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The State University
of New York

The Costs of Labor Law 240 on New York's Economy and Public Infrastructure

Final Report

to

New York Civil Justice Institute

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Executive Summary

There is increasing interest in the effects of New York State’s Labor Law 240, also known as the “Scaffold Law.” Labor Law 240 has been interpreted as imposing absolute liability on employers for workplace related injuries that occur at height. This research project, supported by the New York Civil Justice Institute, offers three avenues to investigate the law’s effects. The key findings to date are summarized below for each major project area.

Section 1: An Empirical Analysis of the Effects of New York’s Labor Law 240

A literature review of New York’s Labor Law 240 and the existence of comparable statutes in other states confirm that all comparable laws in other states that apply strict liability to contractors and owners for construction worker scaffolding, or work-at-height, injury have been repealed. A preliminary review also indicated that no other nation retains a similar law. Study findings confirm that the most recent repeal of a comparable law in the State of Illinois in 1995 was followed by a substantial decline in relevant safety outcomes.

A statistical framework to assess the impact of Labor Law 240 has provided valuable insights. The results include the following findings:

1. Our ordinary least squares regression estimates show that those sectors of the New York construction industry impacted by Labor Law 240 display a significantly higher worker non-fatal injury rate than unaffected sectors. This finding is significant with a very high level of confidence, and could have only occurred by chance with a probability of less than one percent. The size of the impact is also large, with a Labor Law 240 effect of roughly 5.5 additional non-fatal worker injuries annually per 1000 full-time equivalent employees.
2. A different approach, which compares fatal and non-fatal construction injury rates between New York State and Illinois, reveals a very similar pattern. New York and Illinois are similar along a number of important dimensions. However, Illinois repealed its version of Labor Law 240 in 1995. This creates a natural experiment allowing the measurement of the impact of removing Labor Law 240 liability. For non-fatal injuries, Illinois was about 2.7 injuries per 100 private construction workers greater than New York prior to repeal, but fell to about 0.7 injuries less than New York after repeal. Using a more specific measure, fatal falls, Illinois was about 1.7 fatal falls per 100,000 construction workers greater than New York prior to repeal, but fell to about 2.0 fatal falls per 100,000 construction workers less than New York after repeal.

It is striking that two broadly different empirical methods result in similar conclusions. This lends substantial credibility to these findings.

Section 2: Public Infrastructure Investment and Municipal Liability Costs in New York State

Total capital spending by the state and local governments in New York has varied, annually, from 16.5 to over eighteen billion dollars over the five year period 2007-2011 (figures do not include the capital spending of authorities).

- The combined capital spending for New York City and New York State remained about two-thirds of the total over those five years and fluctuated between 10.5 and 11.5 billion.
- In spite of fiscal pressure from a variety of sources, New York’s municipalities (counties, cities – outside NYC, towns and villages) have maintained capital spending at about 10% of total expenditures over the five-year period reported here.
- The modest two percent decline in total actual capital spending over the six-year period conceals a deeper reduction in effective infrastructure spending when the rising costs of construction materials are considered. Estimates by the New York State Comptroller indicate that under current trends, spending on critical municipal infrastructure (outside New York City) will be underfunded by \$89 billion over the next two decades.
- Future infrastructure needs and their importance to the state’s communities highlight the need to search for factors that can help reduce the cost of public works construction.

In a study released earlier this year, total annual local government liability expenses were estimated at nearly one billion dollars per year, our estimates for adding school districts to this total would raise this “minimum threshold” estimate of local liability expenses to \$1.2 billion.

- Summarizing six years of “Fall from Height” claim data (not restricted to Labor Law 240 cases) for a municipal insurer (NYMIR) serving approximately 40% of the state’s municipalities (counties, cities, towns and villages) we found: (i) a high rate of claims; (ii) about \$1.2 million dollars in total insurer claim payments; and (iii) \$1.3 million in claim amounts yet to be settled.
- The six year total of claims for fall from height is 588, while the average number of claims per year is 98. If these claims were distributed evenly over the NYMIR client base, almost nine out of ten municipalities would have experienced such a claim in the last six years. The NYMIR client base does not contain a representative number of larger, most densely populated urban municipal governments, many of which self-insure, where the highest costs for liability activity are found.
- The New York State School Insurance Reciprocal (NYSIR), serving a large number of the states non-metropolitan school districts, found that from Between 1989 and the end of 2010 NYSIR members experienced 270 Labor Law 240 cases. Of the 270 cases, most were closed with no payment at all for NYSIR or their involved member. In many of these cases the risk was transferred to other parties (contractors, etc.) whose insurers experienced claim payments. During this period NYSIR’s legal fees and expenses for Labor Law 240 cases were in excess of 2.7 million dollars and total claim settlements for the period were approximately 2.4 million dollars.

- A range estimate was calculated of total labor law injury awards associated with an annual installment of state and local capital construction investment. The total estimated range is between 30 and 60 million dollars per year for the 2007 -2011 period.

A group of case study profiles were developed to provide a more tangible picture and understanding of the role that Labor Law and Labor Law 240, in particular, has in public organizations and their construction projects. The case study profiles selected were based on cases identified from several sources, including: insurance professionals, public sector professionals, and publications. Case study profiles for the following public organizations appear in the report: the Metropolitan Transportation Authority (serving the metro –New York City region), two municipal Labor Law 240 cases, a school district Labor Law 240 case and one from the New York School Construction Authority.

- The Metropolitan Transportation Authority (MTA), representing New York State’s largest, most densely populated urban region, was included as a case study in the report. The MTA is unusual in utilizing an Owner Controlled Insurance Program (OCIP) to manage risk and insurance cost for their substantial construction portfolio (over \$2 billion per year in relevant projects). The OCIP provides a unique view on the insurance and loss process for Labor Law claims because it concentrates the insurance cost, claim awards, and construction value in one organizational entity for assessing impacts.
 - The MTA has a history of working to effectively manage risk and promote safety for workers and customers. Despite their safety efforts, MTA insurance costs have risen to 7% of contracted construction value, (about 3% above the earlier rate while at the same time substantially increasing general liability and self-insured limits).
 - The increasing insurance costs for the OCIP as a percent of construction value, is paralleled by an increasing number of Labor Law claims and the increasing cost of these claims as a percent of construction value.
- The New York City School Construction Authority (NYCSCA) also utilizes an OCIP in managing risk and insurance cost for its substantial annual construction program. A recently settled NYCSCA Labor Law 240 case helps highlight the costs of claims for public organizations in the metropolitan area. The capital project associated with this claim had a construction value of \$2,648,777. The settlement of \$1.1 million for this one Labor Law 240 claim represents 45% of the related project’s construction value. The OCIP incurred approximately \$125,000 in expenses in addition to the settlement amount. If the other OCIP costs associated with the claim are included the ratio increases to 50%.

Section 3: Economic Impact Analysis of Labor Law 240 in New York State

Based largely on work completed for previous sections this report, we estimate private and public sector construction expenditures that are currently absorbed as insurance costs and legal fees. We discuss the relationship between these expenditures and current labor laws. In particular, we use the limited available empirical data to estimate that nearly \$800 million dollars

of current public sector construction spending may be associated with the insurance costs of at-height construction. Similarly, we estimate that nearly \$1.5 billion in private sector construction costs may be associated with related insurance costs. Finally, we estimate that about \$110 million a year in insurance claims and legal/administrative costs is associated with Labor Law 240. We discuss the strengths and weaknesses of these empirical estimates.

Based on these estimates, we next use a model of the New York State economy to estimate the economy-wide impacts that would be associated with a shift of spending out of the insurance and legal sectors and into the construction sectors. In so doing we assume that in the wake of reforms, some of the money currently being spent on legal and insurance services could be redirected into spending on infrastructure construction. Because we do not have good quantitative data to suggest what proportion of existing expenditures might be shifted under any policy changes, we provide as a hypothetical an upper bound estimate that would be associated with a 100% shift. We provide details of the direct, indirect, induced and total impacts of these shifts in terms of impacts on New York State's output, employment, and labor incomes. Under specified assumptions, our models indicate that there could be up to a roughly \$150 million net gain in the total value of output in the economy. We estimate similarly that there could be a net gain of up to approximately 12 thousand jobs and approximately \$480 million in labor income.

In addition, the report draws attention to the importance of infrastructure investment in fostering longer as well as short term economic growth. Our brief literature review suggests that investment in the public capital can provide an important productivity boost that enhances overall levels of economic activity. However, we note that quantifying this important effect of infrastructure expenditures is not within the scope of this report.

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Report Overview

This research report has three avenues of work that are discussed in three separate report sections. The first section begins with a literature review that discusses Labor Law 240's development in New York and similar statutes in other states. The bulk of that section is organized around an empirical analysis of the effects of Labor Law 240. The second section provides an analysis of state and local capital spending in New York and information about municipal liability costs among New York State's local governments. Several case studies were conducted to better understand the kind of effects that Labor Law 240 has on New York's public sector and how particular cases or groups of claim settlements effect New York's public organizations. The third section reviews the results of estimating statewide short-term economic effects of Labor Law 240 on economy-wide output, jobs, and value added (including wages). In order to complete this task, a statewide regional input output model uses the most recent MIG IMPLAN modeling software and data for New York State.

Bibliographic references are combined in one section at the end of the report. Relevant appended materials directly follow each section of the report.

Section 1:
**An Empirical Analysis of the Effects of
New York's Labor Law 240**

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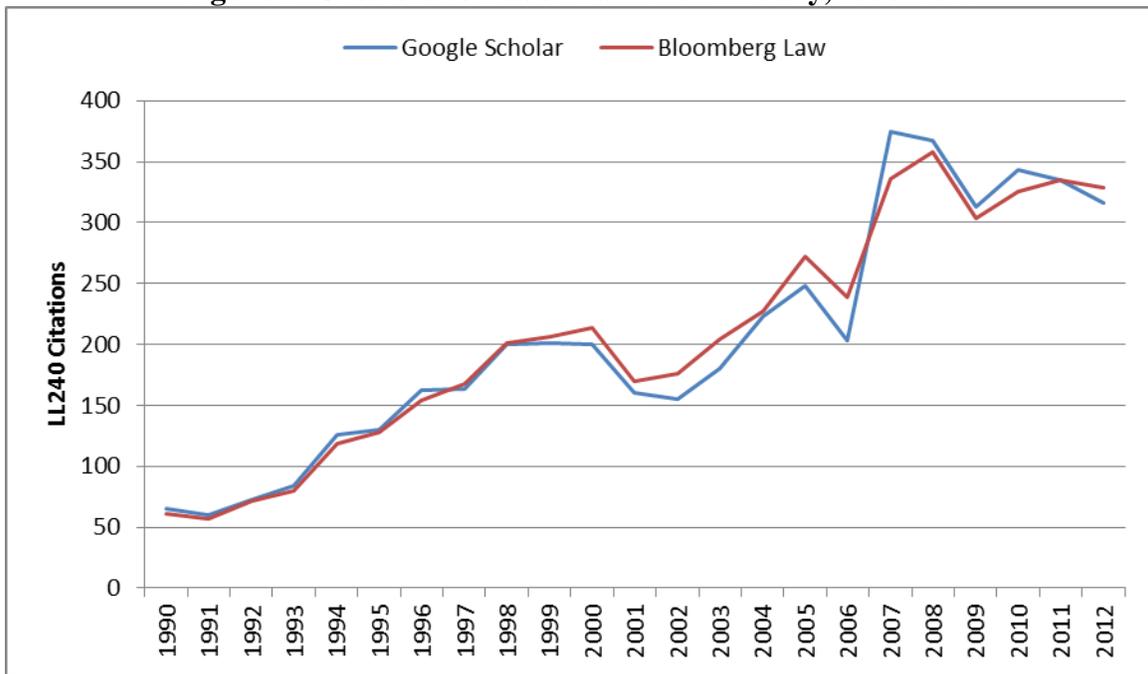
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I. Introduction

There is substantial interest in the effects of New York State’s Labor Law 240, also known as the “Scaffold Law.” Labor Law 240 has been interpreted as imposing absolute liability on employers for workplace-related injuries that occur at height. The significance of Labor Law 240 as measured by New York court cases citing the law is rising. Figure 1 below, which uses data from Bloomberg Law and Google Scholar, reports the number of cases citing Labor Law 240. Citation counts from both sources are closely correlated, and rise steadily over time. The number of cases citing Labor Law 240 rose from an average of about 63 cases annually during 1990-92 to an average of about 330 yearly cases during 2010-12,¹ a fivefold increase over 22 years.

Figure 1: Citations to Labor Law 240 Annually, 1990-2012



The number of cases citing Labor Law 240 has grown over time despite relatively constant employment in the New York construction sector. Figure 2 below displays both the number of cases citing Labor Law 240 (bar chart) and New York construction employment (solid line). Moreover, the average annual growth of Labor Law 240 cases since 1990 has outpaced the average growth of New York Construction Industry’s Gross Domestic Product by 2.7 times, as shown in Table 1 below.²

1 Using Bloomberg Law data.

2 New York Construction GDP (value-added) data from the Bureau of Economic Analysis (BEA)

Figure 2: Construction Employment and Labor Law 240 Citations, 1990-2012

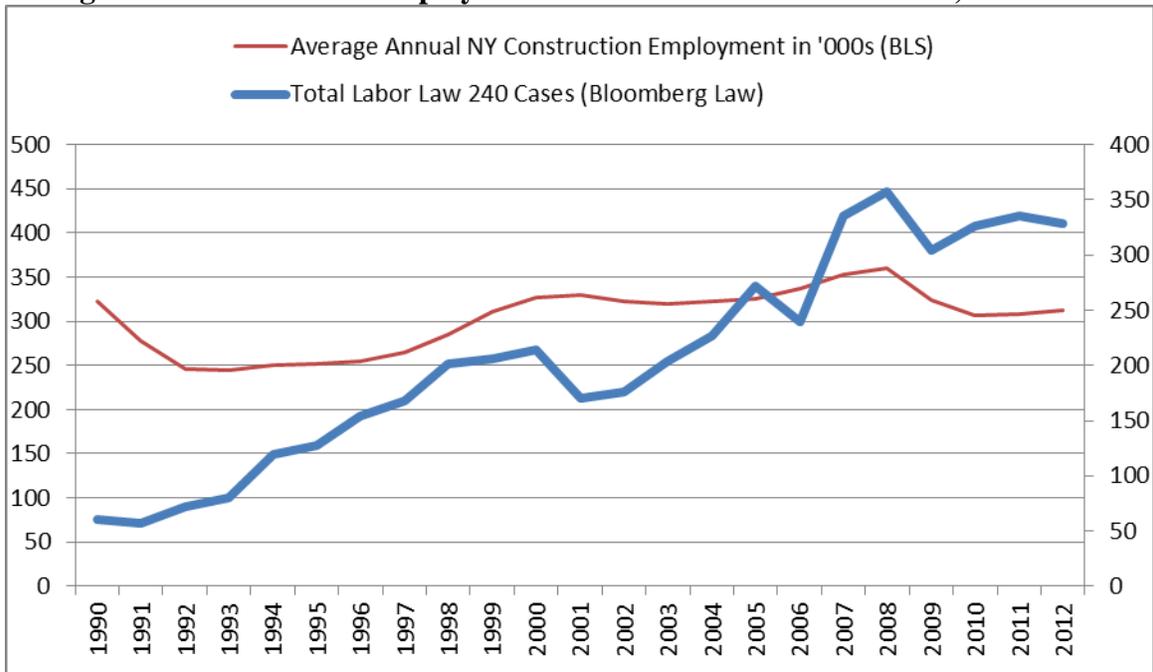


Table 1: Average Annual Growth Rates for Labor Law 240 Cases relative to New York Construction GDP and Employment, 1990-2012

Labor Law 240 Case Citations (Bloomberg)	NY Construction Industry GDP ³	NY Construction Industry Employment
9.12 percent	3.39 percent	.01 percent

The importance of Labor Law 240 is also indicated by the size of plaintiff’s awards. In 2012, 16 of the largest 30 reported settlements in New York State were generated by Labor Law 240 cases.⁴ Despite the high and rising importance of Labor Law 240 in New York’s construction sector, there has been little empirical examination of its economic effects. We conduct such an examination here. We first discuss the law’s legislative and legal context, followed by an analysis of the statute’s impact on injury rates in occupations affected by the law. We use an ordinary least squares regression framework. We find that Labor Law 240 significantly increases the worker injury rate relative to occupations unaffected by the law.

II. Historical and Legal Context

The first scaffold law in New York State was passed on May 22, 1885. The brief [1885 legislation](#) established both civil and criminal liability for “a person employing or directing another” to

³ Bureau of Economic Analysis industry GDP data for New York is from 1990-2011.

⁴ Data were obtained from Verdictsearch.com.

ensure suitable “scaffolding, hoists, stays, ladders, or other mechanical contrivances” as “proper protection to the life and limb of any person so employed or engaged.” Infringers faced fines “not to exceed five hundred dollars,” imprisonment “not less than thirty days or more than six months”, or both.⁵

The scope and applicability of statutes related to injuries at height have subsequently expanded through legislative amendment, as in 1897⁶, 1921⁷, and 1969.⁸ The New York State Court of Appeals ruled in 1923 that employers had an “absolute duty” to furnish safe scaffolding and would be liable if an injury resulted and they failed to do so.⁹ In 1948, the court barred contributory negligence as a defense.¹⁰

After Illinois repealed a similar statute in 1995, New York remains the only state to retain a labor law that effectively imposes strict liability on employers for worker injuries occurring at height. We exploit this fact in our empirical analysis below.

III. Injury Rates and Labor Law 240

The Bureau of Labor Statistics (BLS) compiles both fatal and nonfatal injury statistics to measure the risk of injury in the U.S. workplace. We present injury rate data in two ways: by dividing the number of injuries by the number of total workers, and by dividing them by full-time equivalent workers (which adjusts for the number of hours worked).¹¹ We make comparisons using both methods subject to data availability. To differentiate between the two, hours-based rates are denoted as “injury incidence rates” or “per full-time equivalent (FTE) workers,” while employment-based rates are denoted as “per number of workers.” Since some state-level data was available for total annual hours worked, our ability to compare injury risks across states is unhindered by injury data availability. Appendix C discusses the underlying methodology for calculating injury rates in more detail.

Workplace safety in the United States has improved markedly over the past two decades. As illustrated in Figures 3, 4 and 5 below, this improvement has been dramatic in the U.S. construction sector. There have been large reductions in both nonfatal and fatal injury rates. Between 1992 and 2011, the United States enjoyed a decline in the reported nonfatal private sector injury rates of roughly 60 percent and a decline in construction nonfatal injury rate of

5 Chap. 314: An Act for the protection of life and limb," *General Statutes of New York, 1885*, p. 117-8.

6 Ch. 415": *New York Session Laws, 1897*, vol. 1, p. 468

7 “Safe Place to Work Statute” (1921, ch 50) established Labor Law 240 to encompass slings, hangers, blocks, pulleys, braces, irons, and ropes.*

8 1969 amendment placed responsibility on “all contractors and owners and their agents” in place of “a person employing or directing another to perform labor of any kind” (L 1969, ch. 1108)

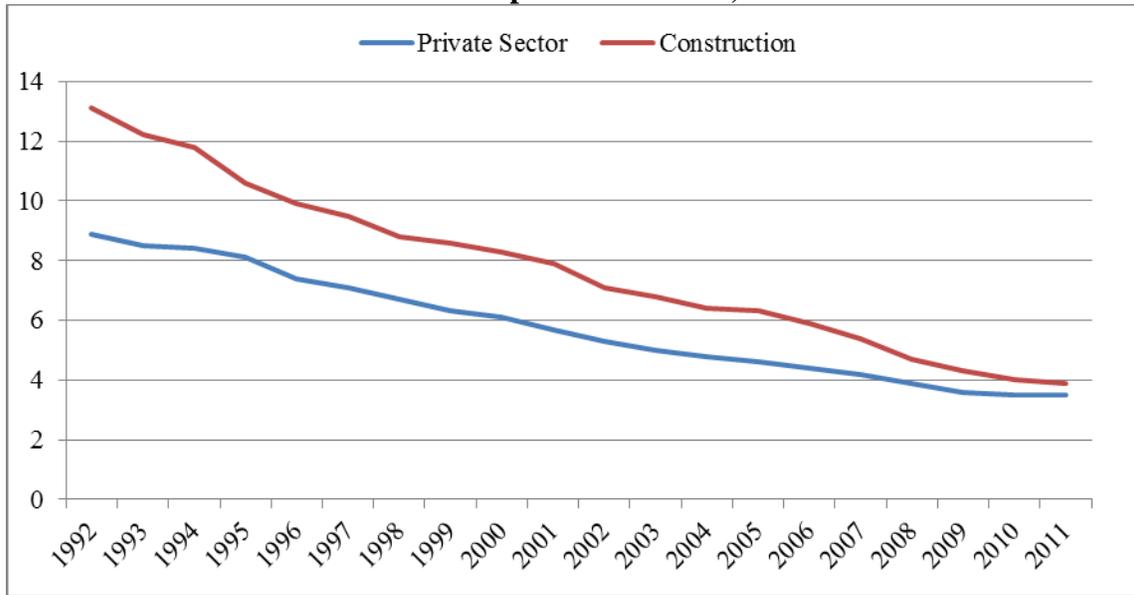
9 *Maleeny v Standard Shipbuilding Corp.*, 237 NY 250, 253 [1923]; see also *Amberg v Kinley*, 214 NY 531, 545 [1915] [Collin, J., dissenting]

10 *Koenig v Patrick Constr. Corp.*, 298 NY 313, 316- 317

11 Outlined by BLS: <http://www.bls.gov/opub/cwc/sh20100121ar01p1.htm>

roughly 70 percent. The decline in total fatalities per 100,000 full-time equivalent (FTE) workers has also been impressive, with a decrease of roughly 37 percent for both the public and private sectors overall, and roughly 34 percent for construction. As Figure 5 shows, the rate of fatal falls per 100,000 FTE construction workers, which measures the type of injury most relevant to Labor Law 240, has decreased by about 25 percent since the early 1990s.

Figure 3¹²: Nonfatal Injury Incidence Rates of U.S. Private Sector and Construction per 100 workers, 1992-2011



12 Data based on Bureau of Labor Statistics nonfatal injury incidence rates. See Appendix C.

Figure 4¹³: U.S. Total Fatalities per 100,000 Full-time Equivalent (FTE) Workers, 1992-2011

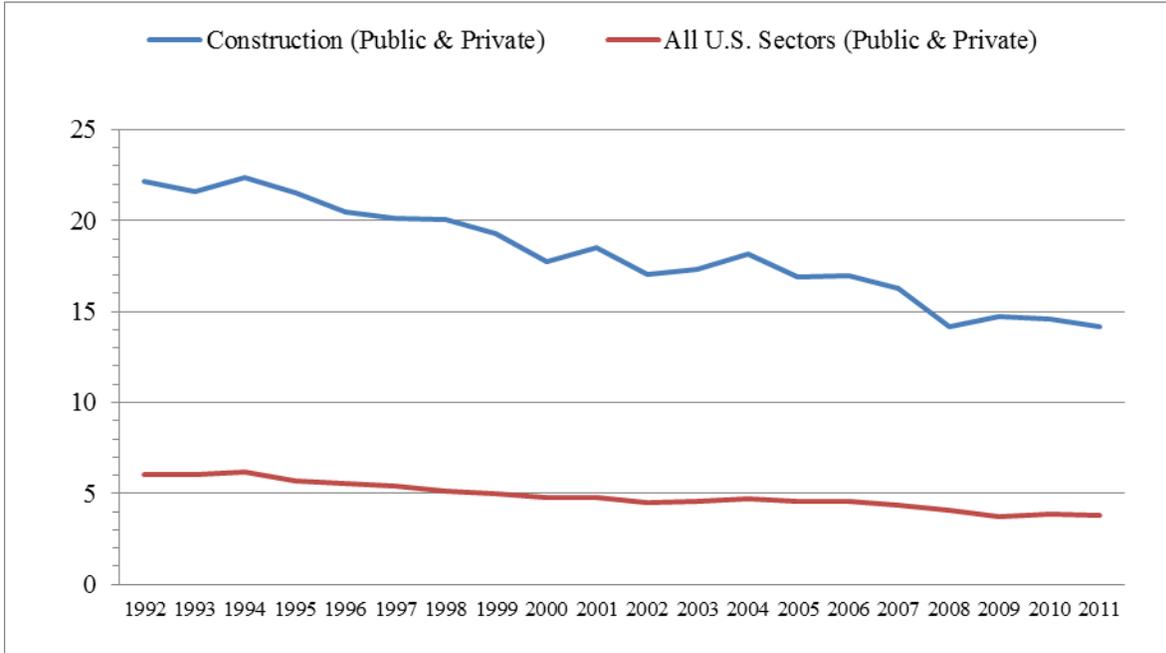
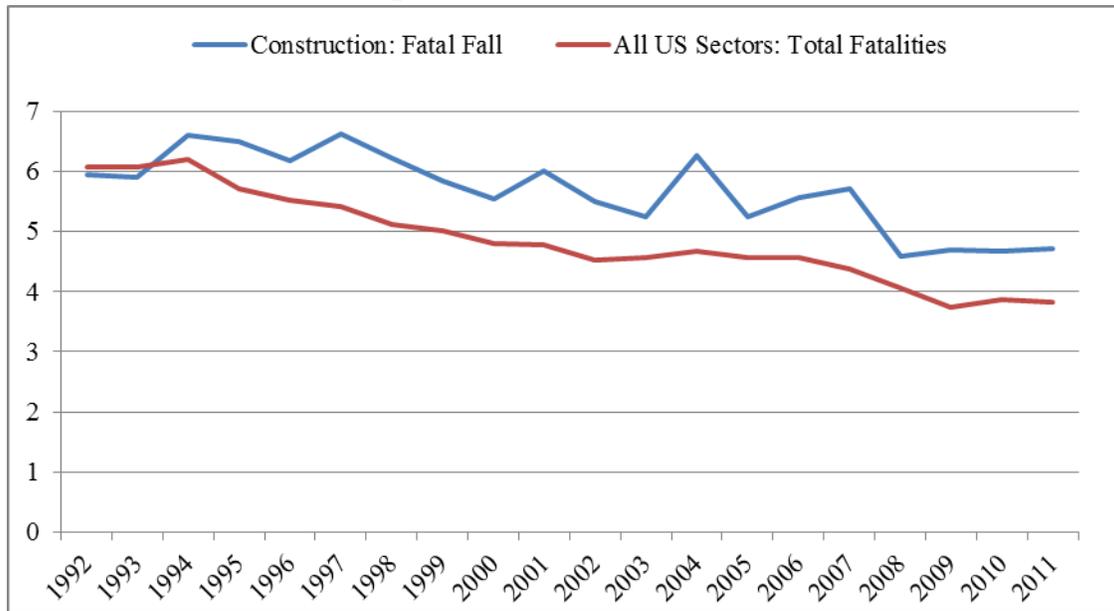


Figure 5¹⁴: Total Fatalities in all U.S. Sectors and Construction Fatal Falls per 100,000 FTE workers



13 Data based on *Census of Fatal Occupational Injuries (CFOI)* and Bureau of Economic Analysis Employment Data. See Appendix C.

14 Ibid. See Appendix C.

As indicated in the above Figures, construction is, perhaps unsurprisingly, more dangerous than the broader private sector, as measured by nonfatal and especially fatal injury rates. Table 2 below shows that construction workers face almost a 1.5 percent greater risk of nonfatal injury than the national private sector average. At the state level, nonfatal injury data suggest that New York is a relatively safe state, both inside and outside the construction sector. New York’s private sector injury rate is among the lowest in the country, and its nonfatal injury rate is also among the lowest.¹⁵

Table 2: Average Annual Nonfatal Injury Incidence Rates 2000-2011, and Average Fatal Falls Rate, 2003-2011			
	Construction Nonfatal Injury Incidence Rate (per 100 workers), 2000-2011 ¹⁶	Private Sector Nonfatal Injury Incidence Rate, 2000-2011 ¹⁷	Fatal Falls (to lower level) per 100,000 Construction Workers ¹⁸
New York State	4.58	3.14	6.51
Average U.S.	6.32	4.90	6.11
Over 10 Million Population	5.23	4.04	5.54
5 to 10 Million	6.28	4.73	5.26
2 to 5 million	6.01	4.92	7.99
Less than 2 Million	7.30	5.53	N/A
Safest State	LA*	NY	AZ
Most Dangerous State	WA	ME	IA
* Safest in reported nonfatal rate, but fatal rate suggests LA is not generally the safest state. See Mendeloff and Burns (2013)			

As this Table shows, New York’s reported nonfatal injury rate for the construction industry is lower than the national average, but the state’s rate of fatal fall injuries per 100,000 workers is higher. This is consistent with the findings of Mendeloff and Burns (2013), who find a negative correlation between reported nonfatal injury rates and the fatality rate in the construction industry. New York ranked in the top third of the sample in fatal injury rates despite having a relatively low nonfatal injury rate.¹⁹ Compared to Illinois (which repealed its statute analogous to Labor Law 240 in 1995), the incidence rate for state construction fatalities, particularly fatal falls, in recent years was higher in New York by about one full fatality.

15 See the data table in Appendix C.

16 Source: [U.S. Bureau of Labor Statistics SSOI](#). See Appendix C.

17 Ibid.

18 See Appendix C for Fatal Injury Rates methodology.

19 See Figures 4, 5 and 6 in Mendeloff & Burns (2013).

The nonfatal injury rates in other states have also been improving. Nonfatal injury rates nationally declined on average by 49.29 percent between 2000 and 2010. The state with the smallest decline in safety was Vermont, which saw a 16.85 percent drop. Notably, Illinois had the largest decline among states at 66.67 percent, which is consistent with the hypothesis that a scaffold law that increases employers’ liability attenuates incentives to invest in workplace safety.

IV. Regression Estimates of the Determinants of Construction Safety

As noted, average injury rates suggest that New York is a relatively safe state. However, simple averages do not account for the numerous factors that affect injury rates, including Labor Law 240. Ordinary least squares regression estimates reported in Table 3 below provide insights into factors affecting construction injury rates from 2000 to 2010. The dependent variable is the construction injury rate. Independent variables include the state’s population, the percent change in that variable, the state’s urbanization rate, construction employment, and many others. Our methodology is explained with greater detail in Appendix C.

	(1) Coefficient (<i>t</i> -statistic)	(2) Coefficient (<i>t</i> -statistic)	(3) Coefficient (<i>t</i> -statistic)
NY (550)	-1.9487** (-2.92)	-0.7743 (-1.09)	-0.1811 (-.24)
Year (550)	-0.1744*** (-5.38)	-0.0955** (-2.66)	-0.1768*** (-3.54)
Population (550)		-0.0704*** (-4.07)	-0.2261** (-3.23)
Percent Change in Population (500)		10.0171 (1.11)	13.0147 (1.42)
Urbanization ^a (550)		0.0066 (.01)	-1.0753 (-1.28)
Construction Employment ^b (550)			-0.0053 (-1.57)
Percent Change in Employment (500)			0.6135 (.43)
Construction GDP ^c (528)			0.2032*** (4.87)
Percent Change (480)			0.9575 (.56)
Residential Permits ^d (550)			-0.0029 (-1.38)
Percent Change in Permits (500)			-0.4831*** (-4.55)
Commercial Permits ^e (550)			-0.0169*** (-2.95)
Percent Change (500)			-0.2925 (-.66)
Constant	7.4838***	7.2056**	8.8441***

Notes: The number of available observations is in parentheses next to each variable. * = .10 significance; ** = .05 significance; *** = .01 significance. (a) Percent of populous living in cities, U.S. Census; (b) Number of people employed in construction, U.S. Bureau of Economic Analysis; (c) Total GDP allocated to construction. Units in millions of nominal dollars; (d) Units in hundreds, U.S. Census; (e) Commercial Permits, Units in Hundreds.

The above regression estimates suggest several conclusions. First, once state population, rates of urbanization, and other key economic factors are included, New York is no safer than other states. An important factor is inclusion of year-fixed effects. The array of unobservable factors that change over time lower construction injury rates by about 0.18 percentage points annually, depending on the specification used. The composition of a state's construction industry is also important. Higher commercial construction activity, for example, is associated with a lower rate of nonfatal injuries. Additionally, states with larger populations tend to have lower injury rates.

V. The Impact of Labor Law 240 on Construction Injuries

The above analysis suggests that, once basic control variables are included, New York's construction injury rate is about average. Raw injury data, however, does not separate those construction occupations affected by Labor Law 240 from those that are not, and thus cannot accurately address its impact.

Labor Law 240 especially applies to certain types of occupations. To isolate its effect we collected injury data on occupations affected by Labor Law 240, as well as on less impacted occupations. The less/non-impacted occupation types provide a control group, which allows us to assess the effects of Labor Law 240 relative to a well-defined baseline. Noting the broad prevalence of the law, we assessed directly impacted occupations as including residential building construction, non-residential building construction, roofing, and heavy commercial construction. Less or non-impacted occupations included manufacturing, wholesale trade, retail trade, transportation and warehousing, and utilities. The difference-in-difference approach by design controls in part for the under-reporting of nonfatal injuries that researchers have observed in recent decades.²⁰ Our difference-in-difference estimates will understate the effects of Labor Law 240 to the extent that occupations we consider to be non-impacted are in fact affected by the law.

To recap, in the regression estimates reported below, the dependent variable is the non-fatal injury rate across a range of occupations, including roofing, heavy-civil engineering, non-residential construction, manufacturing, wholesale trade, retail trade, transportation warehousing, utilities, and residential construction injury rates, for the years 2000 to 2010. This results in 3,382 observations. Data were unavailable for eight states.²¹

Key independent variables were defined as follows:

- **New York:** A binary variable set to one if the observation comes from New York, zero otherwise.

20 Welch et al (2007). "Is the Apparent Decrease in Injury and Illness Rates in Construction the Result of Changes in Reporting."

21 See Appendix C.

- **Labor Law 240 Occup:** A binary variable set to one if the observation comes from a occupation (in any state) that would be impacted by labor law 240, which includes roofing, heavy-civil engineering, residential construction and non-residential construction, zero otherwise.
- **Labor Law 240 Impact:** A binary variable set to one if the observation is from New York and the occupation is impacted by Labor Law 240, zero otherwise

The key variable of interest that reflects the treatment effect of Labor Law 240 on construction safety in New York is the “Labor Law 240 Impact” interaction term, since that variable measures the effect on construction injury rates of being both in New York and subject to Labor Law 240 liability.

	(1) Coefficient (<i>t</i> -statistic)	(2) Coefficient (<i>t</i> -statistic)	(3) Coefficient (<i>t</i> -statistic)	(4) Coefficient (<i>t</i> -statistic)
New York	-1.779*** (-4.88)	-1.775*** (-5.27)	-6.810*** (-10.43)	-6.810*** (-104.16)
Labor Law 240 Occup	0.609*** (6.81)	0.511*** (6.17)	0.520*** (7.32)	0.520*** (3.39)
Labor Law 240 Impact	0.452 (.84)	0.490 (.98)	0.545 (1.28)	0.545*** (3.55)
Constant	5.598***	7.552***	10.711***	10.711***
Year Fixed Effects	No	Yes	Yes	Yes
State Fixed Effects	No	No	Yes	Yes
State*Year Fixed Effects	No	No	Yes	Yes
Clustering (State level)	No	No	No	Yes
R-Squared	0.024	0.17	0.417	0.417
Observations	3,382	3,382	3,382	3,382
Note: * = .10 significance; ** = .01 significance; *** = .001 significance.				

As indicated in Table 4, the Labor Law 240 Impact variable is positive and significant at a high level of confidence after controlling for year- and state-fixed effects and clustering by state. Including fixed effects is reasonable given the important effects of time and location on injury rates discussed above. Clustering by state reflects the role of shared determinants of injury rate among states, such as the business cycle.²² The positive effect of Labor Law 240 on nonfatal injury rates in construction is significant at the one-tenth of a percent (.001) confidence level. To clarify, this analysis indicates that Labor Law 240 increases the construction injury rate in occupations to which it applies with a very high degree of confidence.

22 Asfaw et al. (2010), “The business cycle and the incidence of workplace injuries: Evidence from the U.S.A.”

In addition to statistical significance, the Labor Law 240 effect is also substantial in magnitude, sometimes called “economic significance.” The Labor Law 240 Impact variable displays a coefficient close to 50 in all of the above specifications. That is, coefficient size is highly stable regardless of whether state and year fixed effects, or clustering by state, is included in the analysis. This means that Labor Law 240 increases the number of injuries by about 5.5 per 1,000 full time workers annually, which is consistent with the hypothesis that the law blunts employers’ incentives to invest in worker safety. We are thus confident that Labor Law 240 makes construction in occupations to which it applies more dangerous. As of 2010, the occupations we identified as especially impacted by Labor Law 240 in New York employed about 123,000 workers.²³ Therefore, a reasonable estimate of the additional number of annual nonfatal injuries due to the law is 677 cases.

Table 5: Economic Costs of Labor Law 240

	New York State	Average	Safest	Most Dangerous
Non-Residential Building	4.12	6.12	Texas	Montana
Heavy Civil Construction	5.89	6.06	Louisiana	Vermont
Roofing	6.83	7.84	North Carolina	Washington
Manufacturing	4.35	6.69	Arizona	Alaska
Wholesale Trade	2.75	4.93	New York	Maine
Retail Trade	3.36	5.15	New York	Maine
Transportation & Warehousing	5.55	6.49	Louisiana	Rhode Island
Utilities	3.45	4.44	South Carolina	Maine
Residential Building Construction	3.21	5.50	Texas	Washington

VI. Injury Costs

The social costs associated with workplace injuries are well documented. In 2004, according to the American Society of Safety Engineers, the national economic cost of workplace deaths and injuries was \$142.2 billion and resulted in a loss of 120 million workdays.²⁴ The median injury results in 9 days of lost work, and employers spend roughly \$51 billion per annum to cover wage and medical costs for injured workers.

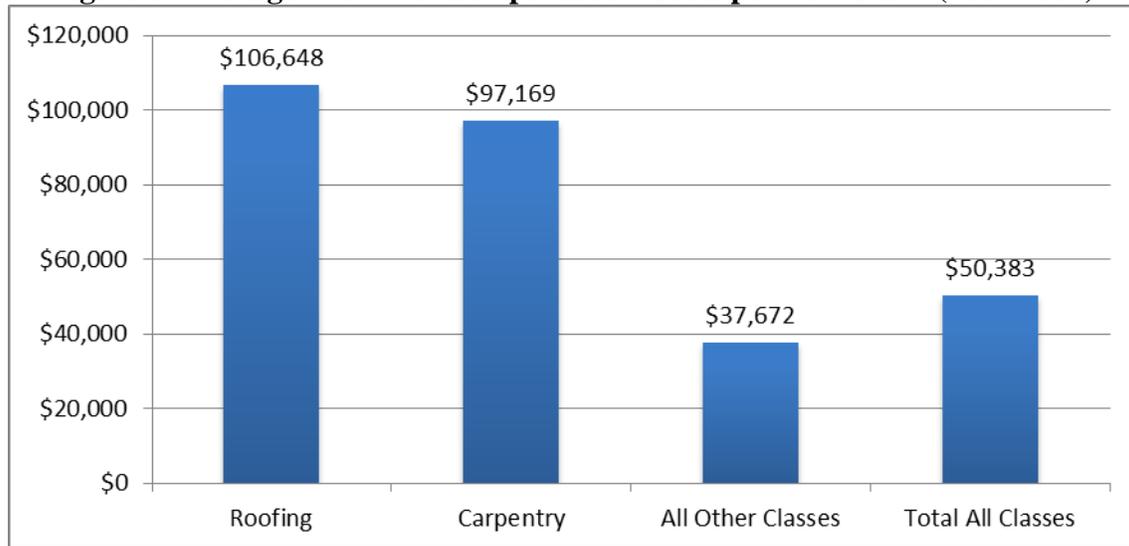
Injuries in the construction industry tend to be more costly than in other professions. This is especially true for injuries at height, which is the focus of the scaffold law. Based on an OSHA

23 2010 Occupational Employment Statistics, Bureau of Labor Statistics.

24 <http://www.osha.gov/dcspp/products/topics/businesscase/costs.html>

study between 2005 and 2007 of injuries from scaffolding and ladders, the average injury cost was \$50,383. The cost is much higher for roofing and carpentry at-height injuries, which are \$106,648 and \$97,169 respectively. Of those costs, roughly 30 percent were wage replacement benefits and the other 70 percent were medical costs.

Figure 6: Average Workers' Compensation Costs per Fall Claim (2005-2007)



Based on the average of total cases and the compensation for injury costs uncovered by the American Society of Safety Engineers study, injuries related to Labor Law 240 cost between \$34 million and \$83.7 million.²⁵

This range reflects the lower bound estimate of New York construction workers directly impacted by Labor Law 240 and an upper bound estimate of all other construction workers potentially impacted by the law. Such workers' compensation data is useful for estimating the baseline economic costs of nonfatal injuries associated with the law, although it likely underestimates the cost of the law, given differences in health spending per capita and workers' compensation costs between New York and the rest of the country. In 2009, New York State ranked seventh in the U.S. in health care expenditures per capita²⁶ and in 2012, New York workers' compensation premiums ranked fifth.²⁷

Maryland Study

In August of 2012, Public Citizen, a national non-profit group, conducted a study assessing the cost of construction injuries and fatalities to the State of Maryland.²⁸ The study assessed the direct, indirect, and quality-of-life costs of worker injuries and fatalities between 2008 and 2010

25 Based on 2010 estimates of employment. (U.S. Bureau of Labor Statistics).

26 [Kaiser Family Foundation, Health Care Expenditures per Capita by State of Residence, 2009.](#)

27 [Dotter, Jay and Manley, Mike, 2012 Oregon Workers' Compensation Premium Rate Ranking Summary.](#)

28 <http://www.citizen.org/documents/price-of-inaction-maryland-worker-safety-report.pdf>

based on the 2004 Waehrer study.²⁹ Over that period there were 55 fatal construction accidents, costing the State roughly \$287 million in direct costs. This is based on a value-of-a-statistical life estimate of \$5.2 million. During that same period there were 11,000 construction injuries resulting in \$425.4 million in injury costs. This implies a unit injury cost of \$38,672 per incident. The total cost of construction accidents over the period was estimated at \$713 million, or \$238 million annually.

Given that Maryland's construction workforce was 147,400 in 2010, a little under half of New York's 302,000,³⁰ the direct, indirect, and quality-of-life costs of construction injuries in New York is well over \$1 billion. Based on the Maryland estimate of injury costs, \$37,672, the additional nonfatal injuries associated with Labor Law 240 cost New York State between \$26 million and \$65.1 million annually.

VII. The Effects of Labor Law 240 on Insurance Costs

The repeal of legislation similar to Labor law 240 in Illinois had a major impact in reducing insurance loss costs, which are the key underlying determinant of premium levels for employers. Because loss costs reflect previous claims costs, different levels of liability across different states will have a direct impact on insurance costs. The 2012 base loss cost data compiled by the Insurance Services Office (ISO) shows that in three Labor Law 240-impacted construction occupations, loss costs are much higher than those in other major states.³¹ In each of the three sectors, New York loss costs are more than double the next highest state in the sample of large states.

VIII. The Illinois Case

Illinois' experience and 1995 repeal of the Structural Work Act,³² is helpful for understanding the possible impact of reforming Labor Law 240. As Table 6 below indicates, the two states are similar along a number of relevant political, economic, and demographic dimensions.

29 Waehrer G, Leigh JP, Cassady D, and Miller T, Costs of occupational injury and illness across states, 46 JOURNAL OF OCCUPATIONAL AND ENVIRONMENTAL MEDICINE 1084-1095 (2004).

30 Based on BLS Occupational Employment Statistics, 2010.

31 ISO, 2012: Loss Costs for Bridge/Elevated Highway Construction (91265), Concrete Construction (91560), and Structural Metal Construction (97655) in CA, CT, FL, IL, MA, NJ, NY, OH, PA, TX

32 (IL ST CH 740 § 150/1) repealed by P.A. 89-2, § 5, eff. Feb. 14, 1995

Table 6: Illinois and New York Compared		
Metric	Illinois	New York
State Population, 2011 ³³	12,869,257	19,465,197
Large Metro Area	Chicago	New York City
Urbanization (percent) ³⁴	88.5 percent	87.9 percent
Average Annual Construction Employment ('000s), 2000-2012 ³⁵	249.42	326.67
2010 Workers Compensation Coverage (percent share of Unemployment Insurance) ³⁶	99.8 percent	99.8 percent
2012 Workers Compensation Premium Ranking (of 51) ³⁷	4th	5th
Statute creating special liability for injuries at height	Structural Work Act (repealed in 1995)	Labor Law 240

Despite their commonalities, the construction and safety rates in the two states have diverged since the 1990s. In the states' overlapping years of data³⁸ before and after repeal of the Structural Work Act, Illinois' construction sector has become as safe (or safer) than New York's as measured by the broadest fatal and nonfatal measures. Those measures, however, are far broader than the injury types potentially related to Labor Law 240. For this reason, subsequent analysis places special emphasis on "falls to lower level," a direct measure of injuries at height and the focus of Labor Law 240. As measured by construction injuries at height, the Illinois construction industry has in recent years been much safer than construction in New York (including New York City) and the rest of the country.³⁹

33 U.S. Census, 2011.

34 Id.

35 [FRED data](#), St. Louis Federal Reserve.

36 Data from 2010 NASI report, "Workers' Compensation: Benefits, Coverage, and Costs, 2010," p. 56-7.

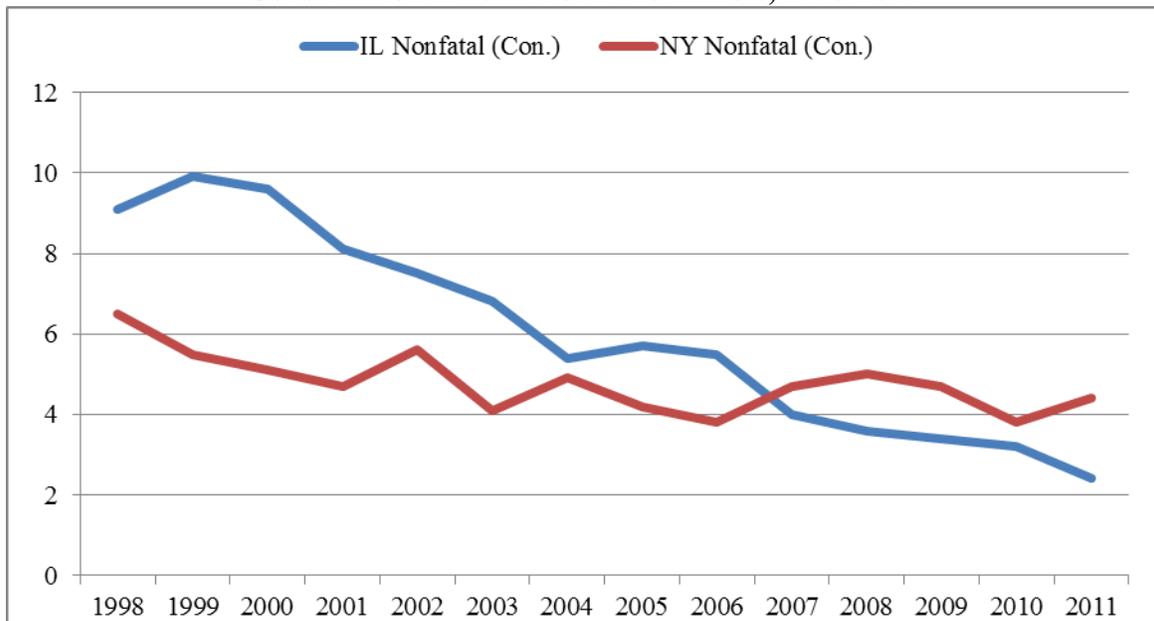
37 Dotter & Manley, "2012 Oregon Workers' Compensation Premium Rate Ranking Summary,"

38 Overlapping years of Bureau of Labor Statistics data since repeal: 1992-2011 for fatal injuries and 1998-2011 for nonfatal injuries

39 Injury data are compared in the overlapping years using NAICS (2002-2011) and SIC (1992-2002) designations, which for construction industries are only negligibly different. See Appendix C.

Injury Rate Measure	All U.S.	Illinois	New York (including NYC)
Average Nonfatal Injury Incidence Rates per 100 Private Construction Workers, 1998-2006 ⁴⁰	6.31	7.76	5.08
Average Nonfatal Injury Incidence Rates per 100 Private Construction Workers, 2006-2011	4.7	3.68	4.4
Average Fatal Injuries per 100,000 Construction Workers (Public and Private), 1992-2011 ⁴¹	17.86	16.88	17.52
Average Fatal Injuries per 100,000 Construction Workers (Public and Private), 2006-2011	15.09	13.63	13.62

Figure 7 : Nonfatal Injury Incidence Rate (per 100 FTE workers) in Construction in New York and Illinois, 1998-2011



40 Taken directly from the Bureau of Labor Statistics State Survey database, 2012. See Appendix C.

41 Generated with BLS data from the Census of Fatal Occupational Injuries. See Appendix C.

Figure 8: Fatalities per 100,000 Construction Workers, New York and Illinois, 1998-2011

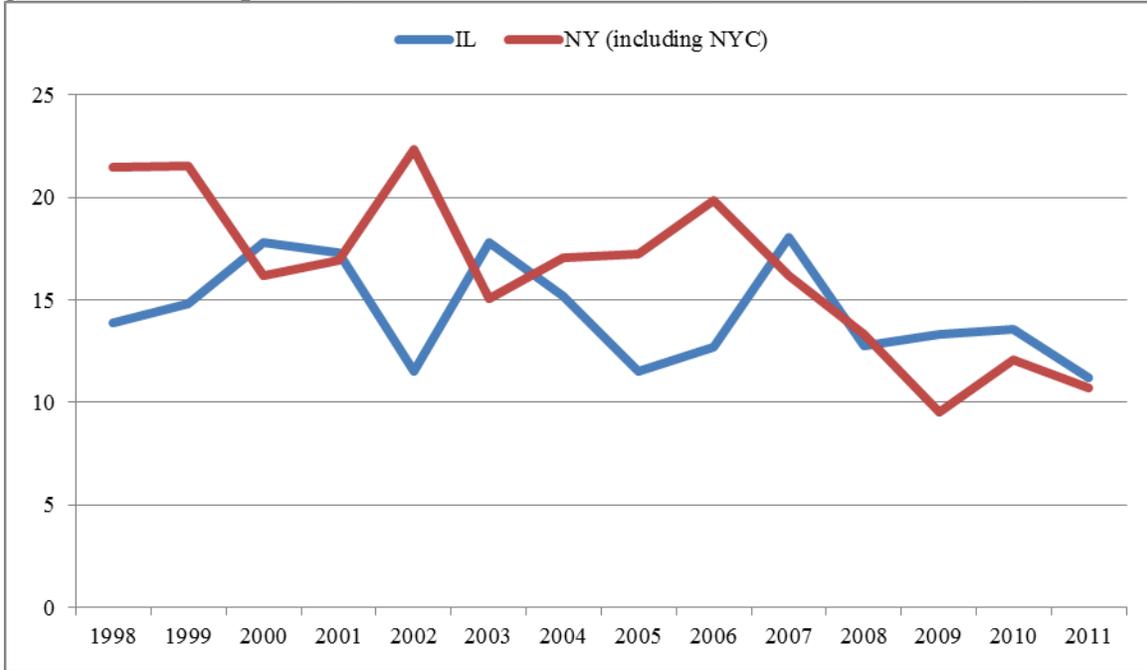


Table 8: Fatal and Nonfatal Rates for Construction Injuries at Height in the U.S., Illinois, and New York, various time periods

Fall (to lower level) Injury Rate Measure	All U.S.	Illinois	New York (including NYC)
Average Fatal Falls (to lower level) per 100,000 Construction Workers, 1992-1995 ⁴²	5.92	8.92	7.25
Average Fatal Falls (to lower level) per 100,000 Construction Workers, 1996-2011	5.49	5.51	7.41
Average Fatal Falls (to lower level) per 100,000 Construction Workers, 1996-2005	5.8	6.08	8.29
Average Fatal Falls (to lower level) per 100,000 Construction Workers, 2006-2011	4.97	4.56	5.95
Average Nonfatal Falls (to lower level) Injury Rate per 10,000 Construction Workers, 1998-2011 ⁴³	30.77	28.87	31.35
Average Nonfatal Falls (to lower level) Injury Rate per 10,000 Construction Workers, 1998-2005	36.79	39.15	35.19
Average Nonfatal Falls (to lower level) Injury Rate per 10,000 Construction Workers, 2006-2011	22.75	15.17	26.23

42 Created with [BLS Data](#) including Public and Private Sector Construction. See Appendix C.

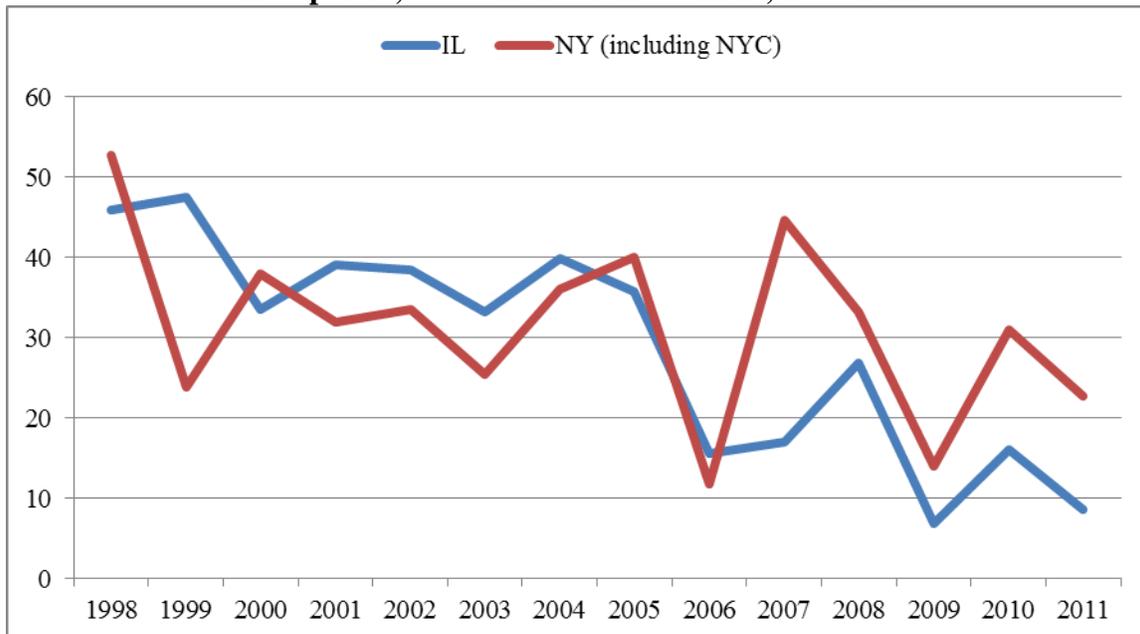
43 Private Industry, includes Injuries and Illnesses. Pre-1998 nonfatal injury data unavailable for Illinois.

Injury Measure	All U.S.	Illinois	New York (including NYC)
Average Fatal Injury Incidence Rate per 10,000 Full-time Equivalent Construction Workers, 2007-2011	14.78	14.73	15.76
Average Fatal Fall Injury Incidence Rate per 10,000 Full-time Equivalent Construction Workers, 2007-2011	4.87	4.83	5.88

To check if injury rate methodology affects the comparison between Illinois and New York, the fatal injury incidence rate was calculated using the BLS hours-based approach. As Table 9 shows, adjusting for the available state-level hours data in construction suggests that, from 2007-2011, Illinois was safer than New York by one full construction fatality and fatal fall.⁴⁴

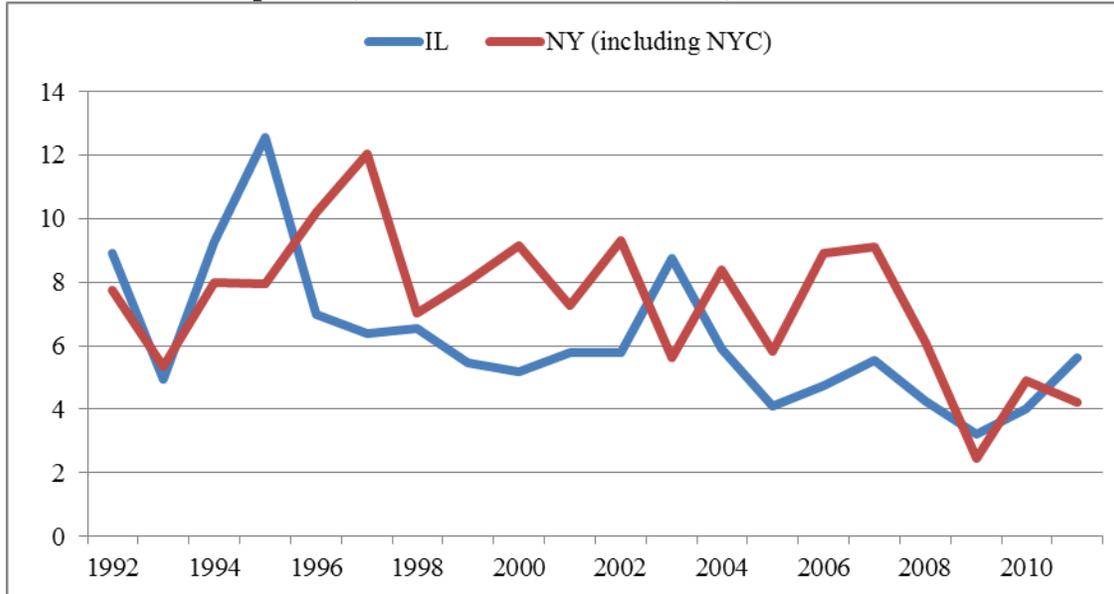
Figures 9 and 10 allow comparison of each state by injuries at height. As illustrated in Figure 9, Illinois construction has experienced a nonfatal fall incidence rate below that of New York in every year since 2006. Further, Illinois’ fatal fall injuries per 100,000 workers (Figure 10) have been higher than New York’s in only three in 13 years of data since 1998.

Figure 9: Nonfatal Falls (to lower level) Incidence Rate per 10,000 Construction Workers, 1998-2011



44 See Appendix C for calculation methodology.

Figure 10: IL and NY Fatal Falls (to lower level) per 100,000 Construction Workers, 1992-2011



The above data does not indicate that construction work at height in Illinois became more dangerous after the repeal of the Structural Work Act (SWA) in 1995. Instead, the injuries at height have become less frequent in Illinois compared to New York and the U.S. since the 1990s.

As shown in the first row of Table 8, average fatal injuries at height per 100,000 workers in Illinois construction in the four years before repeal, 1992-1995, were higher than in both the United States and New York. On a year-by-year basis, fatal injuries at height in Illinois were higher than in New York for three of the four years before SWA repeal, counting 1995 as pre-repeal given the lag of implementation.

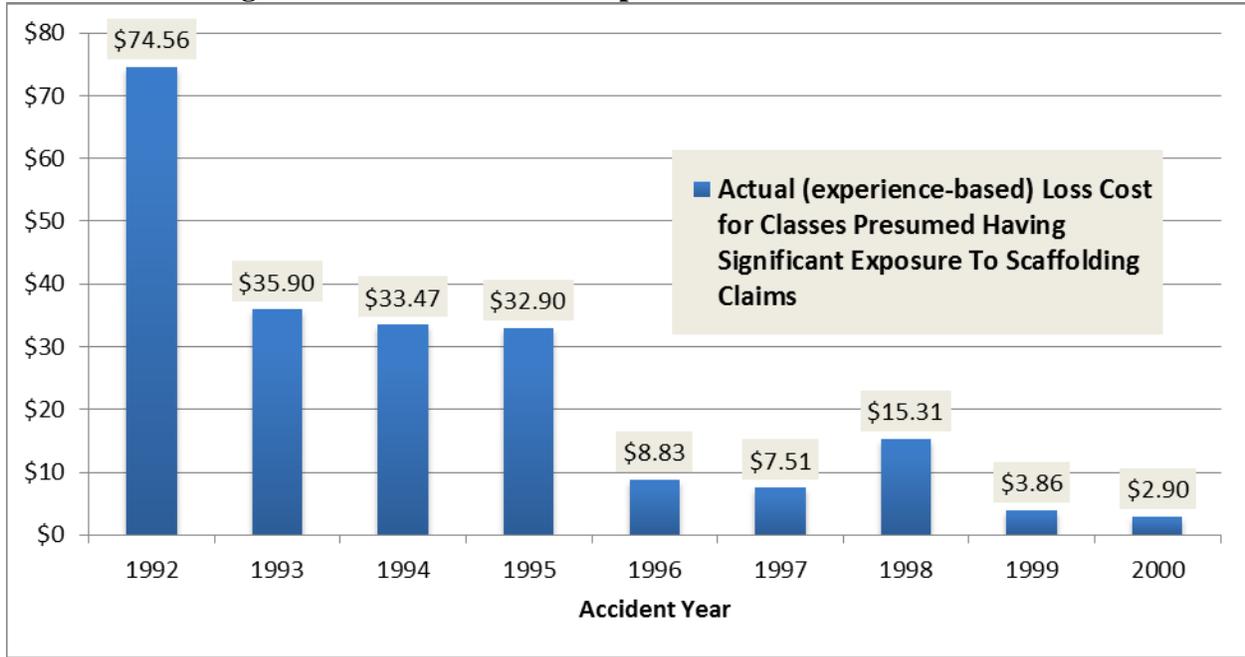
This trend dramatically reversed in the years following repeal. In the 15 years after repeal (1996-2011), Illinois fared worse than New York in only three years along this same measure of fatal injuries at height. Between 1996 and 2011, New York's construction industry averaged nearly two more deadly falls than in Illinois. Illinois' average fatal construction injuries at height has improved from being worse than the U.S. average between 1996-2005 to becoming better than the U.S. by nearly half a fatality between 2006-2011.

Considering the entire period, Illinois fatal falls in construction have fallen from an average of 8.92 per 100,000 construction workers to an average of 4.56 from 2006 to 2011. In New York, by contrast, fatal fall injuries decreased at a much lower rate. They fell from an average of 7.25 for 1992 to 1995, to 7.41 for 1996 to 2005, to 5.95 for 2006 to 2011.

In addition to injury rates, Illinois' loss cost data from the Insurance Services Office for areas assumed to have exposure to liability for injuries at height suggests that repeal of the

Structural Work Act has had a measurable effect on the commercial liability insurance market. Although general liability insurance carriers did broadly experience a hard market⁴⁵ in the late 1980s and early 1990s, Figure 11 below suggests that there are two discrete periods over which loss costs differed between 1992 and 2000: the periods before and after repeal in 1995. This is consistent with the 2012 loss cost data for three construction sectors in New York discussed in the previous section.

Figure 11: Illinois Premises/Operations Historical Loss Costs



45 Harrington, Scott E. "Tort liability, insurance rates, and the insurance cycle" (2004).

Appendix for Section 1

Appendix A: Quantifying Labor Law 240 Legal Citations

Using Bloomberg Law, we compiled the total number of legal citations to Labor Law 240 by searching for the statute within all of New York’s court opinions and dockets. With Google Scholar, we compiled the total number of New York cases containing the precise search term “Labor Law 240.” Because of possibly variations in phrasing and unquantifiable privately settled cases, these numbers are likely to be lower than the number of cases in which the statutes were considered. Annual legal citations data for both sources was compiled on a calendar year basis.

Appendix B: Scaffold Statutes in Other Jurisdictions

Westlaw produced 500 citing references for LL240 and 232 for the similar repealed Illinois statute. Compare with the other states’ total of 339, based on NE (44), LA (31), MO (11), MT (92), OH (10), OK (15), PA (136).

State and Statute	Westlaw Citing References
New York: N.Y. Lab. Law 240	Greater than 500
Missouri: Mo. Ann. Stat. 292.090	11
Nebraska: Neb. Rev. Stat 48-425	44
Louisiana: La. Rev. Stat. Ann. 40-1672	31
Oklahoma: 40 OKl. St. Ann. 174	15
Pennsylvania: Pa. Const. Stat. 25-2	136
Montana: Mont. Code Ann. 50-77-101	92
Ohio: Rev. Code Ann. 3791.06	10
Illinois: IL ST CH 740 § 150/1 (Repealed, 1995)	232
Source: Westlaw	

Appendix C: Data and Methodology

Data Sources

Data for this analysis was collected from a variety of public and private sources. The injury statistics used and compiled for this paper were drawn from the Bureau of Labor Statistics. Nonfatal injury incidence rates for the U.S. and individual states were directly pulled from the BLS Survey of Occupational Injuries and Illnesses (SOII).⁴⁶ SSOI data was unavailable for Colorado, Idaho, Mississippi, North Dakota, New Hampshire, Ohio, Pennsylvania, and South Dakota.

Total Fatality and Fatal Fall (to lower level) injury data were compiled differently than the post-2007 BLS practice of measuring the fatal injury rate with hourly data. The Census of Fatal

⁴⁶ See: <http://www.bls.gov/iif/oshstate.htm>

Occupational Injuries (CFOI) was the underlying source for measurement of fatality counts, providing both aggregate and specific state-level or injury-type data. At the national level, the total fatality and fatal fall rates used in this paper were calculated by dividing the count of fatalities or fatal falls by the number of full-time equivalent workers. U.S. full-time equivalent workers data for the construction industry and all domestic U.S. sectors came from the Bureau of Economic Analysis' "Industry Economic Accounts Database."⁴⁷

It was in fact possible to compile fatality and fatal fall incidence rates data based on the number full-time equivalent workers for New York and Illinois between the years of 2007-2011 (Table 10.3). The BLS and New York Department of Labor made average total weekly hours available for all construction employees during those years.⁴⁸ At the state level, seasonally adjusted annual employment data for the construction industry came from the St. Louis Federal Reserve Bank's FRED database.⁴⁹ Together, the hourly data with FRED employment data enabled the creation of fatal and fatal fall incidence rates like the BLS hours-based approach.

Cited BLS calculations:

For general nonfatal injury rates:

Incidence rates represent the number of injuries and illnesses per 100 full-time equivalent workers, calculated as: $(N/EH) \times 200,000$ where:

N = number of injuries and illnesses

EH = total hours worked by all employees during the calendar year

200,000 = base for 100 equivalent full-time workers (working 40 hours per week, 50 weeks per year).

For nonfatal falls incidence:

Incidence rates represent the number of injuries and illnesses per 10,000 full-time equivalent workers and were calculated as: $(N / EH) \times 20,000,000$ where,

N = number of injuries and illnesses,

EH = total hours worked by all employees during the calendar year,

20,000,000 = base for 10,000 full-time equivalent workers (working 40 hours per week, 50 weeks per year).

47 See: <http://www.bea.gov/iTable/iTable.cfm?ReqID=5&step=1#reqid=5&step=2&isuri=1&403=1>

48 N.Y. DOL: <http://www.labor.ny.gov/stats/lshour.shtm> BLS: <http://www.bls.gov/data/#employment>

49 See: <http://research.stlouisfed.org/fred2/>

Non-BLS Calculations:

For fatalities per 100,000 workers:

Fatalities per 100,000 Construction Workers:

(fatalities count / seasonally adjusted construction employment in thousands)*100

For fatal fall rates:

Fatal Falls per 100,000 Construction Workers:

(fatal fall count / seasonally adjusted construction employment in thousands)*100

For national fatalities (or fatal falls) per 100,000 full-time equivalent in construction and all sectors:⁵⁰

(Fatalities count / Full-time Equivalent workers in thousands)*100

Unless specified as the “injury incidence rate” or “per Full-time equivalent worker,” the rate specified in this paper does not use the post-2009 Bureau of Labor Statistics method for calculating the frequency of workplace injuries.⁵¹ This results from the limitations of BLS data collection, which does not include as much historical data about state-level average total hours in the construction sector as would be necessary to simply compare injury incidence rates over time.

As far as industry classifications, the North American Industry Classification System (NAICS) classification of construction sectors is only negligibly different than it was under Standard Industrial Classification (SIC), as evidenced in the NAICS to SIC “crosswalk.”⁵² For this reason, injury rates from recent years may reasonably be compared with injury rates from the 1990s. The BLS seems to claim that this presents a serious roadblock to these sorts of comparisons,⁵³ but careful standardization of the data compared in this paper negates this issue.

While the nonfatal injury rate data missing for eight states is sub-optimal, it does not provide a serious obstacle to statistical analysis in this paper. For the regressions, construction statistics, such as GDP, employment levels, and permit data were taken from Bloomberg LP terminal data. Bloomberg collects that data from the Census Bureau, the Bureau of Economic Analysis, the Federal Deposit Insurance Corporation, and the Bureau of Labor Statistics. Case count data was taken from Bloomberg Law and Google Scholar.

⁵⁰ Note: the number of FTEs is already calculated, so not multiplied by a base FTE like BLS

⁵¹ BLS change to hours-based method: <http://www.bls.gov/opub/cwc/sh20100121ar01p1.htm>

⁵² <http://www.naics.com/naicsfiles/2012NAICStoSIC-Crosswalk.pdf>

⁵³ See the footnotes of nearly any injury data report on the state data page: <http://www.bls.gov/iif/oshstate.htm>

Regression Methodology

Our first OLS regression designates overall construction injury rates as the dependent variable, and various important factors as independent variables. The objective of this regression was to analyze the overall safety level of NYS construction, not to derive the effect of Labor Law 240. The effect of the law is analyzed in table #3. NY is a dummy variable designed to show the statistical difference between NY and all other states. Observations have a 1 if it is NY, and a 0 if it is any other state.

Labor Law Sectors are roofing, heavy-civil construction, and nonresidential building construction. It's not a perfect snapshot of the relevant industries, but it is a fairly accurate measure. The LL240 Impact variable is a NY*LL240 sectors. So it's only a 1 if it's in New York and affected by the labor law. NY is a 1 if the observation is from NY, LL240 sectors is a 1 if the injury comes from a sector that would be regulated by LL240.

Table C 1: State-by-state average injury data

State	Average Construction Nonfatal Injury Rate (per 100 FTE workers), 2000-2011	Average Private Sector Nonfatal Injury Rate (per 100 FTE workers), 2000-2011	Average Fatal Falls per 100,000 Construction Workers, 2003-2010	2011 Population (U.S. Census)
AK	8.37	6.01		723,860
AL	4.85	4.64	8.87	4,803,690
AR	5.38	4.67	8.95	2,938,580
AZ	6.95	4.42	2.99	6,467,310
CA	6.26	4.63	4.17	37,683,900
CO			3.25	5,116,300
CT	6.73	5.02		3,586,720
DE	4.69	3.82		987,000
FL	6.00	4.55	4.85	19,082,300
GA	4.44	3.92	8.29	9,812,460
HI	7.19	4.82		1,378,130
IA	8.29	6.1	9.67	3,064,100
IL	5.46	4.25	5.30	12,859,800
IN	5.71	5.68	4.53	6,516,350
KS	7.33	5.39		2,870,390
KY	6.16	5.78	8.37	4,366,810
LA	2.75	3.29	4.80	4,574,770
MA	6.45	4.16	6.82	6,607,000
MD	5.32	3.87		5,839,570
ME	7.94	6.99		1,328,540
MI	5.91	5.5	5.37	9,876,800
MN	8.05	5.04	4.00	5,347,300
MO	5.84	5	5.83	6,008,980
MS	N/A	N/A	9.41	2,977,460
MT	10.17	6.63		997,667
NC	4.25	3.88	5.51	9,651,100

NE	6.68	5.21		1,842,230
NJ	5.23	3.8	7.45	8,834,770
NM	5.14	4.56		2,078,670
NV	7.49	5.29	6.71	2,720,030
NY (w/ NYC)	4.58	3.14	6.51	19,501,600
OH	N/A	N/A	4.69	11,541,000
OK	5.61	5		3,784,160
OR	6.82	5.2		3,868,230
PA	N/A	N/A	7.03	12,744,000
RI	7.69	5.7		1,050,650
SC	3.91	3.82	7.12	4,673,350
TN	5.13	4.87		6,399,790
TX	3.88	3.64	6.26	25,631,800
UT	7.67	5.18		2,814,350
VA	5.07	3.73	5.70	8,104,380
VT	7.58	5.84		626,916
WA	10.63	6.38	3.59	6,823,270
WI	9.00	5.91	5.07	5,709,840
WV	6.63	5.49		1,854,910
WY	6.10	4.83		567,356

Section 2:
Public Infrastructure Investment and Municipal Liability
Costs in New York State

Michael R. Hattery, PhD
Director of Local Government Studies

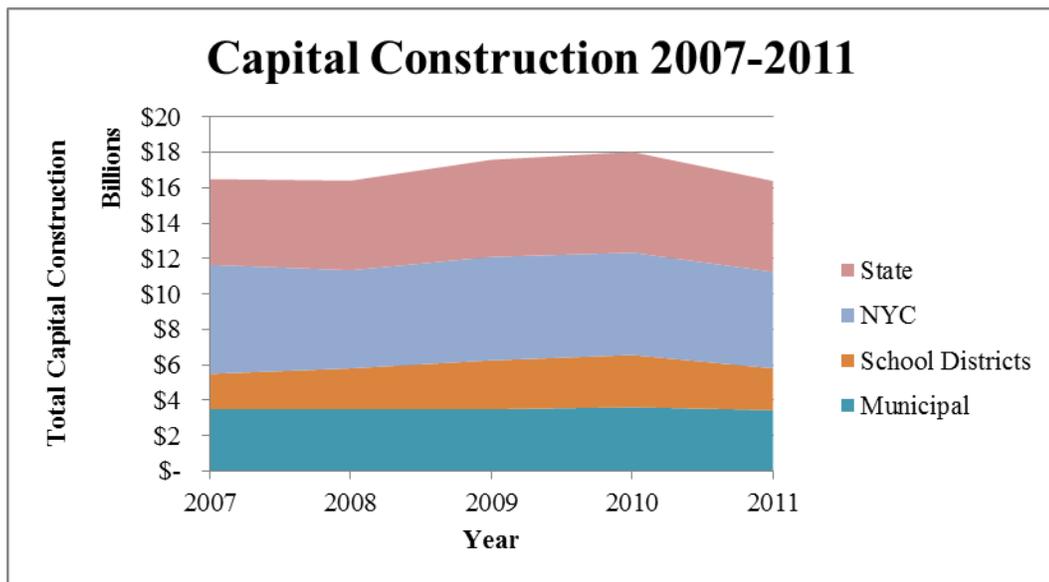
The Nelson A. Rockefeller Institute of Government
University at Albany, State University of New York
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Albany, NY 12203-1003

I. Capital Spending in New York State

Nationally, state and local capital spending in total remained relatively constant in recent years until a noticeable decline beginning in 2010 (Fisher and Wasserman, 2012). This downturn coincides with the ending of federal government stimulus support (Marlowe, 2012). Although there is general stability overtime in aggregate state and local capital spending nationally, Fisher and Wasserman find that there are major interstate differences in the relative amount of capital expenditure. Their results indicate that over the six years 2005-2010, state-local capital spending varied among the states from a high of 18.4 percent of total expenditures to a low of 6.6 percent with a U.S. average of 11.9 percent. In this analysis, New York ranks 22nd in capital spending as a percent (12.1%) of total expenditures for the five year period. Per capita state and local capital spending also varies substantially across the 50 states.

Total capital spending by the state and local governments in New York has varied, annually, from 16.5 to nearly eighteen billion dollars over the five year period 2007-2011. Figure 1 below summarizes capital spending in New York State for this period. After a modest decrease in 2008, the total increased in 2009 and peaked in 2010, and then dropped substantially in 2011. The combined capital spending for New York City and New York State remained about two-thirds of the total over the five years and fluctuated between 10.5 and 11.5 billion. The capital spending figures for New York State and New York City represent Capital Construction. Municipalities and school district report capital and equipment together, so their capital spending amounts include both capital construction and equipment purchases.

Figure 2 1: Capital Spending in New York State 2007-2011

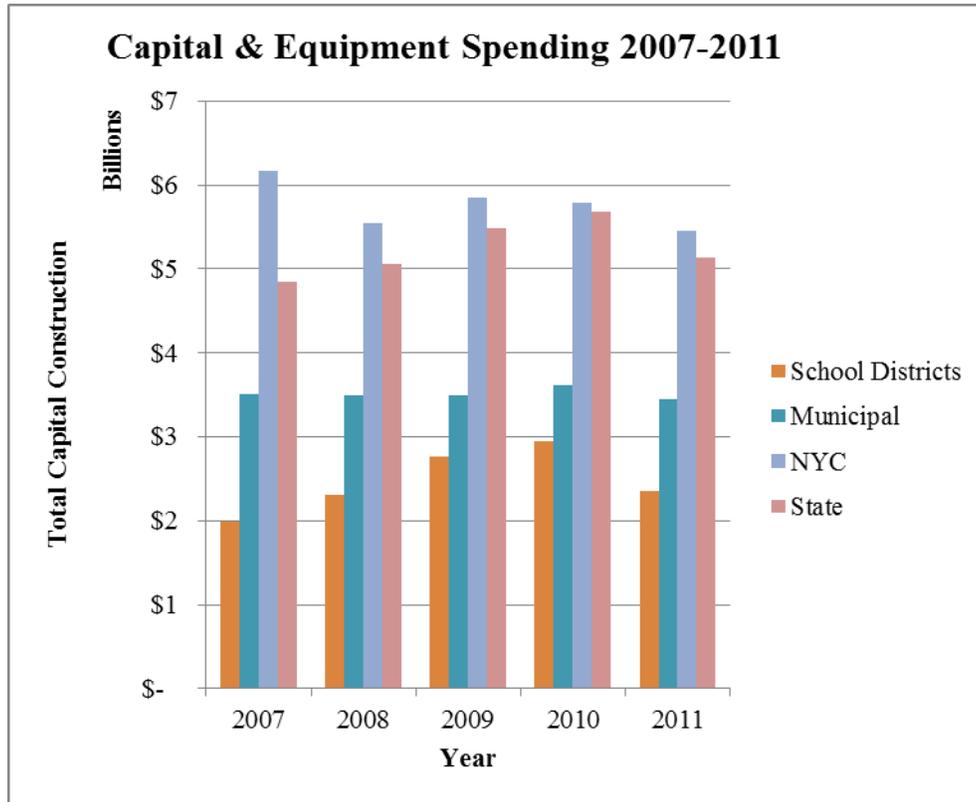


Source: see Table A21 at the end of the report section.

Among these four major public sectors, capital spending fluctuated from 2007-2011 with two sectors growing in actual dollars and two declining in actual dollars (see figure 22, below).

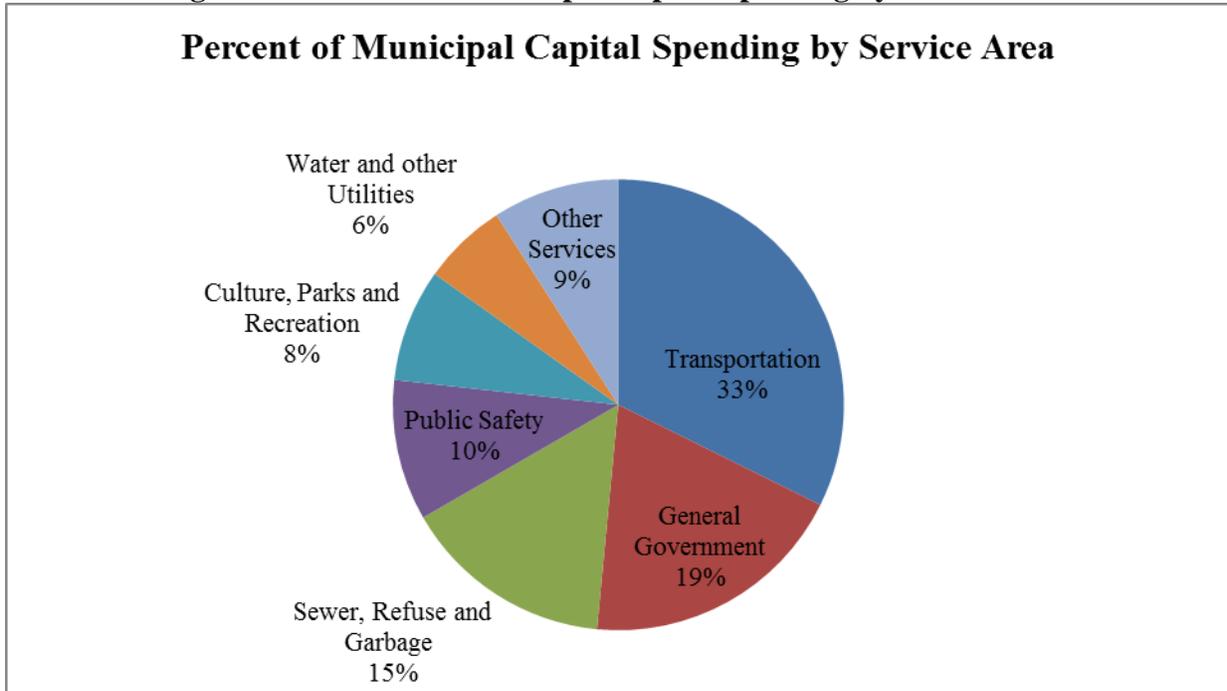
Capital spending for School Districts (19%) and the State of New York (6%) were greater in 2011 than at the beginning of the period, while New York City (-12%) and all other Municipalities (-3%) declined from their 2007 totals.

Figure 2 2: Capital Spending in New York State 2007-2011



The components of municipal capital spending are instructive (Table A21 at the end of Section 2). Of the four major municipal classes in New York (counties, cities – except New York City, towns and villages) only counties (.5%) actually increased total capital and equipment spending (unadjusted for inflation) over the five year period. With town totals declining a modest -2% and cities (-6%) and villages (-15%) declining more steeply. It is important to note that, for each of the municipal classes, spending fluctuated over the five years and no class showed a straight-line decrease or increase during the period. It is instructive that cities and villages, the traditional places viewed as most infrastructure intensive, experienced the steepest decline in capital and equipment investment between 2007 and 2011.

Local government capital spending by service area or function remained relatively stable, as a percent of total spending, from 2007-2011. Figure 23 illustrates the allocation of capital spending by service area. Transportation (32%) is the largest and combined with General Government (19%, office building and equipment) constitutes over half of local government capital spending. The big two are followed by Sewer, Refuse and Garbage (15%), Public Safety (10%), Culture, Parks and Recreation (8%), Water and other Utilities (6%) and a cluster of Other Services (9%).

Figure 2 3: Percent of Municipal Capital Spending by Service Area

Source: Capital spending amounts for municipalities for service areas for counties, cities, towns, villages are from the New York State Comptroller's Annual Report Data as compiled by Comptroller's staff for this project.

Local government capital spending has been under severe pressure, as local governments have faced fiscal pressure from multiple sources. It is important to note that in spite of this pressure they (counties, cities – outside NYC, towns and villages) have maintained capital spending at about 10% of total expenditures over the five year period reported here.

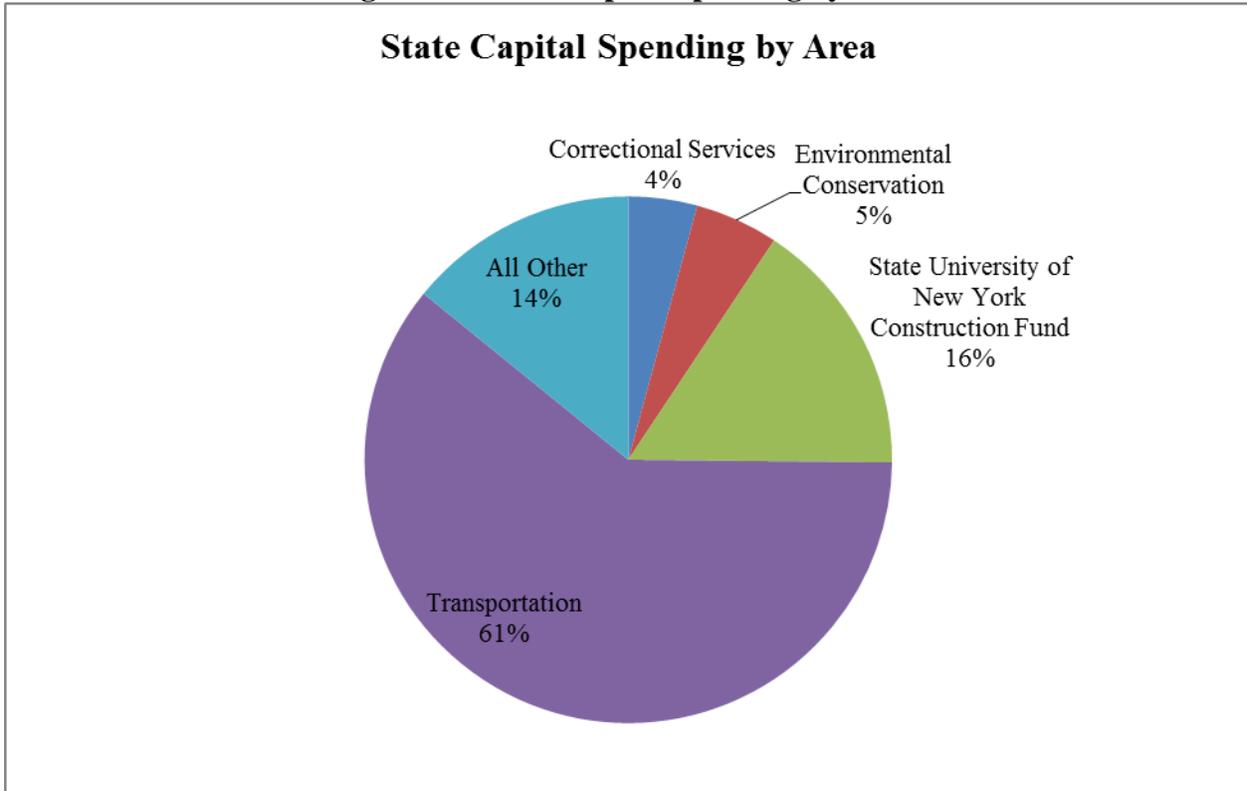
The total figure for state capital construction spending is exclusive of state transfers for local government capital spending and capital spending by authorities. It represents capital construction for state purposes and includes federal transfers for state construction. State capital construction spending includes about 41 agency based categories. A small number of agency areas (4) constitute over 85% of state capital construction spending for 2011 (Figure 24).

Transportation (61%) and the State University of New York (16%) dominate capital construction spending for state purposes. More complete data by state agency area is included Table A22 at the end of this section.

The absence of authority capital spending represents a significant understatement of total capital spending in the state. Authority capital spending is difficult to estimate because it is not included in New York State's Statewide Financial System and is not subject to the same financial reporting and controls as state agencies. For example, in the state 2014 Enacted Budget Capital Program the administration provides a clear list of Authority capital spending *not included* in the state budget. The total planned authority capital exceeds the estimated capital spending *included* in the state budget for 2014. An estimate of authority capital spending has not been clearly delineated in earlier years, including the reporting years in our analysis for this section. In

previous capital programs by the state separating the co-mingling of these investment amounts are not straightforward. The state comptroller has noted a number of problems in this regard (DiNapoli, 2013). If the 2014 figures are representative of a previous capital spending levels by authorities, then total state and local capital spending could be 25 to 50 percent higher than reported here the total could exceed \$20 billion annually over the five year period.

Figure 2 4: State Capital Spending by Area



Source: The New York State Comptroller's Annual Report to the Legislature on State Funds -Cash Basis Report For Fiscal Year Ended March 31, 2011 (Schedules 22-27). <http://www.osc.state.ny.us/finance/cashrpt/annual2011.pdf>

Total public capital investment, exclusive of authorities, in New York State has varied from sixteen to eighteen billion dollars over the five year period reported here. This reflects actual reported spending with no adjustments for inflation and, as noted above, is substantially understated by the absence of authority capital spending. The modest two percent decline in total actual capital spending over the period conceals a deeper reduction in effective infrastructure spending when the rising costs of construction materials and other factors are considered. The New York Office of the State Comptroller – OSC (2012) has estimated that state and local spending in critical infrastructure areas will be underfunded by as much \$89 billion over the next two decades. OSC, citing studies from key oversight agencies, highlights infrastructure needs in clean water, wastewater and transportation. The pressure on spending for local capital needs is further constrained by (1) the continuing pressure of low revenue growth with increased health care and pension costs and (2) the competition for scarce public funds created by three natural disasters in the last 24 months.

Looking to the future, state policy must be sensitive to ways to help expand the ability to meet public capital construction needs. While fiscal resources are important, they will be constrained and under stiff competition from competing needs. Regional strategies to stretch the benefits of capital spending will be important. State statutes, like Labor Law 240, that may have the potential to increase the cost of construction should also be examined.

II. Municipality Liability Costs in New York State

In a study published this year, total annual local government liability expenses were estimated at nearly one billion dollars per year (Cresswell and Landon-Murray, 2013). This average total annual estimate is based data collected for a five year time frame, 2006-2010. Because of inadequacies in available data this figure is considered a minimum threshold. This “minimum threshold” represents about one percent of total municipal expenditures. The estimate is limited to general purpose municipal governments in the state, including counties, cities, towns, villages and New York City. The estimate does not include the liability costs of local school districts, special authorities, and special districts or state government. Using a similar approach an estimate for school liability expenses was calculated for the 2007-2011 fiscal years. The five year average was approximately \$200 million. This addition would raise the combined “minimum threshold” five year average estimate to 1.2 billion for municipalities and school districts combined in New York State.

In their study, Cresswell and Landon-Murray identified four categories of municipal liability costs. The four categories are: payouts for claims and judgments (including bonded debt for such payouts), premiums for liability insurance (or the internal costs of self-insurance), the cost of risk management activities (in-house risk management, consultants, etc.) and the cost of legal counsel. The claim payouts by insurers are also identified as an important factor, but not a direct cost to local governments.

Other factors must be considered when assessing the influence and cost of Labor Law 240 claims on public projects. Most importantly a consideration of the impact of Labor Law 240 must include the municipal-contractor insurance relationship and their related impact on construction costs for public projects.

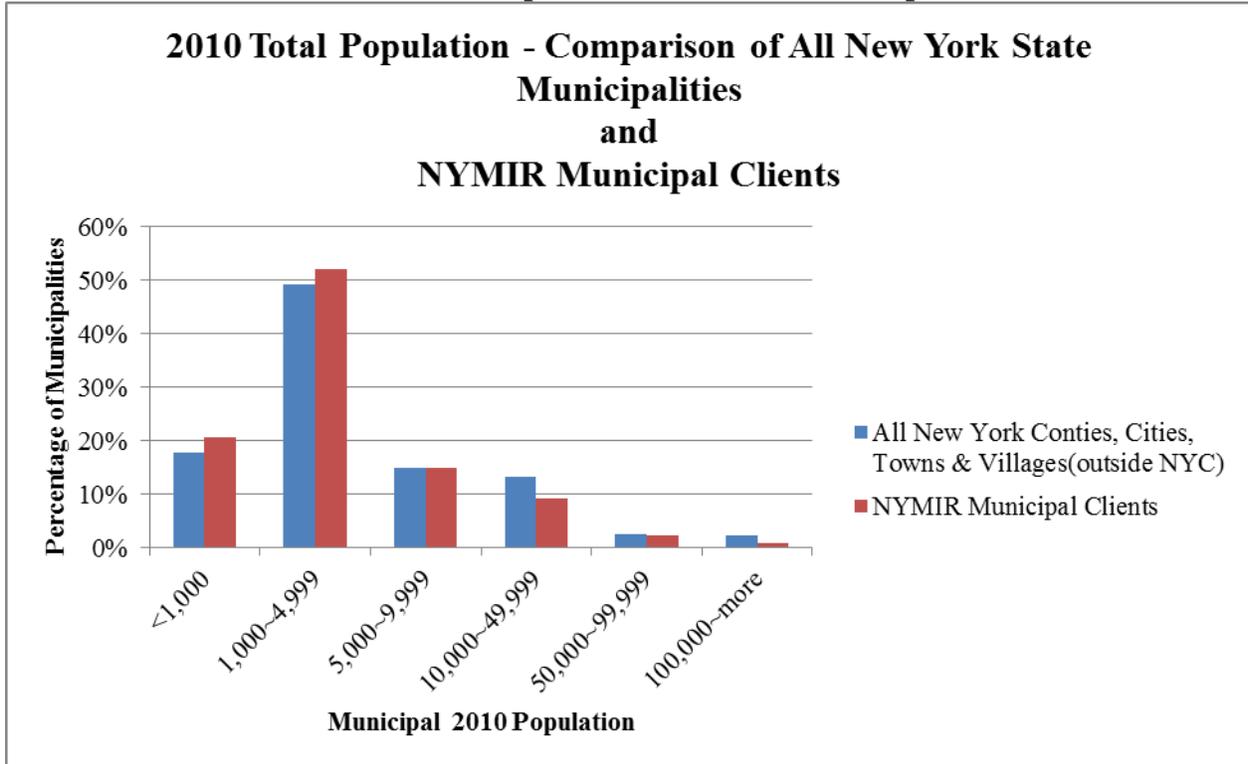
Local Governments, as property owners, along with their contractors share the absolute liability on public works projects for worker injuries under Labor Law 240. As a consequence, local government insurers and local government risk management policies endeavor to assure effective contractor liability coverage for project work. For example, the New York Municipal Insurance Reciprocal (NYMIR), a municipally owned insurer, provides assistance to agents and insured members through both advice and materials for guidance. See for example the guidance materials on insurance requirements for contractors in the Appendix to this section. This document provides detailed guidance with regard to assurances regarding the contractor’s carrier, required coverage and other details. Scaffold claims from municipal construction projects fall

under the municipality's general liability coverage. Generally speaking, this coverage is not adjusted based on the number of public construction projects underway or in process. A municipality's claims experience, including Labor Law 240 claims, will affect future municipal premiums.

In addition to NYMIR there are a number of private insurers providing coverage in New York State's municipal market. Also, a group of New York municipalities, typically larger ones, choose to self-insure as does the State of New York. Municipalities choosing to self-insure often purchase excess insurance to cover very high claims. So the term "self-insured" reflects a range within the type. NYMIR, founded in 1993, is currently the largest municipal property and casualty underwriter in the entire State (largest number of municipalities insured).

NYMIR has over 666 municipal clients in New York State for 40% of the 1606 total municipalities. Figure 25 below provides a 2010 municipal population size distribution which compares the NYMIR client base with the total distribution of New York State local governments outside New York City. NYMIR's distribution is somewhat higher among smaller size municipalities and lower for several of the higher population size groupings. Many of the municipalities in the highest population size grouping, those with 100,000 or more, self-insure. The population distribution of NYMIR's client municipalities provide a close representation of the state's distribution of municipalities, by population size, excepting that group or cohort that tends to self-insure. NYMIR municipalities represent about 26% of total county, city (outside New York City), town and village expenditures over the 2007-2011 period. Because of the composition of NYMIR's client base, we would expect a relatively lower level of Labor Law 240 claims that would be experienced in more dense urban jurisdictions that are more likely to have construction activities with elevated structures.

Figure 2 5: 2010 Total Population — Comparison of All New York State Municipalities and NYMIR Municipal Clients



Source: 2010 Population data for NYMIR clients provided by NYMIR and taken from U.S Census Sources. Statewide 2010 municipal population figures from New York State Comptroller’s Level 1 Municipal Finance Data. https://www.osc.state.ny.us/localgov/datanstat/findata/index_choice.htm

III. NYMIR “Fall From Height” Claims

NYMIR provided case data regarding “Fall from Height” claims for the years 2007-2011. It is important to note one very important shortcoming of this data related to the characteristics of the client base. The underrepresentation of the largest local government cohort in NYMIRs client base, by population size, will have an important impact on claim and liability data collected from NYMIR’s clients. Cresswell and Landon-Murray found “the highest costs for liability activity were found in the most densely populated regions.” Hence, the relative absence of New York City, downstate, and upstate urban centers in this client pool would tend to under represent the general level of liability activity and the magnitude of associated cost. One of the cases outlined below, the Metropolitan Transit Authority, provides more detail on labor law activity in New York City. This will provide a valuable contrast with our findings from the NYMIR claims data.

Second, while the NYMIR claims all represent falls from height, there is no indication of which claims were made under Labor Law 240. Still, a review of this data will provide a general sense of the volume of fall from height claims and their financial costs to the municipal insurer. They do not indicate the portion of the cost of these claims that were paid directly by the municipality

(deductible amounts) or the amount of the claims that may have been paid by other involved parties, including contractors and subcontractors.

NYMIR claims involving a “fall from height” are summarized in Table 21. The information in Table 21 is summarized by the year the claim was filed for the years 2007-2012. Claims fall into three categories: Open, Closed, and Closed Without Payment. These categories reflect the status of the claim as of April 2013, regardless of the year the claim was filed. The Table includes two kinds of data: the number of claims in the three categories, and second the dollar amount (unadjusted) of NYMIR’s payout on the claim (for closed claims) or the amount indicated by the person filing the claim (for open claims). There were a small number (9) of “reopened” claims filed during the six year period and they are not included in the table.

Number of Claims	2007	2008	2009	2010	2011	2012	Six Year Total
Closed	40	29	26	19	22	10	146
Closed without Payment (CWP)	79	71	60	87	64	41	402
Open	0	2	5	11	6	16	40
Total	119	102	91	117	92	67	588
Percent CWP	66%	70%	66%	74%	70%	61%	68%
Value of Claim							
Closed	\$307,225	\$257,553	\$561,028	\$54,059	\$ 43,136	\$ 32,800	\$1,255,801
Open	-	94,250	215,860	412,235	431,071	153,140	1,306,556
Total	\$307,225	\$351,803	\$776,887	\$466,295	\$474,207	\$185,940	\$2,562,357
Closed — Average Amount	\$ 7,681	\$ 8,881	\$ 21,578	\$ 2,845	\$ 1,961	\$ 3,280	\$ 8,601
Closed — Maximum	\$ 97,435	\$117,069	\$192,212	\$ 10,876	\$ 7,201	\$ 12,932	

The six year total of claim for fall from height is 588, while the average number of claims per year is 98. If these claims were distributed evenly over the NYMIR client base, almost nine out of ten municipalities would have experienced such a claim in the last six years. Over the six year period, most of the claims, 402 (68%), were closed without payment, (with no payment by the insurer). For these claims there may have been claim costs paid by the municipality (if the deductible was not exceeded) or by other involved parties including the contractor or subcontractor. Of the remaining 186 (32%) claims, 146 (25%) were closed with some level of payment and 40 (7%) remain open. These numbers imply that if claims were spread equally

across NYMIR clients, one in five would have a “Fall from Height” claim with an insurance settlement payment over the last six years. For cases closed during the six year period, the maximum value paid by NYMIR exceeded \$100,000 in two of the six years.

From 2007 to 2012 NYMIR paid out about \$1.2 million for closed claims and about \$1.3 million in claims remain open. The average amount paid on claims over the six year period was \$8,601. The amount paid out by NYMIR per year varied between a low of \$185,940 in 2012 and a high of \$776,887 in 2009. In comparison, total municipal judgments and claims expenses (for all types and categories) for all NYMIR client municipalities averaged \$51 million per year between 2007-2011 (this figure was calculated from the New York State Comptrollers Annual Financial Report Data for Municipalities).

IV. Labor Law 240 Costs on New York’s Public Sector

The summary of “fall from height” data from NYMIR, above, indicates that local governments are likely to experience a claim over a limited number of years. Without an existing statewide data base of Labor Law 240 and other Labor Law cases, even the annual cost of Labor Law awards is difficult to estimate. The total risk management cost of Labor Law cases exceeds the total of awards to plaintiffs. Public sector costs for risk and safety management and the administrative and legal cost associated with these cases are also significant (see for example NYSIR legal costs versus claim awards in the School District Case Profile in section V.).

The use of an owner controlled insurance program (OCIP) by the Metropolitan Transportation Authority provides one valuable source of information that enables us to assess in a more comprehensive way the value of awards to Labor Law plaintiffs in comparison with the value of capital construction. The MTA OCIP draws the cost of insurance for project contractors, Labor Law injury awards and the cost of project construction, into a single administrative or management system. Table 23 in the MTA case study profile below (page 38) provides calculations of the cost of Labor Claims as a percentage of Construction Value for MTA projects. Older projects are more “mature” from a liability perspective because they have experienced a higher percentage of the potential construction based liability claims than relatively newer projects have. The percentage in Table 23 varies between .91% and .51% for different clusters of MTA capital project investments.⁵⁴

Here we use this MTA experience to develop a very rough estimate of the value of Labor Law claims statewide in New York for a given annual investment in capital. We will also draw upon

54 It is important to note, as indicated in the Table 23 footnote, that the costs of MTA plaintiff awards are capped at the primary or OCIP insurance limits. The award costs of cases that settle for over \$2 million are not included. Award values above the OCIP insurance limit (\$2 million), are maintained by the excess insurance carriers and not available to the MTA. The inclusion of these award values would likely increase the award to capital cost ratio or percent used in this section and hence the total estimated cost of awards statewide.

the finding of Cresswell and Landon-Murray cited earlier, that “the highest costs for liability activity were found in the most densely populated regions.” Hence, the relative expected higher cost and incidence of Labor Law claims in New York City, downstate, and upstate urban centers in contrast with lower cost and incidence in non-metropolitan New York State. To estimate Labor Law claims in New York State we split the local government and state public organizations into two broad groups: urban and non-metropolitan (as noted earlier, these estimates will not include the significant component of public authority capital spending). In the urban group we included: New York City, the State of New York, and all other municipalities in the state with a population of 100,000 or greater. In the non-metropolitan group we placed all municipalities with a 2010 population of less than 100,000 and all New York State school districts (those reporting district based financials to the State Comptroller). The cost or value of capital projects will vary based on the grouping (more urban projects will generally have higher construction cost per unit than nonmetropolitan projects). We took the five year average (2007-2011) of capital construction spending for each of these groups (this is a slight reorganization of the total capital spending data in Table A21). We reduced the capital spending for municipalities and school districts to adjust for the inclusion of equipment and construction not at height (50% of the five year annual average total) and urban capital to adjust for not at height (reduced by 25% of the five year annual average total). To calculate an estimate of the range of the Labor Law injury awards for the urban capital expenditures we used half of the MTA average percent or .3% as the lower range estimate and the full MTA average percent or .6% as the upper bound on the range estimate. For nonmetropolitan capital we used one quarter of the MTA average percent or .15% as the lower bound on the estimate and half the MTA average percent or .3% as the upper bound on the range estimate.

Using these assumptions we calculated a gross range estimate of total labor law injury awards associated with an annual installment of state and local capital construction investment. From Table 21B, the total estimated range is between 30 and 60 million dollars per year for the 2007 - 2011 period.

Table 21B: Average Annual Estimate of Public Sector Labor Law Injury Award Costs*		
(In millions of dollars)		
	Lower Bound	Upper Bound
Urban	26.9	53.7
Non-metropolitan	3.3	6.8
Total	\$ 30.2	\$ 60.5
*Based on assumptions outlined in text, does not include Public Authorities.		

Approximately \$27 to \$54 million was attributable to injury awards in the urban capital sector and from \$3.3 to \$6.8 million to the non-metropolitan capital sector. As is evidenced in other

parts of this section of the report, this is the value of awards, not out of budget costs to state and local governments. Some of these award costs would be paid by other involved parties, including contractors and other organizations. Most governments in the urban capital sector are self-insured and would pay a significant percent of their portion of awards from municipal resources below “umbrella” or coverage insurance. For most governments in the non-metropolitan sector municipal portions of awards would come from insurance sources above policy deductibles. It is important to note that state “authorities” (including the MTA), for reasons noted earlier in this section, are not included in this rough estimated range of statewide labor related injury award costs. Authority based payments for such awards would be a significant and in addition to the figures included here.

V. Impact of Labor Law 240: Case Study Profiles

Comprehensive information on Labor Law 240 and its role in public construction projects is not easily or economically obtained. We have outlined the level of capital spending in New York State and indicated the importance of construction costs and their magnitude in the state. Secondly we have outlined some aspects of municipal liability and “Fall from Height” incidents in a subset of New York municipalities served by the New York Municipal Insurance Reciprocal. Third we have developed a rough estimate of the total cost of public sector Labor Law awards in the state. In this section a number of case study profiles are presented to better understand the kind of effects that Labor Law 240 has on New York’s public sector and how particular cases or groups of claim settlements effect New York’s public organizations. The case study profiles were selected based on cases identified from several sources, including: insurance professionals, public sector professionals, and published materials. It is important to note that these case profiles were done to provide a more tangible picture and understanding of the role that Labor Law and Labor Law 240, in particular, has in public organizations and their construction projects. They were selected to contrast different settings and conditions.

The Case study profiles involved one or more interviews with staff from the involved public organization, insurance professionals, and/or involved contractors. Documents were collected about the case where relevant and available. Case study profiles for the following public organizations appear below, respectively: an overview of cases from the Metropolitan Transportation Authority (serving the metro –New York City region), a case from the New York City School Construction Authority, two non-metropolitan municipal Labor Law 240 cases, and one from a non-metropolitan school district organization. In a number of case profiles our review was limited or delayed by the unavailability or reticence of local officials due to concerns over liability around the claims in question.

Metropolitan Transportation Authority of New York Case Study Profile

The Metropolitan Transportation Authority is North America's largest transportation network, serving a population of 15.1 million people in the 5,000-square-mile area fanning out from New York City through Long Island, southeastern New York State, and Connecticut. It is a public-

benefit corporation chartered by the New York State Legislature in 1965. The MTA is governed by a 17-member Board and has over 65 thousand employees. MTA subways, buses, and railroads provide 2.62 billion trips each year to New Yorkers – the equivalent of about one in every three users of mass transit in the United States and two-thirds of the nation's rail riders. MTA bridges and tunnels carry more than 280 million vehicles a year – more than any bridge and tunnel authority in the nation.

The MTA's operating budget for 2013 was \$13.2 billion. Over the past two decades, the MTA has committed some \$72 billion to restore and improve the network and increase operating efficiency. MTA is currently spending approximately \$1 billion per year on construction contracts.

The MTA provides a somewhat unique organizational setting for considering the role of Labor Law in public construction projects. Its value for this project is twofold. First, it is a large urban public sector organization with substantial ongoing capital investments. As noted earlier, previous research has indicated that in this environment one can expect the highest concentrations of liability actions and the highest costs for these actions. Second, the MTA utilizes an Owner Controlled Insurance Program (OCIP) which is a relatively unique approach to public sector construction project insurance in New York State. The MTA, is one of three public organizations operating in New York state that are permitted to operate an OCIP (NY State Insurance Law 2504). The other two are the Port Authority of New York and New Jersey and the New York City School Construction Authority (NYSCA).

The MTA has been using OCIP or Wrap-Up insurance programs for large construction projects since 1991. In 1998 they created their first rolling wrap-up that sought to cover the majority of projects within their Capital plan. The OCIP provides worker compensation coverage, general liability, and builder's risk insurance for firms working on MTA construction projects. When the OCIP was formed, the primary reason was to reduce the overall cost of insurance based on the premise that insurance costs will decrease if purchased in bulk and thereby reduce or reduce the rate of growth in insurance associated with MTA construction projects. A large portfolio of projects, in the range of \$1 billion, is needed to achieve economies of scale. The OCIP currently obtains insurance coverage from private providers against general liability and worker's compensation claims (accident claims) in excess of \$1,500,000 (a recent increase from the previous threshold of \$500,000). The MTA is self-insured for accident claims below \$1,500,000. The OCIP provides a unique view on the insurance and loss process for Labor Law claims because it concentrates the insurance cost, claim awards, and construction value in one organizational entity for viewing impacts.

The MTA has a history of working to effectively manage risk and promote safety for workers and customers. For example, the MTA's Risk and Insurance Management Department (RIM), which oversees the OCIP, contracts with several outside safety management firms that regularly inspect construction sites to detect safety violations that lead to construction accidents. To further

reduce the cost of accident claims, RIM operates the Contractor Safety Incentive Program which offers monetary rewards to contractors when estimates of eventual accident costs fall below a target established for each construction project. In an assessment report (Klinger, 2010), the New York State Office of the Inspector General noted “ RIM, as the MTA’s centralized insurance authority, is in the vanguard of the Authority’s efforts to reduce accidents at agency construction sites.” The former director of RIM until 2005, Lauren M. Gregory, was named risk manager of the year from Business Insurance Magazine and the Risk and Insurance Management Society for her work at the MTA.

Despite these safety efforts, RIM indicate that over the last 15 years the primary reason for using OCIP has changed from reduced costs from bulk insurance purchasing to managing the financial risk to the MTA as it relates to contractor injuries. Labor Law and the associated claims regarding applicable accidents and awards for injured workers can have significant influence on risk management and insurance costs for public construction projects.

When the MTA began using the OCIP in 1998 their total cost to insure a portfolio of construction contracts was less than 4% of the total cost of contracted construction value (see Table 22, below). Despite the MTA safety efforts, this rate for the most recent construction projects grew to over 7% (three percent higher than the earlier rate) and for these recent projects insurance coverage was reduced to keep down costs. For example, for the most recent set of projects (2010- 2014 OCIP) the general liability limits were raised from 2M/4M/4M to 3M/5M/5M (in millions of dollars -per occurrence/policy year maximum/additional) and the self-insured amount rose from 500,000 to 1,500,000. Excess liability coverage was cut in half to \$25M and premiums for this lower limit were three times higher than previously purchased at \$50M limits. Without these changes the total cost to insure as a percent of construction value would be higher. We would expect based on the MTA’s insurance experience that contractors and subcontractors purchasing their own insurance on a building by building basis would experience even higher rates as percent of construction value. It would be higher based on the volume of insurance purchased and lowered general liability limits.

Clusters of Insured OCIP Projects from Oldest (top) to Most Recent (bottom)	(1)	(2)	(2)/(1)
	Total Contracted Construction Value	Insurance Premium	Percent
NYCT Structures OCIP 2000-2004	\$2,800,000,000	\$97,926,035	3.50%
Long Island & Metro-North Rail Road OCIP 2000-2004	\$400,000,000	\$18,199,840	4.55%
NYCT Stations OCIP 2000-2004	\$1,200,000,000	\$48,202,963	4.02%
Long Island & Metro-North Rail Road OCIP 2005-2009	\$592,512,297	\$32,337,401	5.46%
NYCT OCIP 2005-2009	\$3,200,000,000	\$146,206,853	4.57%
MTA Combined OCIP 2012-2014	\$2,293,193,266	\$163,765,257	7.14%

Source: MTA Risk and Insurance Management Department staff communications.

The increasing insurance costs for the OCIP as a percent of construction value, is paralleled by an increasing number of Labor Law claims and the increasing cost of these claims as a percent of construction value (see Table 23, below). Additional claims, particularly for the most recent construction are expected and will increase the percentage in column (3) for a constant construction value. This will reinforce the parallel trend in the growth of insurance and labor law claim costs. The state’s interest in maintaining adequate infrastructure investment requires that the factors driving up the cost of construction be addressed wherever possible. In this perspective, the cost of insurance for constructing public projects and the cost of labor law claims warrants attention.

Table 2 3: Labor Law Claim Costs as a Percent of Construction Value

	(2)			(1)	(3)
Clusters of Insured OCIP Projects from Oldest (top) to Most Recent (bottom)	Total Contracted Construction Value	General Liability Policy Period	Number of Labor Law Claims	Labor Law: Cost of Claims Incurred*	(1)/(2)
NYCT Structures OCIP 2000-2004	2,800,000,000	10/1/00-10/1/08	65	\$14,383,391	0.51%
Long Island & Metro-North Rail Road OCIP 2000-2004	400,000,000	10/1/00-10/1/08	11	\$3,655,551	0.91%
NYCT Stations OCIP 2000-2004	1,200,000,000	10/1/00-10/1/08	20	\$6,116,416	0.28%
Long Island & Metro-North Rail Road OCIP 2005-2009	592,512,297	6/1/06-6/1/14	16	\$4,131,362	0.70%
NYCT OCIP 2005-2009	3,200,000,000	8/1/06-8/1/14	65	\$28,444,008	0.89%
MTA Combined OCIP 2012-2014	\$ 2,293,193,266	11/1/12-11/1/18	N/A	N/A	N/A

*Incurred costs are capped at the primary limits. Costs of cases that settle for over \$2 million are not included.
 Source: MTA Risk and Insurance Management Department staff communications. Award values above the OCIP insurance limit (\$2 million), are maintained by the excess insurance carriers and not available to the MTA. The inclusion of these award values would increase the award to capital cost ratio or percent in Column (3).

New York City School Construction Authority Case

The New York City School Construction Authority (NYCSCA) is responsible for the building of new schools within the five boroughs of New York City, as well as renovations to existing structures. The NYCSCA mission statement declares the dedication “to building and modernizing schools in a responsible, cost-effective manner while achieving the highest standards of excellence in safety, quality and integrity.” The annual value of the NYCSCA’s construction is significant, varying between one and two billion dollars annually over the seven years, 2006-2012 (Table 24 below). The New York City Department of Education’s proposed Five Year Capital Plan for 2015-2019 call for \$12 billion in capital spending over the plan’s life. This plan will continue at a comparable dollar level the school construction value managed by

the SCA. In recent years factors inflating construction costs have been eroding the spending power of these capital expenditures⁵⁵.

Table 2 4: Total Annual NYCSCA Construction Value for 2006-2012	
Year	Annual Construction Value in dollars
2006	1,116,834,758
2007	1,386,523,391
2008	1,873,187,114
2009	2,185,347,152
2010	1,763,825,929
2011	1,371,694,394
2012	1,271,496,574
Source: NYCSCA staff communication	

Like the MTA, The insurance for construction is provided by the NYCSCA through an Owner Controlled Insurance Program (OCIP) in which all of the contractors for the authority’s projects are enrolled. There are currently over 1,700 contractors enrolled, and all are provided with general liability and workers compensation coverage through the OCIP. OCIPs are used by organizations with a relatively large dollar volume of construction projects. They are created and used for a number of reasons, including: improved safety and risk management, the ability to define the scope of coverage and obtain broader insurance coverage with higher limits than a general contractor or subcontractor could individually, efficient claims management and cost-savings⁵⁶. Despite the use of the OCIP for risk management, the NYSCA is experiencing significant growth in insurance costs for construction projects with reduced coverage⁵⁷. This cost growth is significant enough to further squeeze school construction and is potentially linked to the growth of Labor Law 240 claims and settlements.

One of the NYCSCA’s many Labor Law 240 claims was settled in 2013 after jury selection and just days before a trial was to begin. The incident that gave rise to this claim occurred on January 17, 2008, at a school in Brooklyn, New York at which an extension to the school was being constructed. The plaintiff, 39 years old at the time of the accident, was employed by a masonry contractor. Plaintiff was standing on a wooden platform and alleged that a plank broke, causing

55 Page 7, Building on Success: FY 2010 – 2014 Five-year capital plan, Proposed 2013 amendment. New York School Construction Authority, February 2013
<http://www.nycsca.org/Community/CapitalPlanManagementReportsData/Pages/CapitalPlan.aspx>

56 Marzen, Chad G. 2011. OCIPs In The Future Of The Insurance Industry: Legal And Regulatory Considerations. University of Miami Business Law Review. Winter, 20:49

57 Geiger, James. 2013. School Authority Hit with Huge Bill: Old Scaffold law wreaks new havoc, raising pressure for legislative change. This Week in Crane’s. December 9, 2013.
http://www.crainsnewyork.com/article/20131208/REAL_ESTATE/312089965#

him to fall 8-10 feet to the ground. He sustained injuries to his hip, back and both shoulders, requiring multiple surgical procedures and also alleged psychological damages.

The named defendants in the case were the NYCSCA, The City of New York, The New York City Department of Education and Kel-Tech Construction, Inc. All of the defendants were entitled to coverage under the NYCSCA's OCIP and were, therefore, defended by counsel. After extensive negotiations, this case was settled for \$1.1 million, plus a waiver of the Workers Compensation Lien (the amount paid by Workers Compensation) of approximately \$300,000. Workers compensation is entitled to recover two thirds of what they pay out in the case of a third party settlement. The NYCSCA has a \$2 million deductible per occurrence. As a result, the entire settlement and expenses were paid by the NYCSCA.

The capital project associated with this claim had a construction value of \$2,648,777. The settlement for this one Labor Law 240 claim represents 45% of the related project's construction value. The OCIP incurred approximately \$125,000 in expenses in addition to the settlement amount. These additional expenses represent defense and other costs incurred over the life of the claim. If the other OCIP costs associated with the claim are included the ratio increases to 50%.

The NYCSCA's construction value for 2008, the year in which this claim occurred, was approximately \$1.8 billion (see Table 24, above). For the calendar year 2008, the amount paid to date by the NYCSCA OCIP for general liability claims is \$53,080,372, and the current incurred is \$74,026,132. The current incurred represents the amount paid plus funds held in reserve for claims yet to be resolved for this construction period. The amount paid for general liability claims in 2008 represents 3% of total construction value for that year, and the current incurred is 4% total construction value.

Municipal Case 1

The New York Municipal Insurance Reciprocal (NYMIR) provides general liability insurance to municipal corporations in the state. NYMIR is a membership based insurance organization founded in 1993 and is currently the largest municipal property and casualty underwriter in the State. NYMIR has over 710 municipal clients in New York State for 44% of the 1606 total municipalities. NYMIR's distribution is somewhat higher among smaller size municipalities and lower for several of the higher population size groupings. The following and the next Labor Law 240 case involve NYMIR member clients.

A NYMIR member municipality experienced a fall from height injury in October, 2006. A contractor's employee received significant injuries when a scaffold rolled away from the wall where he was working. The worker fell about eight feet to the ground below. The municipality owned the premises and leased it to a co-defendant in the case to use as a training facility for firemen. The injured worker required back surgery from the fall. The lessee and operator of the fire training facility contracted with a company to build an interior structure for training. The injured claimant was employed by the company doing the interior construction. While standing

on the scaffold with planks of plywood the scaffold moved suddenly away from the wall, causing the fall. The claimant argued that Labor Law 240 was violated insofar as the scaffold wheels were not braced or secured.

The claim ultimately settled in 2009 awarding one million dollars to the claimant. NYMIR as the municipal insurer paid \$100,000 and the municipality paid a \$25,000 deductible amount. The organization leasing the facility paid the balance. No changes in risk management practices were implemented as a result of the claim and award. The municipality does not track administrative and legal cost by case, so these costs to the municipality are not known. The Labor Law 240 case had a modest impact on subsequent municipal insurance premiums.

Municipal Case 2

Pittstown, New York is located in the northern part of Rensselaer County, in eastern New York State. In 2010, the population was approximately 5,735. There are 1,993 households in the town area, with a population density of nearly 92 people per square mile.

The town experienced a “fall from height” injury to a contractor in 2009. During the summer of 2009, the plaintiff was contracted by the defendant, the Town of Pittstown, to repair the hydraulic system on the town’s Gradall, a piece of heavy equipment for highway maintenance. To get to the hydraulic pump, the Plaintiff needed to remove the counterweight, which weighs 6,000 pounds. After the pump was repaired, Plaintiff asked the highway superintendent for two employees and some equipment to assist him in putting the counterweight back on the Gradall. Plaintiff told one employee to lift the counterweight into place with a forklift, had the other employee position a bucket loader against the counterweight to keep it in place, and Plaintiff went underneath the Gradall to line up bolt holes in the Gradall and counterweight. While the forklift was backing away after setting the counterweight on the Gradall, the counterweight fell to the ground, crushing Plaintiff’s foot and requiring a below-the-knee amputation of his leg.

As noted in the description above, the Highway Superintendent for the town assigned two highway employees of the town to work under the plaintiff’s supervision to help with the repair. This became relevant to the case when the defendant failed to prove that the plaintiff had exclusive control over the project or the defendant’s employees. The plaintiff demonstrated that he had no official control over their actions on the project, or any other element of their employment including payroll, benefits, work hours, etc. Though the Highway Superintendent claimed the plaintiff was hired due to his expertise on the case, the town was unable to relinquish responsibility, despite claims of not knowing the counterweight had to be moved and replaced in the first place.

The Supreme Court initially denied the motion by the plaintiff, as well as the defendant’s claim to dismiss the common-law negligence and Scaffold Law claims. The case was appealed and moved to the Third Department where the defendant was unable to prove recalcitrance by claiming a safe work environment was provided and, due to the plaintiff’s actions and decisions,

injury resulted. A professional engineer licensed by the state of New York, who offered testimony during the case, noted user error as the cause for the accident. However, under safety provisions in Labor Law section 240, the town did not provide adequate safety equipment for the task at hand.

The gravity-related nature of the case, involving the possibility of the 6000 pound counterweight falling, even from a small distance, was foreseeable according to the court, and proper safety devices should have been provided. Throughout testimony, it was discovered that the method employed for this project was not the only one available but was a judgment made by the plaintiff. The plaintiff successfully proved that adequate safety devices were not made available and, due to the inability of the defense to use the comparative negligence claim, the final judgment on May 21, 2012 was in favor of the plaintiff because, per the court's determination, the goal of the law is not to determine fault but rather to insure proper safety equipment is supplied.

The plaintiff was awarded \$1,529,000 settlement in the case. NYMIR paid the full amount of the claim to the plaintiff in settlement for the Town of Pittstown. The Town did not have a deductible amount on the policy, so no settlement costs were paid directly from town funds. The case was settled in late 2012/ early 2013. Subsequent impacts on town risk management practices and insurance costs were not available.

School District Case

The New York Schools Insurance Reciprocal (NSYIR) provides general liability insurance for K-12 school districts and school organizations in New York State. NYSIR is a membership based insurance organization and the largest writer of property/casualty insurance for New York's public schools. NYSIR's members include 325 school districts (about 46% of the over 700 school districts statewide) and 16 of the state's 38 Boards of Cooperative Educational Services (BOCES). As with NYMIR, the NYSIR membership tends to be suburban and rural and not inclusive of the larger urban districts and city school systems. NYSIR emphasizes the importance of risk management and risk reduction by its members. This emphasis includes careful guidance on insurance requirements for contractors. NYSIR members are careful to implement these risk management guidelines with contractors.

Between 1989 and the end of 2010 NYSIR members experienced 270 Labor Law 240 cases. Of the 270 cases, most were closed with no payment at all for NYSIR or their involved member. In many of these cases the risk was transferred to other parties (contractors, etc.) whose insurers experienced claim payments. Only 19 of the now closed claims resulted in payments by NYSIR on behalf of their members. During this period NYSIR's legal fees and expenses for Labor Law 240 cases were in excess of 2.7 million dollars and total claim settlements for the period were approximately 2.4 million dollars.

A NYSIR member school organization was involved in a Labor Law 240 case which demonstrates a number of important factors in such cases. The case was settled in 2007 and originated in 1998 when an employee of the NYSIR member experienced a fall from a step ladder while conducting maintenance on a light fixture. The fall resulted in a back injury requiring surgery. The step ladder was deemed to be stable and non-defective. The injury occurred in a building being leased by the NYSIR member. The injured worker filed suit under Labor Law 240 against the owner of the building as an insured. The NYSIR member as a tenant indemnified the landlord for such losses. The case came to court in 2000. After oral arguments the defense introduced a motion for summary judgment which was granted by the presiding justice. The plaintiff appealed the decision which was reversed by the Appellate Division in 2005 granting summary judgment to the plaintiff. After mediation a settlement of \$900,000 dollars was awarded to the plaintiff.

NYSIR insurance covered the full amount of the negotiated award. NYSIR member clients typically carry zero deductible general liability policies, so the local school organization had no out of budget costs for the award or for legal expenses. NYSIR incurred about \$72,000 in legal fees handling this claim over the period of years from inception to final closure. This is in addition to the NYSIR award payment. The involved NYSIR member experienced modest impact on future insurance premiums, because NYSIR caps losses at \$100,000 for participants. The frequency and pattern of losses are of more critical importance to NYSIR in assessing the loss experience for future premiums.

In this non-construction case, the involved school organization appeared to have managed both workplace safety and its exposure to risk in an effective manner. The Labor Law 240 settlement had minimal impact on the organization's finances and future insurance premiums. The case represents one of the most significant awards experienced by NYSIR clients over the period from 1998 to 2010, accounting for approximately 38% of Labor Law 240 claim awards over the period and three percent of legal fees for handling these claims.

Summary of Cases

The material above provides case based information about two public authorities from the New York City metro area, two nonmetropolitan local governments, and one nonmetropolitan school district organization. This set of cases provide some valuable insights for public organizations. The MTA and NYCSCA are unusual in utilizing an Owner Controlled Insurance Program (OCIP) to manage risk and insurance cost for their combined substantial construction portfolios (over \$3 billion per year in relevant projects). The OCIP provides a unique view on the insurance and loss process for Labor Law claims because it concentrates the insurance cost, claim awards and settlement, and construction value in one organizational entity for assessing impacts.

The MTA has a history of working to effectively manage risk and promote safety for workers and customers. Despite their safety efforts, MTA insurance costs have risen to 7% of contracted construction value, (about 3% above the earlier rate while at the same time substantially

increasing general liability and self-insured limits). The increasing insurance costs for the OCIP as a percent of construction value, is paralleled by an increasing number of Labor Law claims and the increasing cost of these claims as a percent of construction value.

The New York City School Construction Authority (NYCSCA) also utilizes an OCIP in managing risk and insurance cost for its substantial annual construction program which annually exceeds one billion dollars. The NYCSCA Labor Law 240 case discussed above highlights the costs of claims for public organizations in the metropolitan area. The capital project associated with this claim had a construction value of \$2,648,777. The settlement of \$1.1 million for this one Labor Law 240 claim represents 45% of the related project's construction value. The OCIP incurred approximately \$125,000 in expenses in addition to the settlement amount. If the other OCIP costs associated with the claim are included the ratio increases to 50%.

The MTA and NYCSCA cases help to demonstrate the higher frequency and the high dollar value of claims, awards and settlements experienced in the New York City metropolitan area. Despite the OCIP approach, both the MTA's and NYCSCA's insurance costs continue to rise. If equitable relief is available for insurance costs, it would serve to help increase the value of current capital spending.

The non-metropolitan municipal cases were insured members of NYMIR and the school organization was a NYSIR insured member. In general NYMIR and NYSIR members cover construction related risk through their general liability coverage and without additional policy coverage for specific construction projects. Both reciprocals, NYMIR and NYSIR, work to help their member clients with suggested documentation, and other assistance in managing construction related risk.

The insights from these cases and previous material on NYSIR Scaffold Law 240 cases and NYMIR fall from height incidents since 2007 indicate that when local governments are the defendant (municipalities and schools) there a relatively small percentage of cases with relatively high awards to injured plaintiffs. Further, our cases indicate that the burden of these awards are quite variable, with local governments often sharing or largely transferring risk via plaintiff award payments to other involved entities. In these case profiles outlined here that risk transfer was to involved construction firms and other public and private organizations.

All three of the non-metropolitan cases summarized here involved final plaintiff awards near or exceeding a million dollars. For the small to medium sized public organization that is not self-insured municipal risk of large awards are relatively rare, but they do occur and require preparation. Some officials involved in the case profile communities indicated their concern that despite their risk management efforts in construction and other contract management they were still vulnerable to Labor Law 240 exposure given the law's intent and subsequent interpretation. One community indicated that the Labor Law 240 case experience has resulted in the addition of another layer of insurance to their policies, despite a general sense that it will be inadequate for

similar instances of exposure. This additional layer of insurance will add to annual municipal liability costs.

The case profiles indicate that local governments and their insurers can be subject to long waiting period and substantial legal costs in resolving Labor Law 240 cases. For, example, NYSIR expended significantly more in legal costs than in Labor Law 240 plaintiff awards in the 1989 -2010 period. In these three case profiles two involved higher court reversals of lower court findings, extending the time of involvement and uncertainty for New York’s Local Governments.

Nonmetropolitan local government service costing is as inadequate for risk management as it is for other key service and administrative functions. Our interviews, with a one or two notable exceptions, indicate that the involved non-metropolitan local governments tend to neglect a regular tracking of the costs of major activities and functions. Certainly, managers and elected official cannot anticipate every future need to “slice” their costs for important assessment.

The growth of risk management and risk exposure has become significant enough that local governments should consider how to track the costs of managing risk and how successful their risk management investment is. This can lead to revising their risk management approach to increase or decrease their investment based on their success in improving safety for employees and citizens and shielding both of these from unneeded and unwanted exposure. The ability to calculate administrative and legal costs associated with liability claim management, insurance coverage and cost, and current safety programming along with other activities all fall under this cost umbrella and warrant attention. The lack of administrative focus in this area contributes to our inability to collect useful information on public sector Labor Law 240 claims. A stronger management focus would provide the related cost of:

- safety efforts
- legal expenses
- insurance costs
- loss costs

Earlier in this report, it was indicated that the state’s larger urban and suburban areas have a higher frequency of liability cases with a higher magnitude of awards. The case profiles summarized in this section support this and help provide a valuable contrast of the non-metropolitan communities of the state with the urban MTA and NYCSCA cases, centered in the New York City region, which demonstrates a higher value, higher frequency of Labor Law 240 liability exposure.

Appendix for Section 2

Table A2 1: Total Capital Spending In New York State by Entity for the Years, 2007-2011 (Spending in Thousands of Dollars)					
	2007	2008	2009	2010	2011
Counties	1,418,989	1,364,864	1,507,995	1,612,025	1,436,099
Cities	516,039	541,221	556,731	585,740	496,437
Towns	1,139,324	1,195,551	1,074,261	1,083,761	1,141,777
Villages	435,509	391,755	358,510	330,542	373,289
Total Municipal (except NYC)	3,509,861	3,493,391	3,497,497	3,612,068	3,447,602
School Districts	1,982,198	2,309,153	2,757,607	2,944,959	2,355,395
New York City	6,162,674	5,542,866	5,843,732	5,783,049	5,452,333
New York State	4,838,189	5,060,133	5,483,202	5,682,222	5,131,630
Total	16,492,921	16,405,543	17,582,047	18,022,296	16,386,960
Sources: Capital spending amounts for school districts, counties, cities, towns, villages and the City of New York (capital construction for 2007-2010) take from New York State Comptroller's Annual Report Data. https://www.osc.state.ny.us/localgov/datanstat/index.htm . Capital Construction for New York City for 2011 taken from City of New York's 2011 Annual Report (web address). Capital Construction amounts for New York State taken from Comptroller's Cash Basis Report for years 2007-2011 (Schedules 22-27). The amounts for New York State include federal sources used for state capital construction, but are exclusive of state transfers to local entities for capital construction.					

NYMIR Document for Municipal Clients

INSURANCE REQUIREMENTS — CONTRACTORS

- I. Notwithstanding any terms, conditions or provisions, in any other writing between the parties, the contractor hereby agrees to effectuate the naming of the municipality as an unrestricted additional insured on the contractor's insurance policies, with the exception of workers' compensation.
- II. The policy naming the municipality as an additional insured shall:
- Be an insurance policy from an A.M. Best rated "secured" or better,
 - New York State admitted insurer.
 - State that the organization's coverage shall be primary coverage for the municipality, its Board, employees and volunteers.
 - Additional insured status shall be provided by ISO endorsement CG 2010 11 85 or its equivalent. Examples of equivalent ISO additional insured endorsements include using **both** CG 20 33 10 01 and CG 20 37 10 01 **together**. A completed copy of the endorsement must be attached to the certificate of insurance;
 - The certificate of insurance must describe the specific services provided by the consultant (e.g., asbestos testing, consulting) that are covered by the professional or errors & omissions policy.
- III. The contractor agrees to indemnify the municipality for any applicable deductibles.
- IV. Required Insurance:
- **Commercial General Liability Insurance**
\$1,000,000 per occurrence / \$2,000,000 general and products/completed operations aggregates. The general aggregate shall apply on a per-project basis.
 - **Automobile Liability**
\$1,000,000 Combined single limit for owned, hired and borrowed and non-owned motor vehicles.
 - **Workers' Compensation**
Statutory Workers' Compensation & Employers' Liability Insurance for all employees.
 - **Owners Contractors Protective Insurance**
(Required for construction projects in excess of \$200,000)
\$1,000,000 per occurrence / \$2,000,000 aggregate, with the municipality named as the additional insured.
 - **Excess Liability**
\$2,000,000 per occurrence / \$2,000,000 aggregate, with the municipality named as the additional insured.
 - **Builders Risk Insurance or Installation Floater**
Builders Risk coverage can be provided by the municipality, or required of the contractors. Installation floaters are provided by the contractor(s).
 - **Bid, Performance and Labor & Material Bonds**
If required in the specifications, these bonds shall be provided by a New York State admitted surety company, in good standing.
- V. The insurance producer must indicate whether or not they are an agent for the companies providing the coverage.

- VI. Contractor acknowledges that failure to obtain such insurance on behalf of the municipality constitutes a material breach of contract and subjects it to liability for damages, indemnification and all other legal remedies available to the municipality. The contractor is to provide the municipality with a certificate of insurance, evidencing the above requirements have been met, prior to the commencement of work.

- VII. The municipality is a member/owner of the NY Municipal Insurance Reciprocal (NYMIR). The contractor further acknowledges that the procurement of such insurance as required herein is intended to benefit not only the municipality but also the NYMIR, as the municipality's insurer.

Section 3:
Economic Impact Analysis of Labor Law 240
in New York State

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I. Economic Impact Analysis: Introduction and Overview

In this section of the report, we consider statewide economic impacts that might be plausibly associated with modifications to Labor Law 240. To this end, we employ IMPLAN, a widely used economic modeling system (developed and supported by MIG, Inc.)⁵⁸ that packages and integrates a diverse array of computational routines and nationally consistent data sets for subnational regions down to the county level. IMPLAN is routinely used by economists to custom-build economic “input-output” models for a chosen geography or region, including New York State as in this instance. Once a New York State economic model is constructed, it is possible to use the model to calculate the effects (“impacts”) of policy driven changes in certain kinds of economic activity, including purchasing patterns, on key statewide economic indicators such as employment, wages, output and related variables.⁵⁹

For this analysis, we generated an IMPLAN model of the New York State economy. Based on work completed for other parts of this report, we next estimated current spending patterns that are associated with the existence of current labor laws. We use the New York IMPLAN model to consider the effect on the economy of an assumed redirection of current spending under a new policy regime.

More particularly, the quantitative information provided by authors of other sections of this report about the MTA’s experience suggests that it is reasonable to assume that about 7% of public sector construction costs,⁶⁰ or almost \$800 million dollars annually, is currently spent on insurance related to “at height” construction. If we apply the same parameter to New York State’s private nonresidential construction sector, an estimate of nearly \$1.5 billion spent annually for the same purpose is derived. Using data on the number of Labor Law 240 cases, award amounts, and estimates in the economic tort law literature about the relationship between awards and legal expenses, we estimate further that approximately \$110 million is spent annually on related legal fees and payouts.

58 See <http://implan.com/V4/Index.php>, accessed June 8, 2013.

59 To avoid confusion, it should be emphasized upfront that the information derived from this kind of analysis is intended to track changes in tangible economic indicators like those mentioned. Input output analysis is in a different class altogether, in terms of both economic theory and empirical practice, from cost benefit analysis. The latter strives to measure, often employing less tangible measurements of “value”, the net “economic benefit” to society of a given policy change.

60 As reported above, “When the MTA began using the OCIP in 1998 their total cost to insure a portfolio of construction contracts was less than 4% of the total cost of contracted construction value ... Despite the MTA safety efforts, this rate for the most recent construction projects grew to over 7% (three percent higher than the earlier rate) and for these recent projects insurance coverage was reduced to keep down costs.” This percentage was applied to the NYS Comptroller’s data on public sector Capital Expenditures. The latter is calculated as the sum of reported County, City (including New York), Town, Village, School District and “State Capital Construction with Federal” Capital and Equipment Expenditures, with a 25% downward adjustment to remove, with a best guesstimate based on limited available information, the fraction of the total associated with equipment expenditures. Note that this total does not include capital spending by the State’s Authorities, which could drive the total up another 20% (\$140 million) or more.

Taking these estimates as a starting point, we suggest that some uncertain fraction of each might be redirected, depending on the nature of hypothetical revisions of the law, towards the construction of infrastructure. A redirection of resources implies that there will be losses in some sectors of the economy and gains in others. The distribution of these gains and losses is quantified using our IMPLAN model. The strength and significance of the IMPLAN modeling effort lies in its ability to show how changes in patterns of expenditures that affect a few economic sectors (in the current case, we consider primarily shifts from financial/insurance and legal services to construction) have magnified and differentiated implications, often called “multiplier” or “ripple” effects, for many and often all other sectors in the economy as well.⁶¹

The reason effects ripple throughout the entire economy when the level of production of goods or services in one sector of the economy changes is twofold. In the first instance, the entire supply chain of businesses will be affected as sectors that are initially directly affected ramp production levels up or down, and subsequently increase or decrease their own purchases of inputs from suppliers. These effects, including cascading effects on the suppliers of the suppliers, are generally called indirect effects. In the second instance, incomes to labor, proprietors and their households will be affected as production levels are adjusted all along the supply chain. The associated changes in income lead to changes in household consumer purchases. These consumer spending effects are generally called induced effects.

It is important to understand that our reported quantitative estimates are hypothetical maximum or upper bound estimates, given our framework assuming an unchanged sum of funding available for public and private sector infrastructure spending. This is because our analysis measures what would happen if *all* of the resources currently estimated to be involved in relevant litigation, insurance and claim payouts were to become available for investment in infrastructure construction. Our work should not be interpreted as a suggestion that this a likely real world outcome. In reality, the effects on the economy of a policy change would at least depend on both the specifics of new policy and the way new policy was implemented. Some uncertain fraction of the economic impacts we estimate might therefore be anticipated to be realized in practice. Finally, in at least one important sense that works in the other direction, our estimates are not comprehensive. Data limitations in this area of research are pervasive, but we are constrained to focus our attention on the three components of economic expenditures that are somewhat tractable in terms of data availability. These are payouts for claims and legal judgments, liability premiums for liability insurance, and the costs of legal counsel. As cited in other sections of this report, Cresswell and Landon-Murray also draw attention to expenditures on risk management activities. We have no useable data on the magnitude of these expenditures.

⁶¹ For a more in-depth discussion of the strengths and weaknesses of input-output models in general, see discussion below.

II. Regional Economic Growth versus Economic Impacts

The fundamental starting point of this economic analysis is the assumption that some resources that are currently being channeled towards financial and/or legal sectors of the economy could, with reform of Labor Law 240, be redirected towards increased spending on public infrastructure. This will logically entail economic losses in the financial/legal (and related) sectors of the economy, and economic gains in the public infrastructure related (especially construction) sectors. As demonstrated below, IMPLAN modeling translates these net gains and losses from sector-specific to economy-wide impacts. Differences in economic impact associated with shifts in spending from one part of the economy to another depend greatly on a) the extent to which inputs in the different sectors are purchased from New York State versus out-of-state businesses and workforces,⁶² and b) the share of business spending in the different sectors that goes to labor and business owners for spending on consumer goods as opposed to the share that goes to the direct purchase of business inputs (material goods and services).⁶³

It is important to emphasize that neither this study, the IMPLAN modeling system, nor the input-output modeling approach in general, are designed to analyze the still more complex issue of the effects on long term economic productivity of public or private capital and infrastructure investment. Similarly, the closely associated questions of the effects on economic growth over the long term are not addressed by this analysis. In the long run capital and investment expenditures on infrastructure are often justified, and often have their most important economic effects, because of their contributions over the entire useful lifetime of the infrastructure. These contributions may involve their effects on the productivity of other goods and services, or they may be based in the contributions they make directly to the well-being of consumers, residents, or other categories of beneficiaries. These productivity and long term growth effects are conceptually transparent, and will be discussed briefly below.

However, the focus in this study remains on the short term supply and demand effects on employment (and other key variables) that are associated with current expenditure shifts. The expenditures are treated in input-output models as if they were spent on consumer goods rather than capital goods. This treatment is of importance and relevance for the economy because just like consumer goods, the production of capital goods involves the use of labor, energy, material and other kinds of inputs in the short term. While these short term effects tracked by input-output models are especially important in the context of Keynesian style stimulus spending, they are not necessarily the central justification for public spending on infrastructure.

⁶² IMPLAN's trade flow models estimate, for example, that the State's three nonresidential construction sectors supply roughly 90% of the state's demand for construction. IMPLAN estimates that an even higher fraction of legal services is supplied by in-state legal and insurance brokerage firms. However, the proportion of insurance provision itself that is sourced instate is estimated to be significantly less (63%). This difference is an important factor in estimating the direct instate impacts of a shift from financial to construction sectors.

⁶³ IMPLAN estimates confirm the expectation that the State's three nonresidential construction sectors direct a higher proportion of their total expenditures to material inputs, and less to "value added" (returns to owners, to labor, and to taxes), as compared to the financial and legal service sector industries.

Before turning to the results of our analysis, we therefore offer, for context only, an abbreviated summary of some key literature on the broader economic contributions of public infrastructure in particular. The point of this limited review is not to be comprehensive or to propose definitive answers regarding the relation between public investment, productivity and economic growth. Instead we wish to underscore the conclusion that public infrastructure expenditures have a significant potential to have important economic benefits that are different in kind than those analyzed in this study.

The main question addressed by the literature in question is whether, and to what extent, public infrastructure spending contributes to economic growth. While contradictory results have been found, on the whole the existence of a positive contribution has been consistently supported, while research into factors affecting size of the contribution is ongoing. The intuitive logic supporting the expectation of a contribution was clearly expressed in an illustration by one of the early modern researchers into this question (Munnell 1992, 191)

Everyone agrees that public capital investment can expand the productive capacity of an area, both by increasing resources and by enhancing the productivity of existing resources. A well-constructed highway allows a truck driver to avoid circuitous back roads and to transport goods to market in less time. The reduction in required time means that the producer pays the driver lower wages and the truck experiences less wear and tear. Hence, public investment in a highway enables private companies to produce their products at lower total cost. The condition of the highway, of course, is just as important as its existence. Similar stories can be told for mass transit, water and sewer systems, and other components of public capital.

On the other hand, there are also economic reasons to expect public investment to displace or “crowd out” some private investment that might have otherwise taken place, leading to a less clear cut case for expansion on net than would seem evident at first glance. A key factor in “crowding out”, especially at the scale of the national economy, is the effect of public spending on interest rates, given the significance of interest rates for borrowers needing to finance investment. Much research in this area since the late 1980’s has attempted to employ increasingly sophisticated methodological approaches in order to sort out the empirical measurement of these and related counteracting effects.

Aschauer’s (1989) seminal piece jump-started empirical research in this area. He found that government additions to the stock of nonmilitary structures such as highways, streets, water systems, and sewers strongly influenced national economic growth and productivity improvements. However, critics argued that the large positive effects were an artifact of improperly specified models, and that the dynamics of cause and effect were not properly sorted out.

A large body of work since then has tried to address these initial shortcomings. An early series of papers by Munnell (1990, 1992; Munnell and Cook 1990) revisited the Ashauer's analysis using additional analytic approaches and subnational data. In a summary, Munnell affirmed that public capital has a positive impact on economic activity at the state level, but that for logical reasons the magnitudes of these effects were "considerably smaller than those found at the national level" (1992, 192).

A few selected examples of recent work using a variety of datasets and approaches are cited next to further affirm and calibrate current understanding of the issue. Bronzini and Piselli (2009, 197), in a study of Italian regions, concluded that infrastructure had a positive and "quite remarkable" effect on regional productivity, that the effect is of infrastructure on productivity and not the reverse, and that the infrastructure of one region positively affected the productivity of nearby regions. Gisecke et al. (2008), using a multiregional computable general equilibrium modeling approach in Australia, found consistent economic gains from public infrastructure provision, but that the size of the gains were sensitive to the method of financing. Finally, Ligthart and Suárez (2011) conducted a meta-analysis of 55 studies of the topic through 2005. Noting that the size of the estimated effect of public investments on growth varies in the literature, their work enumerates both data and analytic characteristics that help explain the variation. Their overall conclusion is that the return on public investment "is substantially above the marginal productivity of private capital ... suggesting that investment in public capital should be encouraged from a macroeconomic point of view." (Ligthart and Suárez 2011, 29)

Other economic effects not included in this analysis

- Insofar as the high costs related to policy governing work at height deters infrastructure investment in New York State, changed policy and lower costs would likely encourage new investment that is greater than the amount saved. The analysis necessary to predict the scope of this new investment was outside the scope of work for this project, and no analysis currently exists that reliably predicts the amount of new spending that would be encouraged.
- If policy change might indeed lead to increased worker safety, as other parts of this analysis suggest, one of the additional short term economic benefits of reform would be a shift of expenditures by households, businesses, and insurance companies from health care and accident related expenditures to other business sectors. There would, of course, be multiple additional kinds of benefits associated with reduced health care costs. For economic analysis of these, a cost-benefit and/or fiscal analysis would be a more appropriate analytic tool than input-output analysis.
- Other sections of this paper identified the following costs to local government: payouts for claims and judgments (including bonded debt for such payouts), premiums for liability insurance (or the internal costs of self-insurance), the cost of risk management activities (in-house risk management, consultants, etc.) and the cost of legal counsel. Claim payouts by insurers are also identified as an important factor, but not always a

direct cost to local governments. While the estimate we used of a 7% increment to the cost of construction due to Labor Law 240 are clearly intended to include insurance premiums, the costs of counsel and risk management, this estimate does not account for payouts.

- Possible changes to Labor Law 240 that result in one-to-one shifts of current expenditures away from insurance and legal costs and towards infrastructure construction have been addressed in this study. However, input-output models are not well suited to analyze large changes that result in more fundamental restructuring of the insurance, construction, or legal industries. Large spending shifts could, for example, significantly increase local construction wage rates or the costs of construction materials. Similarly, the price of labor and other inputs to the affected insurance and legal industries might decline with decreased demand. Similar to the point made in the first bullet of this section, these types of changes together with a changed policy environment might well significantly change a number of business location as well as total investment decisions. Such changes would change the structure of the state's economy in a way that is not addressed in this analysis. For example, many in the insurance industry assert that Labor Law 240 has contributed to a "massive withdrawal of underwriters" from New York.⁶⁴ Insofar as modifications to the law would indeed lead to a significantly increased presence of underwriters in the State, competitive and other market forces now absent could cause price and input changes in the economy that would change the historical, underlying structure of both supply and demand that is embedded in the IMPLAN model. A similar caution rests on the fact that insurers are required by regulators to meet statutory reserve requirements which employ complex formulae based on characteristics of policies issued in order to determine how much the liquidity the insurer must maintain. The extent to which significant shifts in demand for insurance products might influence the proportion of insurers' assets which need to be held in reserve has not been evaluated.

III. Public Sector Insurance for Construction

Economic Impact Analysis Results, Redirecting Public Sector Insurance Payments: Overall Impacts on Output

As noted above, our analysis assumes that one short-term economic effect of a policy change would be to shift public spending that is currently absorbed by insurance and legal services to the construction of infrastructure.⁶⁵ We use an estimate of approximately \$785 million associated

64 For example, see Green, Meg. "Mass Withdrawal of Construction Liability Writers in NY Traced Back to Scaffold Law." AM Best. 03 October, 2012 Accessed January 25, 2014 at <https://www.agcnys.org/files/newsletters/10.10Newsletter.pdf>

65 Within IMPLAN, the Legal Services, Insurance Carriers and Insurance Agency sectors we used for analysis correspond to the similarly named NAICS sectors with codes 5411 (Legal Services), 5241 (Insurance Carriers), and 5242 (Agencies, Brokerages, and Other Insurance Related Activities). See http://implan.com/v4/index.php?option=com_docman&task=cat_view&gid=137&limit=5&order=hits&dir=DESC&Itemid=65 for documentation.

with the insurance costs of at-height construction.⁶⁶ Within the IMPLAN modeling system, there are three “new nonresidential” construction sectors that would most likely experience increased demand as a result of this shift. Among these, the “manufacturing” and the “commercial and health” nonresidential construction sectors include primarily the construction of buildings, while the “other nonresidential” sector includes construction technologies arguably most likely to absorb any increases in public infrastructure spending.⁶⁷ It is most plausible, therefore, that the results shown for the “other new nonresidential” construction sector in Table 31 best reflect the likely outcomes of the policy change stipulated. However, the results for the two other sectors are also shown to indicate a range of possible outcomes, especially as some fraction of the spending would indeed likely be for building construction.⁶⁸

Table 31: Redirection Of Public Sector Insurance Expenditures, Economy-Wide Output — effects of direct purchases of \$785 million in goods and services from sectors of the New York State economy directly affected by Labor Law 240 (millions of 2013 dollars)				
	Direct	Indirect	Induced	Total
<i>Increased Purchases</i>				
Construction, other new nonresidential	\$785	\$218	\$365	\$1,368
Construction, new nonres. commercial and health	\$785	\$192	\$3670	\$1,334
Construction, new nonresidential manufacturing	\$785	\$159	\$383	\$1,327
<i>Decreased Purchases</i>				
Insurance carriers	\$785	\$266	\$257	\$1,307
Insurance agencies	\$785	\$244	\$371	\$1,400
NOTE: These amounts are not to be added, but instead show alternative totals associated with increases and decreases that would be distributed among the construction and insurance sectors.				

Table 31 includes the estimated indirect, induced and total output effects of a \$785 million increase in demand for construction work generated by each of these sectors within New York State. The results for the indirect impacts, or the purchase of inputs by businesses from businesses, show a range of increased activity ranging from \$159-218 million. As noted in the previous paragraph, most of the spending would likely occur in the “other nonresidential” sector, so the model indicates that indirect effects would most likely fall in the neighborhood of \$218

66 The estimate of the insurance costs component of public sector construction is 7% of average annual capital spending for “at height” construction. The average annual capital spending for “at height” construction was estimated as a part of calculations in Section 2 (IV. Labor Law 240 Costs on New York’s Public Sector), page 38 above.

67 Other nonresidential construction includes, for example, construction related to airports, bridges and tunnels, conservation, dams and reservoirs, other water storage, harbors and ports, highways and streets, mass transit, pipelines, recreational facilities, sewage and water treatment facilities, and more. Again, see http://implan.com/v4/index.php?option=com_docman&task=cat_view&gid=137&limit=5&order=hits&dir=DESC&Itemid=65 for documentation.

68 This method technically involves a negligible amount of double counting, as the production functions for the three construction sectors already account for a very small fraction of a penny of spending by the construction sector on insurance for every dollar of construction sector output.

million. Whereas these indirect effects associated with the “other nonresidential” sector are greatest, this is not true for the spending induced by changing household incomes. The induced effects for the “other nonresidential” construction sector are somewhat smaller than for the two other construction sectors. However, the range (\$365-383 million) is comparatively narrow. The Total effects are therefore dominated by the indirect effects. Focusing finally on the Total results for the most salient “other new nonresidential” sector, the \$785 million increase would stimulate an estimated total of \$1.37 billion in economic activity.

At the same time that this increase in economic activity is experienced there would be a decrease in economic activity within other sectors as \$785 million in spending shifts out of the insurance sectors.⁶⁹ Table 1 again shows a modest range of indirect effects with the two Insurance industry sectors showing a \$244 versus \$266 million decrease. The spread associated with the induced effects associated with household income changes ranges from \$257-371. Overall, the dollar losses to the state economy would be less if the policy change shifted spending primarily out of average firms in the insurance carrier as opposed to the average firm in the insurance agency sector, as seems likely.

Finally, it is important to compare gains with losses to arrive at a net expected gain. The maximum net gain to the state’s economy derivable from these figures is \$61 million (\$1,368-1,307). However, if the shift into “other new nonresidential” construction were to come primarily out of the insurance agency sector, the net effect could even be somewhat negative. The probability that a mix of these two insurance industries, weighted towards the carriers, would lose business suggests the net short term “impact” gains from an output perspective would be positive but modest in scale.

Economic Impact Analysis Results for Output, Redirecting Public Sector Insurance Payments: Distribution of Impacts by Industry

While total impacts like those reported in Table 31 often garner the most attention, the real strength of input-output analysis is in the way it captures the relationships or linkages between different sectors of the economy. One way of highlighting this strength is to note the different sectors of the economy that would be likely to experience the greatest changes due to the indirect and induced effects from change in a single sector. Table 32 lists in order of size of impact the five sectors in the State economy, outside of the sector in which the initial gain or loss takes place, that would experience the greatest increases or decreases in output from a change. For example, a shift of purchases away from the insurance carrier sector would have the greatest impact on insurance agencies, but a shift away from the insurance agency sector would have the greatest impact on the imputed value of homes. The business sectors most closely linked to and affected by changes in the insurance and legal sectors tend to be other financial service or

69 According to IMPLAN modeling data on the New York economy, the state’s insurance industry accounts for slightly over \$50 billion of the state’s total output. The Insurance Carrier sector accounts for 71% of that output, and the Insurance Agency sector accounts for the rest.

consumer product related sectors. The business sectors most closely linked to and affected by changes in the construction sectors include some of these same sectors, but not surprisingly also include clear, construction related input sectors such as architectural and engineering services.

Table 32: Distribution of impacts: the five sectors whose output is most greatly affected (in addition to the directly affected sector) by a \$785 million increase or decrease in purchases from that sector

<p><i>Insurance carriers</i></p> <ol style="list-style-type: none"> 1. Insurance agencies 2. Owner occupied dwellings (imputed value) 3. Securities, commodity contracts, investments, and related 4. Real estate establishments 5. Monetary authorities and depository credit intermediation activities (ie. banks, credit unions, savings institutions)
<p><i>Insurance agencies</i></p> <ol style="list-style-type: none"> 1. Owner occupied dwellings (imputed value) 2. Real estate establishments 3. Monetary authorities and depository credit intermediation activities (ie. banks, credit unions, savings institutions) 4. Private hospitals 5. Food services and drinking places
<p><i>Legal Services</i></p> <ol style="list-style-type: none"> 1. Owner occupied dwellings (imputed value) 2. Real estate establishments 3. Monetary authorities and depository credit intermediation activities (ie. banks, credit unions, savings institutions) 4. Food services and drinking places 5. Private hospitals
<p><i>Construction, other new nonresidential</i></p> <ol style="list-style-type: none"> 1. Architectural, engineering and related services 2. Owner occupied dwellings (imputed value) 3. Monetary Real estate establishments (ie. banks, credit unions, savings institutions) 4. Wholesale trade businesses 5. Monetary authorities and depository credit intermediation activities
<p><i>Construction, new nonres. commercial and health</i></p> <ol style="list-style-type: none"> 1. Owner occupied dwellings (imputed value) 2. Architectural, engineering and related services 3. Real estate establishments 4. Wholesale trade businesses 5. Monetary authorities and depository credit intermediation activities (ie. banks, credit

Table 32: Distribution of impacts: the five sectors whose output is most greatly affected (in addition to the directly affected sector) by a \$785 million increase or decrease in purchases from that sector
unions, savings institutions)
<i>Construction, new nonresidential manufacturing</i>
1. Owner occupied dwellings (imputed value)
2. Wholesale trade businesses
3. Real estate establishments
4. Architectural, engineering and related services
5. Private hospitals

Economic Impact Analysis Results, Redirecting Public Sector Insurance Payments: Overall Impacts on Jobs

Table 33 translates the results of Table 31 into the metric of jobs. Because the labor and capital intensity of producing output in different sectors varies greatly, the “story” of the impact in employment terms is not quite the same as it was in Table 31. First, it is noticeable that for this reason, the same amount of direct spending creates a variable number of jobs in different sectors. In particular, there are many more jobs created in construction than in the insurance sectors listed. This is in part a reflection of IMPLAN’s database that indicates lower average total employee compensation per employee in construction than in insurance sectors.

In focusing on the chain of business inputs (indirect effects) associated with purchases from each sector, the Construction sectors show lesser ins-state job creating linkages than does insurance. However, the situation associated with changes in household spending is more balance. It is worthwhile comparing shifts between the Insurance Carrier and the Other New Nonresidential construction sectors as the most likely sectors to be affected. Regarding total impacts, the indicated shift of \$785 million would create over 9,900 construction jobs at the cost of over 5,000 insurance jobs, in this case pointing to an unambiguous net gain in employment numbers.

Table 33: Redirection Of Public Sector Insurance Expenditures, Economy-Wide Employment Effects — of direct purchases of \$785 million in goods and services from sectors of the New York State economy affected by Labor Law 240				
	Direct	Indirect	Induced	Total
<i>Increased Purchases</i>				
Construction, other new nonresidential	6,228	1,275	2,423	9,927
Construction, new nonres. commercial and health	6,449	1,078	2,437	9,965
Construction, new nonresidential manufacturing	6,734	862	2,539	10,137
<i>Decreased Purchases</i>				
Insurance carriers	2,149	1,318	1,702	5,168
Insurance agencies	4,002	1,444	2,460	7,906
NOTE: These amounts are not to be added, but instead show alternative totals associated with increases and decreases that would be distributed among the construction and insurance sectors.				

Economic Impact Analysis Results, Redirecting Public Sector Insurance Payments: Overall Impacts on Labor Income

Table 34 translates the results of Table 31 into the metric of "labor income", or income to employees and the labor of business owners (i.e. excluding from the returns to owners any corporate profits, capital consumption allowance, and payments for rent, dividends, royalties and interest income) . Because the returns to labor of producing output in different sectors varies with capital/labor intensity and compensation rates, so again the "story" of the impact sounds somewhat different in income terms. First, it is again noticeable that the same amount of direct spending creates variable income to labor in different sectors. In comparison to construction, both insurance sectors, and especially the insurance carrier sector, show a lower share of spending that redounds to the benefit of labor.

In focusing again on the chain of business inputs (indirect effects) associated with purchases from each sector, the insurance carrier sector shows the largest linkages to other businesses in terms of indirect effects on labor income The range of variation associated with changes in household spending is less, as the induced effects column demonstrates. Again comparing the Insurance Carrier to the Other New Nonresidential Construction sectors, Total impacts results show that the indicated shift of \$785 million would lead to a net increase in income to labor throughout the economy of \$197 (\$655-458) million.

Table 34: Redirection Of Public Sector Insurance Expenditures, Economy-Wide Labor Income Effects (employee compensation plus proprietor income) effects in millions of dollars of direct purchases of \$785 million in goods and services from sectors of the New York State economy affected by Labor Law 240				
	Direct	Indirect	Induced	Total
Increased Purchases				
Construction, other new nonresidential	\$426	\$94	\$136	\$655
Construction, new nonres. commercial and health	\$442	\$81	\$137	\$659
Construction, new nonresidential manufacturing	\$477	\$68	\$142	\$687
Decreased Purchases				
Insurance carriers	\$232	\$131	\$95	\$458
Insurance agencies	\$325	\$92	\$108	\$526
NOTE: These amounts are not to be added, but instead show alternative totals associated with increases and decreases that would be distributed among the construction and insurance sectors.				

IV. Private Sector Insurance for Construction

Economic Impact Analysis Results, Redirecting Private Sector Insurance Payments: Overall Impacts

A parallel but independent analysis to that reported regarding the redirection of public sector insurance expenditures can also be pursued for private sector insurance expenditures. As with public sector construction spending, we assume again that there is a 7% insurance related

component of spending that can be associated with coverage for “at height” work. Lacking more specific information, we further apply this percentage to the total value of output in each of the three nonresidential construction sectors. This suggests that the total private insurance costs that could hypothetically be released from insurance spending for investment in nonresidential construction spending would be approximately \$1.49 billion, with 34/9/58% of this total associated respectively with the three new nonresidential Commercial and Health Care Structures/Manufacturing Structures/Other New Nonresidential sectors. These amounts are therefore introduced into the model in proportion as increases in these three construction sectors. The collective results are in the New Nonresidential Construction rows of Tables 35-37. As before, these increases in construction spending would be counterbalanced by decreases in spending on insurance. The alternative endpoints of allocating the entire \$1.5 billion decrease to either of the insurance sectors is shown. Also as before, it is likely that there would be some combination of carriers and agents affected, but the results are likely to be heavily weighted towards those for the insurance carriers.

Because IMPLAN is a linear model, most of the results are similar in type as for those found with the public sector impacts, but scaled up in size due to the larger direct impact (\$1.5 billion as opposed to \$785 million). A quick review of Tables 35-37 can be summarized as showing that a \$1.5 billion shift from insurance to new nonresidential construction would lead to:

- a modest gain of \$47 million (2,524-2,477) in net output if the shift were to be all from the Insurance Carrier sector, but could lead to a net negative in the less likely event that most of the shift was out of Insurance Agencies
- a net gain of 7,545 jobs (17,340-9,795) if the shift were to be all from the Insurance Carrier sector, and a smaller amount (2,356=17,340-14,984) in the less likely event that most of the shift was out of Insurance Agencies
- a net gain of \$258 million in labor income (1,126-868) if the shift were to be all from the Insurance Carrier sector, and again a net negative (-137=1,126-1,263) in the less likely event that most of the shift was out of Insurance Agencies

Table 35: Redirection Of Private Sector Insurance Expenditures, Output Effects — in millions of dollars associated with direct purchases of \$1.487 billion in goods and services from sectors of the New York State economy affected by Labor Law 240				
	Direct	Indirect	Induced	Total
<i>Increased Purchases</i>				
New Nonresidential Construction	\$1,487	\$409	\$628	\$2,524
<i>Decreased Purchases</i>				
Insurance carriers	\$1,487	\$504	\$486	\$2,477
Insurance agencies	\$1,487	\$463	\$703	\$2,653
NOTE: insurance industry amounts are not to be added, but instead show alternative totals associated with decreased spending that would be distributed among the two insurance sectors shown.				

Table 36: Redirection Of Private Sector Insurance Expenditures, Economy-Wide Employment Effects — associated with direct purchases of \$1.487 billion in goods and services from sectors of the New York State economy affected by Labor Law 240				
	Direct	Indirect	Induced	Total
<i>Increased Purchases</i>				
New Nonresidential Construction	10,589	2,585	4,166	17,340
<i>Decreased Purchases</i>				
Insurance carriers	4,072	2,497	3,226	9,795
Insurance agencies	7,585	2,736	4,663	14,984
NOTE: insurance industry amounts are not to be added, but instead show alternative totals associated with decreased spending that would be distributed among the two insurance sectors shown.				

Table 37: Redirection Of Private Sector Insurance Expenditures, Economy-Wide Labor Income Effects (employee compensation plus proprietor income) effects in millions of dollars associated with direct purchases of \$1.487 billion in goods and services from sectors of the New York State economy affected by Labor Law 240				
	Direct	Indirect	Induced	Total
<i>Increased Purchases</i>				
New Nonresidential Construction	\$725	\$168	\$233	\$1,126
<i>Decreased Purchases</i>				
Insurance carriers	\$439	\$248	\$181	\$868
Insurance agencies	\$781	\$221	\$261	\$1,263
NOTE: insurance industry amounts are not to be added, but instead show alternative totals associated with decreased spending that would be distributed among the two insurance sectors shown.				

V. Insurance claims and legal judgments

Estimating the costs of insurance claims and legal judgments

In this section, we analyze a set of economic impacts that are distinct from the public and private costs of insurance coverage that have been the subject of previous sections: legal costs plus insurance claims. First, we will derive an estimate of the total direct costs of litigation and insurance awards. To do this we derive an estimate of the average cost of a labor law claim. Next we estimate the per-claim cost of litigation (for both sides) to derive a total per claim cost. Then we multiply an estimate of the annual number of claims times the per claim cost to arrive at an annual cost. Finally, we use IMPLAN to estimate the indirect, induced and total effects of the shift in expenditures that would be associated with a redirection of these expenditure into expenditure on infrastructure spending.

As noted in other parts of this report, the MTA’s data is of particular interest for our purposes because it “concentrates the insurance cost, claim awards, and construction value in one organizational entity for assessing impacts.” Data provided by the MTA for its Owner Controlled

Insurance Program (OCIP) includes the cost of labor law claims incurred (\$92,045,732) – about 7% of contracted construction value -and the number of labor law cases (283). It should be noted that this data is inclusive of but not restricted to Labor Law 240 claims. On average the OCIP cost incurred is therefore \$325,088 per claim.

No additional data was obtained from the MTA about its legal costs. However, Hersch and Viscusi's (2007) analysis of tort liability litigation costs in Texas concludes that total transaction costs (legal costs of both sides) for each dollar received by claimants average \$0.83 for claims in which the claimant retained an attorney and a suit was filed.⁷⁰ The Hersch and Viscusi analysis is based on data from 1988-2004, i.e. almost entirely prior to the adoption of significant tort reform in Texas in 2003. It is debatable how well the pre-tort reform Texas conclusions translate into the context of New York State today. Nevertheless, received wisdom and some data suggest that the cost of relevant tort litigation in New York is likely to be higher rather than lower than in Texas. Whether this is the case in proportion to claimants' awards is on its face less clear.⁷¹

The analysis, in an earlier section of this report, of NYSIR data representing many of the state's school districts found that between 1989 and 2010 NYSIR's legal fees and expenses for "Fall From Height" including Labor Law 240 cases were in excess of \$2.7 million while total claim settlements for the period were approximately \$2.4 million. In other words, for the Fall from Height cases covered by NYSIR, legal and administrative costs were \$1.12 for each dollar of

70 Although not a factor that affects our use of this parameter directly, it should not be forgotten that there is often a difference between a jury verdict and actual payments; the latter may be only a fraction of the amount initially awarded. (See Baker et al., 2008, who cite Viscusi and others on this matter.)

71 In general, both are large states in terms of population and economy, with Texas bigger on both counts, (25.2 v. 19.4 million 2010 population; \$1.4 v. \$1.2 trillion 2012 Gross State Product) while the legal services sector is a notably larger portion of New York's gross product (2.6 v. 1.1%; see <http://www.bea.gov/regional/downloadzip.cfm>, data accessed July 31, 2013). According to Anderson (2007), Texas is "perhaps the state" in which tort reformers have had the most success; presumably Hersch and Viscusi's use of pre-2003 Texas data increases similarities for our purposes. For one comparative perspective from the corporate sector, the US Chamber of Commerce's Institute for Legal Reform ranks states on how "reasonable and balanced" the states' tort liability systems are perceived to be by business (ie. based on polling of a random sample of senior lawyers in large corporations). New York gets a somewhat better mean grade (3.6) for "overall treatment of tort and contract litigation", ranking 17th in the nation, compared to Texas which earns a 3.4 or 31st in the nation. (See <http://www.instituteforlegalreform.com/states>, accessed July 30, 2013). In contrast, in supporting a broad argument favoring tort reform, the conservative Pacific Research Institute's Tort Liability Index ranking of all states consistently slots New York very much lower than Texas. This result holds on many key component indicators as well as overall: overall "litigation risk" (50th for NY, 36th for TX), commercial multiperil losses (44th v. 5th), "other" liability losses (49th v. 24th), medical malpractice losses (50th v. 8th), commercial self insurance losses (49th v. 9th), product liability losses (43rd v. 11th), and size of overall tort caseload (34th v. 12th). (See http://www.doh.state.fl.us/Workforce/Workforce/Council_Materials/Tort_Liability_Index_2010.pdf, accessed July 31, 2013) This report has been vigorously criticized for its agenda driven research and a lack of fairness in looking only at costs in a cost-benefit framework. However, the criticism is not directly related to the state rankings per se. In our report, as with the US Chamber of Commerce study, the citation of this work is intended to draw notice to widespread perception rather than to evaluate the solidity of the conclusions.

settlement – significantly higher than the 0.83 estimate found by Hersch and Viscusi. Though cases not covered by NYSIR might possibly yield a lower ratio, such data is not accessible to us. The quantitative data we do have supports the assessment that the Texas parameter is conservative. We therefore adopt the Hersch and Viscusi estimate as a reasonable lower bound number for an estimation of legal costs. Applying the 0.83 estimate to the claims received per case figure yields an estimate of \$269,823 per case in total transaction/legal costs in addition to the payment to claimants, for a total of \$594,911 per claim.

This figure of nearly \$600,000 can be multiplied by the average number of claims a year to estimate total costs. According to Google Scholar case citations⁷², there have been an average of 338 Labor Law 240 citations a year since 2007; this represents a significant upwards jump compared to the average number listed annually (194) between 2000 and 2006. It is worth noting that about 10% of the total involve local government, and among these the City of New York in particular, as a named party.

However, closer analysis of these citations for 2012 generates a split between those in New York’s lowest court (the Supreme Court) of 55%, as compared to the appellate courts (plus a small number of other miscellaneous citations) accounting for the remaining 45%. Though legal and administrative costs are obviously incurred at all levels of appeal, using only the number of cases in New York’s entry level court is a more compatible and conservative match with the “per claim” relationship derived from the Hersch and Viscusi analysis. Thus, we assume that on average there have been approximately 187 (55% of 338) cases a year in recent years. Multiplying the cost per case times the average number of cases in recent years provides an estimate of roughly \$111 million a year in insurance claims and legal/administrative costs associated with Labor Law 240.⁷³ In order to avoid a false sense of precision in these estimates, we round this total to \$110 million in our economic analysis.

There are multiple reasons to suggest this figure is probably low. First, it is likely that the calculated average of approximately \$600,000 per claim is a lower bound estimate compared to

72 As suggested in earlier sections of this report, a simple Google Scholar search on "Labor Law 240" for New York courts brings up all the citations to Labor Law 240 in the Google Scholar database. This provides a similar annual number of cases to those tracked by Bloomberg Law. Westlaw or Lexis is arguably more reliable, but our research suggests that Labor Law 240 searches with those more specialized services are difficult to do accurately. The number of statute citations yielded by Google Scholar also includes appeals, so the total citation number obviously exceeds the number of cases as such. However, the total number of citations do provide a reasonable estimate of the number of Labor Law 240 court cases for which lawyers are being paid (both defense and plaintiff) and for which workers have a chance of establishing a verdict. Importantly, this does *not* reveal the number of cases with out of court and undisclosed settlements. This is very likely a significant source of underestimation of total costs. We are not aware of any documentation on how frequently parties reach settlements to avoid litigation in Labor Law cases.

73 Table 21B, page 38 of this report, includes an estimate of annual *public* sector Labor Law (not just 240) injury award costs that ranges between \$30 and \$60 million. If legal costs of .83 per dollar awarded, again from Hersch and Viscusi, can be applied here, the combined costs implied range from \$55-110 million for public sector costs alone.

results that would be found outside the MTA OCIP. This is especially likely since the most expensive Labor Law 240 cases found on Verdict Search are in the tens of million, and it doesn't take many extra-high value verdicts to drive overall average figures much higher. A second underestimate of the overall transaction costs revolves on the point that litigation may also be pursued by liability insurers looking to place a lien on the prior Workers Compensation payments of workers collecting Labor Law 240 payouts. Unfortunately, we have no quantitative estimates of the extent or cost of this litigation. Finally, as mentioned in a previous footnote, the Labor Law 240 related cases that show up as court *cases* in legal searches of available databases yields a quite likely far from comprehensive list of *claims* that have been filed and have incurred some associated legal costs. This lack of comprehensiveness is not fully explained by out of court settlements as noted above. In fact, every action that is reviewed in the New York State Supreme Court must be initiated by filing documents (summons, complaint, etc.) in the clerk's office. These filings, if counted, would indicate the true number of cases that reach the court system, though the costs of taking a case to this stage would presumably be less than for a case litigated through to a ruling. However, the main source of underestimation for our purposes is that, in rural counties in New York especially, not every case is published in a reporter, nor does it receive a citation. Databases such as Lexis, Westlaw, and Google are rather inconsistent, and do not include most unpublished/unreported cases.

It should be emphasized overall that the complexity of court rulings under Labor Law 240 makes it difficult to figure out the true size of its footprint. Cherundolo's recent annual reviews of tort law (e.g. Cherundolo 2012) exemplify this in their richness of detail, and casually imply it for example in the general statement that, "... many significant policies of tort law were decided by the Court of Appeals in the past year. *As usual*, many of these were in the field of labor law in cases addressing section 240(1) and section 241(6) of the Labor Law of the State of New York." (p. 2, emphasis added).

Still, given the difficulty of comparisons with other states that don't litigate much in regard to injuries at height (because of workers compensation and negligence standards), it is reasonable to assume that the measured cost of the Labor Law 240 litigation in claims and administrative costs is one of the fairest direct conceptual measures of this important cost of the law.

Economic Impact Analysis Results, Redirecting Insurance Claims and Transaction Litigation Costs: Overall Impacts on Output

In this section, we take the estimated \$110 million in insurance claims and legal costs, assume it is redirected into construction, and estimate the net economic effects on the state economy. We restate that in most ways, the real world figures we are able to anchor our \$110 million quantitative estimate on are an underestimate of the full cost. However, we emphasize again that no plausible revision to Labor Law 240, insurance or safety laws would eliminate or make available for investment in other sectors the entire estimated amount. In this sense our underestimates are counterbalanced to some uncertain degree by an overestimate of the true

opportunity costs; that latter would require an unquantifiable partial rather than total reprogramming of expenditures associated with the existing law.

Tables 38, 39 and 40 show the economy wide impacts in of redirecting \$110 million into Other New Nonresidential Construction sector from other relevant sectors. As before, the results are shown in terms of output, jobs, and income to labor. Because we have focused on this single construction sector earlier in the report, and for simplicity, we do not include the results for the other nonresidential construction sectors. The results for the legal services sector assume that the full \$110 million is redirected away from that sector. However, because our initial assumption was that the \$110 million accounted for both legal costs and insurance claim awards, we also include results for other sectors. We have no information on how the insurance claim awards are actually spent. However, we assume for illustrative purposes that the insurance claims might be spend on a) medical services, or b) according to the typical expenditure patterns of middle income households. For comparison we show results for a reallocation of the entire \$110 million out of each of these sectors, and more consistently with our previous assumptions if the \$110 million were allocated between legal services and each of these sectors based on the previously used factor of \$0.83 in legal services for each dollar in claims awarded.

A summary of the results from Tables 38, 39 and 40 indicates that a shift to nonresidential infrastructure construction of spending associated with the legal sector and/or insurance claim awards would result in:

- a net gain of \$46 million (192-146) in net output if the shift were to be all from household spending and legal services, but could lead to a net decrease in output if the shift were instead from legal and medical services
- a net gain of 559 jobs (1,391-832) if the shift were to be from the legal sector and households, and a smaller amount (168=1,391-1,223) if the shift were instead from legal and medical services
- a net gain of \$29 million (92-63) in income to labor if the shift were to be the legal sector and households, and again a small net negative (-8=92-100) if the shift were instead from legal and medical services

Table 38: Redirection Of Insurance Claims And Legal Expenses, Economy-Wide Output Effects — in millions of dollars associated with direct purchases of \$110 million in goods and services from sectors of the New York State economy affected by Labor Law 240				
	Direct	Indirect	Induced	Total
<i>Increased Purchases</i>				
Construction, other new nonresidential	\$110	\$31	\$51	\$192
<i>Decreased Purchases</i>				
Legal Services	\$110	\$14	\$46	\$170
Doctors, medical services	\$110	\$31	\$58	\$199
Middle Income Households	N.A.	N.A.	\$124	\$124
<i>Combined Legal Service, Medical</i>	<i>\$110</i>	<i>\$36</i>	<i>\$67</i>	<i>\$213</i>
<i>Combined Legal Service, Mid Income Household</i>	<i>\$50</i>	<i>\$7</i>	<i>\$89</i>	<i>\$146</i>
NOTE: insurance industry claim amounts (spent on medical, or by households) are not to be added, but instead show alternative totals associated with decreased spending that would be distributed among the two sectors shown.				

Table 39: Redirection Of Insurance Claims And Legal Expenses, Economy-Wide Employment Effects — associated with direct purchases of \$110 million in goods and services from sectors of the New York State economy affected by Labor Law 240				
	Direct	Indirect	Induced	Total
<i>Increased Purchases</i>				
Construction, other new nonresidential	873	179	340	1,391
<i>Decreased Purchases</i>				
Legal Services	477	84	303	864
Doctors, medical services	841	189	385	1,415
Middle Income Households	N.A.	N.A.	805	805
<i>Combined Legal Service, Medical</i>	<i>662</i>	<i>171</i>	<i>390</i>	<i>1,223</i>
<i>Combined Legal Service, Mid Income Household</i>	<i>216</i>	<i>38</i>	<i>578</i>	<i>832</i>
NOTE: insurance industry claim amounts (spent on medical, by households) are not to be added, but instead show alternative totals associated with decreased spending that would be distributed among the two sectors shown.				

Table 40: Redirection Of Insurance Claims And Legal Expenses, Economy-Wide Labor Income Effects (employee compensation plus proprietor income) in millions of dollars associated with direct purchases of \$110 million in goods and services from sectors of the New York State economy affected by Labor Law 240				
	Direct	Indirect	Induced	Total
<i>Increased Purchases</i>				
Construction, other new nonresidential	\$60	\$13	\$19	\$92
<i>Decreased Purchases</i>				
Legal Services	\$59	\$6	\$17	\$82
Doctors, medical services	\$69	\$13	\$22	\$104
Middle Income Households	N.A.	N.A.	\$46	\$46
<i>Combined Legal Service, Medical</i>	<i>\$63</i>	<i>\$13</i>	<i>\$23</i>	<i>\$100</i>
<i>Combined Legal Service, Mid Income Household</i>	<i>\$27</i>	<i>\$3</i>	<i>\$33</i>	<i>\$63</i>
NOTE: insurance industry claim amounts (spent on medical, or by households) are not to be added, but instead show alternative totals associated with decreased spending that would be distributed among the two sectors shown.				

VI. Total Private and Public Sector Impacts

Total impacts are represented by the combination of the impacts presented individually in the previous sections. Because input-output models are linear, the results are in general additive, ie results that are estimated separately and summed will be the same as results that are introduced simultaneously as shocks into the model. For simplicity, we show here the sum of only one of the several possible alternative ways of combining (adding) results from the previous sections.⁷⁴ In particular, we assume that the only construction sector experiencing increased spending is the “other new nonresidential” sector, and that the funds are redirected entirely from the insurance carrier sector and the “combined legal service, mid income household” sectors. Selecting these sectors selects for the largest positive impacts and the smallest negative impacts in terms of changes in output. Under this assumption the model indicates that there is a \$154 million net gain in the total value of output in the economy.⁷⁵ Based on the differential labor and wage components of the affected industries, there is also a net gain of 12,304 jobs (Table 42), and of \$484 million in labor income (Table 43).

74 The results for Output Effects draw from Tables 31, 35 and 38; for Employment Effects from Tables 33, 36 and 39, and for Labor Income from Tables 34, 37 and 40.

75 If the losses are assumed to come primarily from insurance agencies rather than insurance carriers, this net gain is reversed.

Table 41. Total Output Effects in millions of dollars				
	Direct	Indirect	Induced	Total
<i>Increased Purchases</i>				
Construction, other new nonresidential	\$2,382	\$658	\$1,044	\$4,084
<i>Decreased Purchases</i>				
Insurance carriers, legal services, mid income households	\$2,322	\$777	\$832	\$3,930

Table 42. Total Job Effects				
	Direct	Indirect	Induced	Total
<i>Increased Purchases</i>				
Construction, other new nonresidential	17,033	3,899	7,167	28,099
<i>Decreased Purchases</i>				
Insurance carriers, legal services, mid income households	6,437	3,853	5,506	15,795

Table 43. Total Labor Income Effects in millions of dollars				
	Direct	Indirect	Induced	Total
<i>Increased Purchases</i>				
Construction, other new nonresidential	\$1,211	\$275	\$388	\$1,873
<i>Decreased Purchases</i>				
Insurance carriers, legal services, mid income households	\$698	\$382	\$309	\$1,389

Background on the Strengths and Weaknesses of Input-Output Analysis

Like all models, input-output models combine assumptions with measured information to produce results. In assessing an economic impact model, we can't just look at the end result — the jobs and revenue numbers that are produced by the model. We also need to pay careful attention to the assumptions underlying the model. Of course, all models have strengths and weaknesses in their assumptions, so we need to determine how severe the weaknesses are in a particular context to make a judgment about the model's usefulness or predictive ability. The strengths of economic impact analyses based on simple input-output modeling assumptions include:⁷⁶

- The relative simplicity, familiarity, and widespread use of the models that make them easy to use and transparent to critique. The data sets and algorithms also tend to be significantly cheaper to purchase and employ than competing, typically more complex, economic models. The more complex models are frequently more satisfying theoretically,

⁷⁶ See Kay 2011, pp. 4-5

but also include many assumptions about the nature of relationships between variables as well as many more hard to measure embedded parameters that may introduced significant empirical error.

- Input-output models are based on descriptive accounting “snapshots” of the economy at one particular point in time. They have the related and important strength of reflecting the complex existing web of purchase and sales relationships, or input and output linkages, between all economic sectors. The level of sectoral detail, or disaggregation, tends to be greater than that of competing models, enabling a finer grained investigation of the distribution of effects across sectors.
- Input-output models reflect the typical or average relationships between sectoral inputs and outputs in an economy. They are therefore particularly well suited for estimating the effects of changes in economic activity that are of a “typical” scale and type; in other words those that don’t require the businesses involved to diverge from the mix of expenditures on inputs they normally require to produce their output of goods and services.

There are several significant limitations of these models:

- Input-output models measure what they are designed to measure, namely levels of observable economic activity such as output, jobs, and incomes. They do not measure other significant economic concepts, especially including the value to society of any of these activities. Just as with the familiar measures of Gross (National) Product, levels of economic activity increase whether the expenditures are related to social goods or social ills. An economic “value” concept would be more appropriate to investigate in a cost-benefit framework.
- Constraints exist on the ability of basic input-output models to evaluate economic circumstances in which change in the economy has been or will be rapid and large. With large, quickly implemented change, there will likely be significant changes in embedded economic parameters (e.g. prices) which are not accounted for.
- More generally, input-output models simplify the economy such that certain (general equilibrium) economic relationships involving supply and demand effects are assumed away, leading to the result that any increase in economic activity in any sector will lead to more growth as an inevitability rather than as an empirical proposition to be tested.
- Input-output models assume that most impacts are independent of each other over time. The economic effects of changing expenditure patterns that occur in one year are, for example, assumed not to interact with those occurring in subsequent years; ie. certain overlapping and cumulative economic effects are ignored.
- There is a close tie between input-output modeling and economic base theories of economic development which privilege exports as the engine of economic growth. This theoretical framework has been repeatedly challenged for its overly narrow formulation

of growth dynamics, its narrow range of prescriptions for policy, and its weak ability to explain growth empirically.

- Several important “built-in” model parameters – most importantly those that indicate the proportion of goods and services in every economic sector that will be purchased locally versus “leaked” from the local economy – are costly-to-validate estimates. While this fact alone suggests that estimates better than those in the model are rarely available, they may nonetheless incorporate significant estimation errors for a given industry, particularly in a regional or county level model.

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