a variety of on-site and off-site consultation services primarily for smaller employers and has prioritized establishments by size when receiving requests for these services. For example, the highest scheduled priority of consultation services will be given to employers who employ less than 25 employees at the worksite. Most of these services are provided at no cost through the state and federal funds with primary attention to smaller businesses. These services can include, but are not limited to,

opening and closing conferences, a walk-through of employer worksites, identification of hazards, correction assistance, follow-up visits to verify correction of serious hazards, assistance in the development or improvement of the employer's occupational safety and health management system, technical assistance by telephone or letter and client visits to a department office. No penalties will be proposed or citations issued for any safety and health problems identified by the consultants. Hence, these consultation services greatly benefit small businesses in establishing and maintaining a safe and healthful workplace.

### **3.4 Exempted recordkeeping and reporting requirements for small businesses**

According to WAC 296-27-00103, establishments with 10 or fewer employees are not required to keep injury or illness records. Based on the survey results, more than half of the affected businesses fall into this category, and therefore are exempt from this recordkeeping requirement.

## **4. SMALL BUSINESS INVOLVEMENT IN THE RULEMAKING PROCESS**

The department has made a considerable effort to involve small businesses and their representatives at various points in the rulemaking process. These efforts include:

(1) Since March 2006, the department has held three series of stakeholder meetings in Tumwater, Tukwila, Spokane, Yakima and Bellevue to hear from the business community, including many small businesses. There was also a stakeholder comment period after each series of meetings.

(2) The department also held several ad hoc committee meetings between March 2007 and August 2007, in which small businesses or their representatives addressed their concerns and opinions about this rulemaking.

(3) Representatives of many business and trade associations such as Associated General Contractors (AGC) of Washington, Independent Business Association (IBA), Association of Washington Business (AWB), and Building Industry Association of Washington (BIAW) were invited and heavily involved in the entire process of developing and conducting the cost survey.

(4) The department finally developed the rule language with the consideration of all the comments and concerns from the interested stakeholders across the state, including the small business community.

## **5. INDUSTRIES LIKELY TO BE REQUIRED TO COMPLY WITH THE RULE**

All the industries included in the sampling frame for the cost survey are listed in Table A2 in the appendix of this SBEIS. One or more increased requirements in the proposed rules may apply to businesses in these industries, depending upon the work activities of their employees. The actual compliance cost varies among different businesses. In some cases, employers have indicated there was no cost for them because they have already been in compliance with the proposed requirements thereby incurring no additional cost resulting from these rule amendments.

## **6. NUMBER OF JOBS CREATED OR LOST**

The department does not anticipate that a significant number of jobs will be created or lost as a result of compliance with the proposed fall protection rules. Normally these requirements are such that employers will be able to meet them using existing staff and without the need for new hires. Similarly, there is no reason to suspect that employers would need to dismiss employees as a result of the draft proposed fall protection rules. Although some employers have indicated in the survey that extra labor is needed to implement the safety watch system, L&I believes this is not necessary the case as the safety watch system is an option for employers in addition to all the other existing approaches available and allowed.

## **7. CONCLUSIONS**

As we have analyzed above, the proposed fall protection rules are likely to impose disproportionate compliance costs on small businesses. The extent of the disproportion varies among different rule components<sup>2</sup>. On the other hand, current research findings have also indicated that small businesses usually suffer significantly higher rates of injuries and

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<sup>2</sup> These comparisons were made based on the average costs per FTE estimated in 2010 after the rule language was finalized for public hearings. The department believes that these estimates were still reliable at the time this report was last updated in 2012 as they were not expected to change substantially by changes in economic conditions or other factors during this period.

fatalities than large businesses (Kaskutas, et al., 2009; Mendeloff, 2006; Ringen, 1995; Marsh, 1994; Toscano and Windau, 1994). Therefore, small businesses may benefit more in terms of reductions in injuries and deaths if the proposed rules are adopted.

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## 9. APPENDIX

<b>Table A1. Response rates of previous surveys for rulemaking projects by L&amp;I</b>					
Rulemaking content area	Year of survey	Survey sample size	Sampling method	Total respondents	Response rate
Heat –related illness	2007	5206	Stratified random sample by industry	804	15%
Lead	2005	492 to construction firms	Random selection	115 for construction	23%
		615 to general industry firms	Random selection	108 for general industry	18%
Self-insurance: medical care, claims handling, personnel qualifications	2005	391	Surveyed entire population of self-insured employers	36	9%
Ground personnel: personal protective equipment	2004	849	Randomly selected 10% of businesses from each of the relevant industries	209	25%
Ground personnel: motor vehicles	2004	849	Randomly selected 10% of businesses from each of the relevant industries	197	23%
Machine safety: chippers and hog mills	2003	1,000	Random selection	248	25%
Agriculture	1998	323	Stratified random sample, weighting small businesses more heavily	30	9%
Health care services	1998	529	Random selection	41	8%

Ergonomics	1998	5,644 (4,425 contacted by phone by Gilmore Research Group)	Stratified random sample, weighting industries with few firms and large businesses more heavily	1,085	19%
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**Table A2 . Industries likely to be required to comply with the rule  
(6-digit NAICS level)**

<b>NAICS Code</b>	<b>Description</b>
238130	FRAMING CONTRACTORS
238160	ROOFING CONTRACTORS
236115	NEW SINGLE-FAMILY HOUSING CONSTRUCTION (EXCEPT OPERATIVE BUILDERS)
236118	RESIDENTIAL REMODELERS
238320	PAINT AND WALL COVERING CONTRACTORS
238170	SIDING CONTRACTORS
236220	COMMERCIAL AND INSTITUTIONAL BUILDING CONSTRUCTION
238220	PLUMBING, HEATING, AND AIR-CONDITIONING CONTRACTORS
238310	DRYWALL AND INSULATION CONTRACTORS
238350	FINISH CARPENTRY CONTRACTORS
238990	ALL OTHER SPECIALTY TRADE CONTRACTORS
238110	POURED CONCRETE FOUNDATION AND STRUCTURE CONTRACTORS
238120	STRUCTURAL STEEL AND PRECAST CONCRETE CONTRACTORS
238210	ELECTRICAL CONTRACTORS
238910	SITE PREPARATION CONTRACTORS
236116	NEW MULTIFAMILY HOUSING CONSTRUCTION (EXCEPT OPERATIVE BUILDERS)
238140	MASONRY CONTRACTORS

<b>Table A3. Stratified random samples for survey by NAICS<sup>3</sup></b>			
NAICS Code	Total accounts	Percent of all accounts	Proportionate sample size
236115	3562	16.38%	1310
236116	74	0.34%	27
236118	2699	12.41%	993
236220	1090	5.01%	401
238110	977	4.49%	359
238120	111	0.51%	41
238130	2193	10.08%	807
238140	504	2.32%	185
238160	751	3.45%	276
238170	321	1.48%	118
238210	2016	9.27%	742
238220	1950	8.96%	717
238310	857	3.94%	315
238320	1786	8.21%	657
238350	727	3.34%	267
238910	1165	5.36%	429
238990	969	4.45%	356
Total	21752	100.00%	8000

<sup>3</sup> Note: The population of 21752 businesses is computed from the data warehouse while deleting the duplicates, out-of-state, and the incomplete or inaccurate addresses out of the original 22395 establishments.

<b>Table A4. Key survey response information</b>	
Sampling frame	21752
Sample size	8000
Returned total	1042
Incomplete total	25
Completed total	1017
Unaffected by the proposed rules (The answer to Q5 or Q6 is “No”).	520
Affected by the proposed rules but unrelated to any section in the survey.	200
Related to one or more sections in the survey.	290
Out of business, closed, sold	7

<b>Table A5. Comparison of costs to small businesses and 10% of the largest businesses for each increased requirement under the proposed rules</b>			
	Cost per FTE to small businesses(\$)	Cost per FTE to 10% of largest businesses	Ratio of cost
Fall protection for form and rebar work	354	144	2.5
Fall protection for work on hazardous slopes	378	53	7.2
Height requirement for guardrail system	310	33	9.3
Installation requirement for catch platforms	611	207	2.9
Elimination of the use of moveable barriers	439	180	2.4
Elimination of the use of body belts	952	778	1.2
Fall protection for work on a roof	54	9	6.0