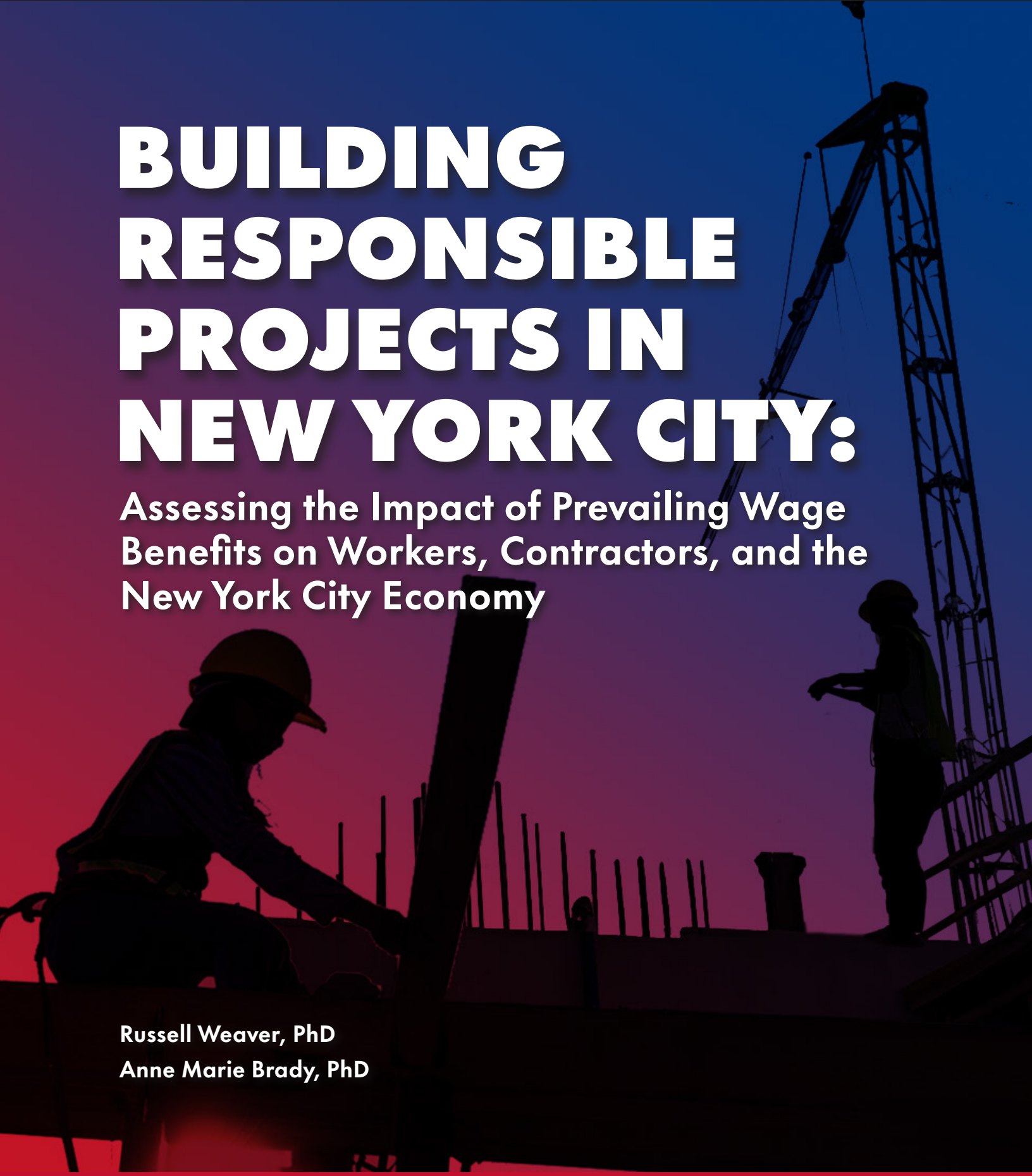

BUILDING RESPONSIBLE PROJECTS IN NEW YORK CITY:

Assessing the Impact of Prevailing Wage Benefits on Workers, Contractors, and the New York City Economy

Russell Weaver, PhD
Anne Marie Brady, PhD

ILR Buffalo Co-Lab
ILR Worker Institute

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This report was authored by Russell Weaver and Anne Marie Brady. The opinions, findings and/or interpretations of data contained herein are the responsibility of the authors and the authors take responsibility for any remaining errors and shortcomings.

Russell Weaver

Russell Weaver is the Research Director of the Buffalo Co-Lab at Cornell University's School of Industrial and Labor Relations

Anne Marie Brady

Anne Marie Brady is the Research Director for Worker Rights and Equity at the Worker Institute at Cornell University's School of Industrial and Labor Relations

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EXECUTIVE SUMMARY

Prevailing wage requirements in New York State have typically been associated with public construction projects. This changed with the passage of New York State Labor Law Section 224-a, which extended prevailing wage (PW) requirements to cover private construction projects too. On January 1, 2022, Section 224-a went into effect, stipulating that certain private construction projects in New York State that are "paid for in whole or in part out of public funds"—known as "covered projects"—are required to comply with the PW requirements set forth in Section 220 of the New York Labor Law.[1] A "covered project" is generally defined in Section 224-a as construction work where (i) the project costs exceed $5 million, and (ii) the project receives public funds covering, in the aggregate, at least 30% of the total construction project costs.[2] The new law therefore meaningfully expands the range of projects to which PW requirements apply in New York State. Whereas PW requirements were mostly enforced on fully or predominantly public-funded projects prior to January 2022, they are now also enforced on predominantly private-funded projects where public funds account for as little as 30% of total project costs.

The upshot is that private developers, who may engage non-union contractors that pay lower wages and offer workers fewer benefits than their union competitors, now have greater incentive to consider using union labor. When a project is subject to PW requirements, workers must be paid set hourly wage rates and hourly benefit amounts as determined by the fiscal officer of each New York county.[3] Put another way, PW requirements mandate that all contractors—local or non-local, union or non-union—adhere to a wage floor rate that is set according to local prevailing market conditions.[4]

1. "SECTION 224-A. Prevailing wage requirements applicable to construction projects performed under private contract Labor (LAB) CHAPTER 31, ARTICLE 8." https://www.nysenate.gov/legislation/laws/LAB/224-A.
2. Ibid. Receipt of public funds, for the purpose of Section 224-a, is broadly defined to include not only payments made or money loaned by public entities, but also any project savings achieved (including through tax credits) via the involvement of a public entity.
3. NYC Comptroller. (n.d.) *NYC wage standards, prevailing wage schedules.* https://comptroller.nyc.gov/services/for-the-public/nyc-wage-standards/wage-schedules/
4. Ibid.

PW rates are usually meaningfully higher than the local minimum wage, and also traditionally far greater than average non-union rates. More specifically, in practice, union pay rates tend to set the upper level for PW rates, whereas wages at non-union contractors tend to fall below prevailing rates. As such, PW laws are an important mechanism to require non-union contractors to pay closer to union-level wages. In that sense, the new PW law in New York State should equalize the labor costs of union and non-union contractors for any private development project that receives at least 30% of its funding from the public sector.

Assuming other costs (technology, materials, etc.) are similar for union and non-union firms, rough equalization of labor costs means that private developers would presumably be equally likely to choose a union or non-union contractor under the new law for applicable projects. However, PW laws do not fully equalize labor costs across firms. Notably, fringe benefits for workers in union shops are covered in their respective collective bargaining agreements (CBAs), while non-union firms tend to provide bona fide benefits packages at relatively low rates.[5] Because of this discrepancy, PW laws require firms to pay any worker who does not currently receive employer-provided benefits a supplemental PW rate that would allow that worker to purchase a comprehensive benefits package. Importantly, because union workers' benefits are covered by CBAs, union employers only pay associated costs (e.g., workers' compensation insurance) on their employees' wages, not on most fringe benefits they provide.[6] In contrast, non-union firms bear these costs on the total sum of wages and supplemental benefits when the latter are required to be paid under PW laws. The potential result—which this research report explores—is that a non-union firm's total labor costs under the new PW law may exceed the total costs of their union counterpart if the former does not provide employees with bona fide fringe benefits packages at the same rate as the latter.

The upshot is that private developers, who may engage non-union contractors that pay lower wages and offer workers fewer benefits than their union competitors, now have greater incentive to consider using union labor.

This report investigates this possibility through a two-tiered approach. The report starts with a review of the legal precedent set by PW laws. This includes a review of the literature that explores the effect of PW laws on productivity, education and training, and workers' wages and benefits.

5. Per Rules of the City of New York, Title 44, §2-02, a "bona fide fringe benefit" is "any payment made by a Covered Employer, other than wages, that directly benefits a Covered Worker, including but not limited to paid vacation or sick leave, medical or dental insurance, retirement accounts or annuities and apprenticeship training."
6. As discussed in the section "Cost Savings Source 1: Workers' Compensation Insurance" below, qualifying fringe includes vacation and sick leave payments, but not the cost of group health and pension plans.

In the second half of this report, we present the findings of an empirical thought experiment. That thought experiment leverages data from multiple sources to simulate labor costs in four trades—High Rise Carpenters, Cement and Concrete Laborers, Cement Masons, and Metallic Lathers—for a hypothetical high-rise construction project in New York City. Through the use of various scenarios that simulate labor costs under assumptions of varying restrictiveness, the results of the empirical exercise show that, because non-union firms offer comprehensive benefits packages at much lower rates than union firms, most non-union firms are likely to face higher labor costs on PW jobs. The reason for this outcome is that non-union shops will have to pay a greater share of their employees the prevailing supplemental benefits rate as wages, which, in turn, means that these supplemental payments count as payroll in the employer's workers' compensation expenses. These modeled scenarios suggest, in unambiguous terms, that in a well-designed PW legal framework, developers are likely to save money by using union labor on *private* PW projects.

PREVAILING WAGE LAW AT THE FEDERAL AND STATE LEVELS

As one of the oldest labor market policies in the United States, prevailing wage (PW) laws have played an invaluable role in stabilizing local wages and setting standards in the construction industry. Initially instituted at the state level through various state PW laws,[7] and then at the federal level through the Davis-Bacon Act of 1931,[8] PW laws effectively set a wage and benefits floor requirement for applicable projects.

New York State's PW law was first enacted in 1897 and required contractors working on state-funded government construction projects to pay their workers no less than the "prevailing" wage and benefit levels within the local construction market. The law protected New York construction workers from being undercut by low-wage, often out-of-state contractors seeking a large government construction contract, which could take away jobs and erode working conditions for local residents.[9]

The 1897 law (and similar laws passed in other states) was a precursor to and put pressure on the federal government to pass PW legislation that covered federally funded projects. Passed by the U.S. Congress in 1931, the Davis-Bacon Act requires private contractors to pay "prevailing wages" to employees on all federally funded construction projects over $2,000 for construction, alteration, or repair of federal public buildings or public works. Federal rates are calculated by the Wage and Hour Division of the U.S. Department of Labor. The Davis-Bacon Act applies PW standards to direct federal infrastructure construction.

State legislation and policy normally requires government procurement agents to select the lowest bidder for publicly assisted and funded construction projects.[10] At its core, PW legislation

7. Before passage of the Davis-Bacon Act, nine states had enacted their own such law for state-funded projects. Within four years of Davis-Bacon's passage, 16 more states added a state-level prevailing wage law ("mini" Davis-Bacon Acts). At one time or another, 42 states and the District of Columbia have had a prevailing wage law. Duncan, K., Philips, P., & Manzo, F. (2017). *Building America with prevailing wage.* https://illinoisepi.org/site/wp-content/themes/hollow/docs/prevailing-wage/building-america-davis-bacon_final.pdf
8. The Davis-Bacon Act, 40 U.S. Code § 3141. The Davis-Bacon Act was subsequently modified in 1935 and 1964.
9. Ormiston, R., Belman, D., & Hinkel, M. (2018). *New York's prevailing wage law. A cost-benefit analysis.* Economic Policy Institute. https://www.epi.org/publication/new-yorks-prevailing-wage-law-a-cost-benefit-analysis/
10. Duncan, K., Philips, P., & Manzo, F. (2017). Building America with prevailing wage. https://illinoisepi.org/site/wp-content/themes/hollow/docs/prevailing-wage/building-america-davis-bacon_final.pdf

prevents government bodies from using their purchasing power in the construction market to undercut wages and benefits in a community. PW legislation mandates that governments pay the wages and benefits in local labor markets that have already been agreed upon by contractors and workers for comparable work on similar projects. PW laws therefore force contractors to compete based on quality, worker productivity, materials costs, technological advances, management practices and logistics, and profit margins.[11] By setting compensation at the prevailing rate but maintaining a lowest-bidder system, the downward pressure on wages is reduced and labor costs—in theory—are effectively removed from the competitive bidding equation. But there are workarounds that undermine PW laws. Deceptive practices that try to hide labor costs by misclassifying workers, underestimating the number of hours needed to complete a project, or hiring lower-skilled workers or workers not authorized to work can present a false picture of a cheaper bid. But there is another workaround that this report explores: underestimating the cost of labor by failing to pay, in whole or in part, for the benefits owed to workers.

Supporters of PW requirements have pointed to evidence that shows the ways in which PW regulations provide massive benefits to construction firms, workers, and local communities. Research has shown that PW laws prevent out-of-town firms from taking local jobs by using lower-paid workers from elsewhere, which puts downward pressure on local wages, benefits, and working conditions.[12] As such, PW regulations keep construction wages high and worker injury rates low.[13] They encourage skilled workers to enter the construction industry and provide incentive for firms to train workers, which in turn boosts productivity.[14] All of this, combined, promotes overall stability within a project (i.e., low turnover rates), which helps to lower total project cost.[15] Moreover, well-paid construction workers means less need to draw on essential public benefits, such as SNAP and Medicaid, to supplement workers' incomes in order to meet basic economic needs.[16]

But opponents argue that PW requirements increase the overall cost of public construction projects, potentially leading to higher taxes and/or fewer construction projects. Researchers have explored this very issue and found no evidence to support these assertions. Kaboub and Kelsay examined whether PW laws increase

11. Manzo, F. (2015). *Prevailing wage laws, contractor profits, and the economic pie*. Illinois Economic Policy Institute. http://www.faircontracting.org/wp-content/uploads/2015/01/ILEPI-Economic-Commentary-PWLs-Profits-and-Redistribution.pdf
12. Ormiston et al. (2018).
13. Li, Z., Zorigtbaatar, C., Pleiés, G., Fenn, A., & Philips, P. (2019). The effects of prevailing wage law repeals and enactments on injuries and disabilities in the construction industry. *Public Works Management & Policy,* 24(4), 368-384.
14. Manzo, F., Bruno R., & Littlehale, S. (2014). *Common sense construction: The economic impacts of Indiana's common construction wage*. Midwest Economic Policy Institute; Labor Education Program, School of Labor and Employment Relations, University of Illinois at Urbana-Champaign; & Smart Cities Prevail. See Philips, P., Mangum, G., Waitzman, N., & Yeagle, A. (1995). *Losing Ground: Lessons from the Repeal of Nine 'Little Davis-Bacon' Acts*. Working Paper, Economics Department, University of Utah. This paper also presents data on construction industry growth and worker productivity. See Manzo (2015). Kaboub and Kelsey cite two main reasons why PW regulations are positively correlated with apprenticeship training and higher wages and why the absence of PW regulations tends to increase injuries in the construction sector. First, the repeal of PW laws or the absence of PW laws encourages small, inexperienced construction firms to enter the sector. These smaller and more inexperienced firms have poorer safety records than do large ones. Second, employee turnover increases in states that do not have PW statutes. Lower construction wages and benefits, lack of apprenticeship training, and other factors lead to a less skilled workforce that is more prone to injuries. Kaboub, F., & Kelsay, M. (2014). Do prevailing wage laws increase total construction costs? *Review of Keynesian Economics,* 2(2), 189-206.
15. Manzo (2015).
16. Jacobs, K., Huang, K., MacGillvary, J., & Lopezlira, E. (2022). *The public cost of low-wage jobs in the New York construction industry.* UC Berkeley Center for Labor Research and Education. https://laborcenter.berkeley.edu/wp-content/uploads/2022/03/Public-Cost-New-York-Construction.pdf

public construction costs.[17] They found that when examining this issue, it is important to separate public from private construction projects and to differentiate construction projects by type of structure. Without such distinctions, the analysis would conflate the causes of higher construction costs even for similar types of structures. When taking these differences into consideration, Kaboub and Kelsay found that there was no statistically significant difference in total construction costs between similar structures as a result of a state having a PW statute.[18] Finally, by increasing worker incomes, the PW laws actually increase state and federal tax revenues as opposed to leading to higher taxes.[19]

17. Kaboub, F., & Kelsay, M. (2014).
18. Repealing PW laws would therefore not result in substantial costs savings as claimed by proponents of repeal or modification of PW laws. See Belman, D., & Philips, P. (2014). Prevailing wage laws, unions and minority employment in construction: A historical and empirical analysis. *Prevailing Wages*; Duncan, K.C. (2011). *An analysis of Davis-Bacon prevailing wage requirements: Evidence from highway resurfacing projects in Colorado*. Hasan School of Business, Colorado State University Pueblo; Nooshin, M. (2008). *Prevailing wages and government contracting costs: A review of the research*. Economic Policy Institute Bulgaria; Wial, H. (1999). *Do Lower Prevailing Wages Reduce Public Construction Costs?* Keystone Research Center; Prus, M.J. (1996). *The effect of state prevailing wage laws on total construction costs*. Department of Economics, State University of New York at Cortland. https://faircontracting.org/wp-content/uploads/2022/03/effects_davisbacon-15.pdf
19. Duncan, K.C. (2011). *An analysis of Davis-Bacon prevailing wage requirements: Evidence from highway resurfacing projects in Colorado*. Hasan School of Business, Colorado State University Pueblo.

TWO POTENTIAL SOURCES OF UNION AND NON-UNION LABOR COST DISCREPANCY UNDER PREVAILING WAGE LAWS

Recall from above that, when a project is subject to prevailing wage (PW) requirements, all contractors—local or non-local, union or non-union—must pay a floor wage rate that is set according to local prevailing market conditions. In New York City (NYC), PW rates are drawn almost exclusively from union collective bargaining agreements (CBAs). Specifically, for each PW rate and supplemental (fringe) benefit rate listed in the current (2023-24) NYC Construction Worker Prevailing Wage Schedule, the NYC Comptroller's Office lists the active (local) union CBA from which the rates were adopted.[20]

Because New York City uses union CBAs to determine its annual PW schedules, it is reasonable to argue that the city's PW laws effectively equalize the labor costs of union and non-union contractors for any covered project.[21] Frank Manzo, a nationally recognized policy analyst and expert on PW law, describes the intent of PW law thusly:

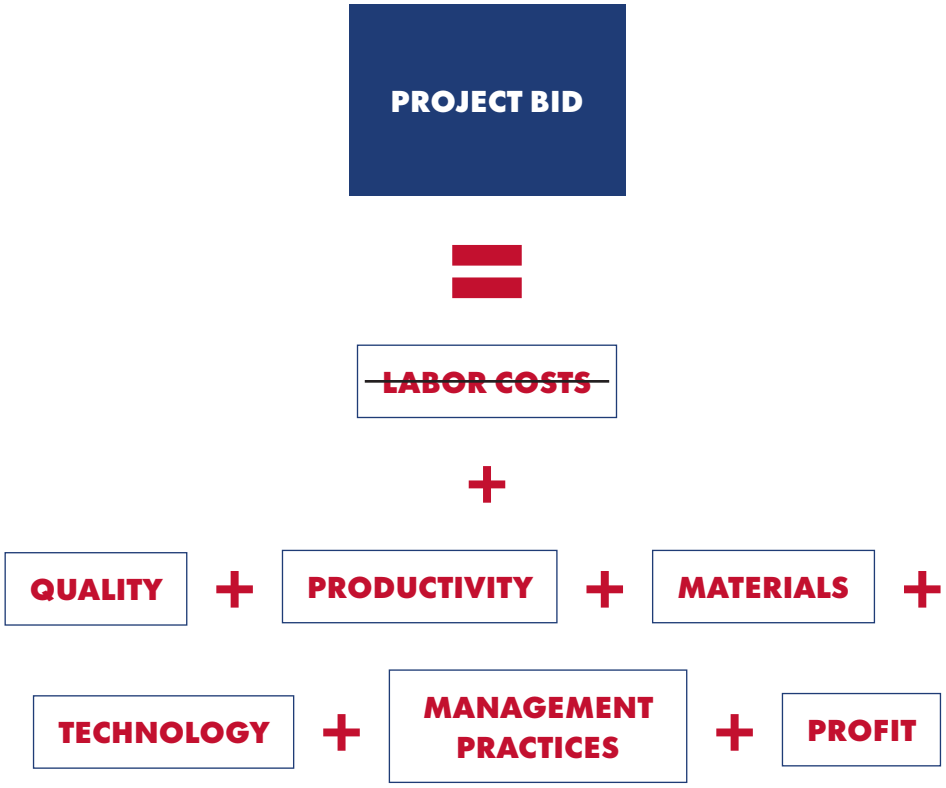
> By setting compensation at the prevailing rate but maintaining a lowest-bidder system...downward pressure on wages is reduced and labor costs are effectively removed from the competitive bidding equation. Thus, in theory, a [PW law] forces contractors to compete based on quality, worker productivity, materials costs, technological advances, management practices and logistics, and profit margins.[22]

To reinforce this point, Manzo developed a graphical depiction of the mathematical effect that PW laws have on project bids. Figure 1 shows an adaptation of Manzo's graphic, in which labor costs are effectively removed from the calculus of a firm's bid on a PW project.

Insofar as empirical research on the construction industry consistently finds that union contractors outperform non-union contractors on numerous measures of work quality and productivity,[23] one

20. NYC Comptroller. (n.d.-a). *Construction worker prevailing wage schedule, 2023-24*. https://comptroller.nyc.gov/wp-content/uploads/documents/ConstructionWorkerSchedule-2023-2024.pdf
21. Covered projects include any private development project that receives at least 30% of its funding from the public sector.
22. Manzo (2015).
23. Manzo, F., Jekot, M., & Bruno, R. (2021). *The impact of unions on construction worksite health and safety: Evidence from OSHA inspections*. Illinois Economic Policy Institute.

FIGURE 1. The Manzo Model of How Prevailing Wage Laws Affect Project Bids



implication of the "cancelling out" of labor costs (Figure 1) under PW laws is that union firms might hold an advantaged position over their non-union competitors. Explicitly, assuming that other costs (technology, materials, etc.) are similar for union and non-union firms, rough equalization of labor costs, coupled with evidence of generally higher union quality and productivity on jobs, implies that PW project bids from union firms should come in at marginally more competitive levels than non-union firms, all else being equal.

However, there are at least two reasons to believe that this prospective union advantage on PW projects is likely to be more than just "marginal," as characterized above. First, consider that labor costs include more than wages paid to workers. Among other factors, labor costs subsume fringe or supplemental benefits paid to employees, as well as an employer's insurance and tax payments. And, whereas PW laws seek to equalize wage and fringe costs across all potential bidders, they only equalize certain insurance costs when all bidding employers provide welfare benefits (i.e., health and pension benefits) at the same rates. To that end, the first potential source of a more substantive union advantage on PW jobs is savings on insurance costs, which is described in greater detail in the next subsection.

The second potential source of a union cost advantage on PW jobs is apprenticeship. In New York State (NYS) and New York City, as in many other jurisdictions across the United States, unions and union contractors make up a substantial share of NYS "Registered Apprenticeship" programs that are approved and recognized by the NYS

Because New York City uses union CBAs to determine its annual PW schedules, it is reasonable to argue that the city's PW laws effectively equalize the labor costs of union and non-union contractors for any covered project.

Department of Labor. As Fuchs, Warren, and Bayer observed of New York City's construction apprenticeship programs:

> Union apprenticeship programs have been important for meeting the [NYC] construction industry's need for recruiting, training and educating skilled labor. The apprenticeship training programs are funded by construction contractors through the Joint Apprenticeship and Training Committee (JATC), a labor/management partnership supported and sustained by the collective bargaining system. This cost-sharing partnership is essential to both labor and management for ensuring a highly skilled workforce without placing an undue burden on either the industry or labor. Union apprenticeship programs offer a rare, and in most cases free-of-charge, opportunity to "earn and learn," providing wages and benefits to workers while they learn job-related skills.[24]

Whereas comparable data are not immediately available for New York State, Manzo and Thorson found that union JATC programs make up between 63% and 97% of all apprenticeship programs in other states across the United States.[25] One reason that unions tend to dominate the apprenticeship landscape and offer such robust apprenticeship programs is that, as indicated in the passage above, apprenticeship is institutionalized in union CBAs through clauses that specify the number of "cents per hour" each worker contributes to their union's apprenticeship fund.[26] Such funding mechanisms are virtually nonexistent in non-union firms, which leaves unions and union contractors in control of the lion's share of the construction apprenticeship pool. Because NYC's PW rules have separate, generally lower wage schedules for apprentices,[27] union firms, which have ready access to apprentices and tend to put them to work on most jobs, arguably leverage their apprenticeship programs into additional labor cost savings on PW projects.

The next two subsections briefly expand on each of these additional potential sources of union labor cost savings—[workers' compensation] insurance savings and savings via apprenticeship—in order to more firmly ground the empirical thought exercise that follows.

24. Fuchs, E.R., Warren, D., & Bayer, K. (2014). *Expanding opportunity for middle class jobs in New York City: Minority youth employment in the building and construction trades.* Columbia School of International and Public Affairs.
25. Manzo, F., & Thorson, E. (2021). *Union apprenticeships: The bachelor's degrees of the construction industry. Data for the United States, 2010-2020.* Illinois Economic Policy Institute. https://illinoisepi.files.wordpress.com/2021/09/ilepi-union-apprentices-equal-college-degrees-final.pdf
26. Ibid.
27. NYC Comptroller. (n.d.-b). *Construction apprentice schedule, 2023-24.* https://comptroller.nyc.gov/wp-content/uploads/documents/ConstructionApprenticeSchedule-2023-2024.pdf

COST SAVINGS SOURCE 1: WORKERS' COMPENSATION INSURANCE

Whereas employers face multiple insurance and taxation costs in their business operations, focusing on just one of those costs—workers' compensation insurance—is useful for understanding how PW laws might create a competitive edge for union labor on covered construction projects.

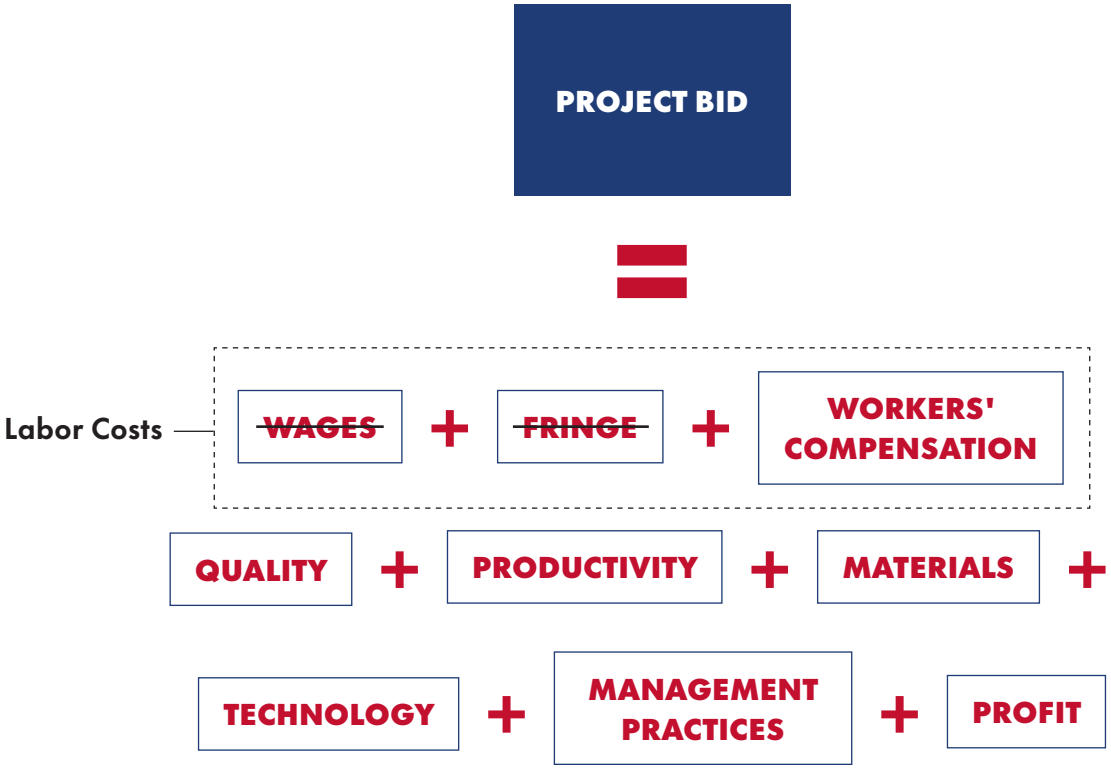
Because almost all employees at union shops receive group health and retirement benefits through their CBAs, whereas large fractions of non-union employees are not provided with any group benefits through their employers,[28] it can be shown that PW laws do not fully equalize labor costs for all bidders on a PW project. To illustrate how this claim works, it is first necessary to disaggregate the variable "labor costs" into its constituent parts. For simplicity and legibility, this research considers just three such components—wages, fringe, and workers' compensation—such that "labor costs" can be redefined as:

Labor Costs = Wages + Fringe + Workers' Compensation Payments

Drawing on this definition, the Manzo model of how PW laws affect project bids from Figure 1 can be expanded as shown in Figure 2.

28. Center on Policy Initiatives. (2009). *Construction: Working without a healthcare net*. https://cpisandiego.org/research/construction-working-without-a-healthcare-net-2009/

FIGURE 2. An Expansion of the Manzo Model of How Prevailing Wage Laws Affect Project Bids



With the (re)presentation in Figure 2, it becomes clear that PW laws might not fully equalize labor costs across firms. Rather, by drawing on union CBAs to set NYC PW levels and accompanying "supplemental benefit rates," the latter of which represent hourly valuations of the total fringe benefit packages specified in the guiding union CBAs, NYC's PW laws effectively equalize firms' wage and fringe benefits costs only. The intent behind the equalization of these measures are obvious: (1) ethically, PW laws ensure that all workers on PW jobs receive wages and benefits that reflect prevailing, typically union-level wages and benefits, which almost invariably exceed the compensation packages provided by non-union employers—thus uplifting quality of life for individual workers; and (2) economically, PW laws protect local contractors from being undercut by out-of-town or out-of-state firms that pay their workers relatively low wages—thus uplifting, or at least protecting, quality of working conditions for the local construction workforce as a whole.[29]

That being said, **if PW laws—for ethical and economic reasons—effectively equalize wages and benefits for all project bidders, regardless of a bidder's unionization status, then how could such laws result in unequal workers' compensation costs for different bidders?**

To answer this question, observe that fringe benefits for workers in union construction shops are covered in their respective collective bargaining agreements (CBAs), while non-union firms provide their workers with bona fide benefits packages at comparatively low rates.[30] Using national data, for instance, the Center on Policy Initiatives in San Diego found that roughly 89% of union construction workers receive health coverage through their employment, compared to just 61% of non-union construction workers.[31] Using more recent data, Manzo and Thorson found this disparity to be 95% to 68%,[32] whereas we estimate that the gap in the NYC metropolitan region is roughly 91% to 60.1%.[33]

In theory, PW laws are aimed at narrowing these systemic gaps, to make it possible for all construction workers—at least, all construction workers who work on PW jobs—to receive the same level and quality of health and other fringe benefits. The mechanism used to achieve this goal is the "supplemental benefit rate per hour." Under existing NYS and NYC PW laws, employers must either provide all the workers they assign to NYC PW jobs with comprehensive fringe benefit packages that match union packages, or they must pay any employee who does not receive such a fringe package an additional, supplemental, rate above and beyond the PW rate. For example, drawing on the current (2023-24) NYC Construction Wage Schedule,[34] the PW rate for an "A book" High Rise Carpenter working a PW job in New York City is $51.48 per hour. Thus, any carpenter working on high rise concrete forms for a PW job at the A-book level must receive at least $51.48 per hour in wages from their employer. If that carpenter does not receive a benefits package through their employment, then they are owed an additional $44.74 per hour, which is the current estimated hourly value of the fringe benefits package negotiated by and for

29. Ormiston et al. (2018).
30. Center on Policy Initiatives (2009); also see Manzo & Thorson (2021).
31. Center on Policy Initiatives (2009).
32. Manzo & Thorson (2021).
33. Estimates were generated by modeling self-reported union membership from the 2022 U.S. Census Bureau Current Population Survey (CPS) Outgoing Rotation Group (ORG) and using that model to predict union membership for all respondents represented in the current, 2017-21 U.S. Census American Community Survey (ACS) Public Use Microdata Samples (PUMS). With the modeled union membership variable appended to the PUMS data, the authors are able to identify, from observable/known data in the PUMS, which workers receive employer-provided healthcare and which do not.
34. NYC Comptroller. (n.d.-a).

A-book carpenters in their CBA.[35] In that way, any non-union carpenter who does not receive fringe benefits through their employer should, through PW laws, be able to receive compensation and benefits at union-level rates by working on a PW job. Rather than receiving their benefits directly from their employer, however, such a carpenter would be paid an additional $44.74 per labor hour that they could then use to purchase a benefits package from the private market that would compare favorably with the guiding union, collectively bargained package.

Viewed through this lens, it becomes easier to see how PW laws essentially "cancel out" the wage and fringe components of labor costs, as shown in Figure 2 above. What existing PW laws cannot do, however, is force an employee who receives the supplemental benefit rate to use that supplemental income exclusively for purchasing fringe benefits from the private market. Stated alternatively, there is no extant rule, law, or mechanism that compels an eligible employee to spend the money they earn through supplemental benefit payments on benefits. Rather, employees who receive the supplemental benefit rate can and do treat those funds as additional income, and they allocate that income to any purpose(s) they deem most urgent and necessary. Along the way, for both the employee and employer, supplemental benefits payments blend with the employee's wage income. For the employee, these payments show up "in cash in the employee's weekly paycheck when working on a [PW] project."[36] And, it follows, for the employer, supplemental benefits payments count toward the employer's payroll.

35. Ibid, pp. 10-11.
36. New York State Department of Labor. (n.d.) Article 8 (construction) frequently asked questions. https://dol.ny.gov/article-8-frequently-asked-questions

It is here where the wide gap in benefits provision between union and non-union contractors potentially gives the former a labor cost advantage on PW projects over the latter. For brevity, workers' compensation can be defined thusly:

> [I]nsurance [plans that] provide[] benefits to employees who are injured or become sick while performing the duties within the scope of their job responsibilities. These benefits cover medical expenses, lost wages, rehabilitation, and in the event of death on the job, death-related costs for the family.[37]

Construction firms are required to carry workers' compensation plans, meaning that workers' compensation insurance is a critical component of labor costs for any bidder on a PW project. Importantly, the cost of a workers' compensation plan to an employer is a function of three variables: (1) the job being performed, whereby each job is associated with a Class Code Rate that is set by insurance professionals who account for differential risks of injury across occupations; (2) the firm's experience and history of safe work practices, as measured by its individual Experience Modification Rate (EMR); and (3) the firm's total payroll divided by $100. For the purposes of workers' compensation cost estimates, payroll includes "[w]ages, overtime, bonuses, incentive plans, holiday and sick leave payments"; however, "group insurance and pension plans... [are] not be taken into account [as part of payroll] when calculating [a] workers compensation premium."[38] As a consequence, even if wage and fringe benefit costs are effectively equalized across bidders by PW laws, payrolls will be lower for bidders who provide fringe benefits packages at higher rates compared to bidders who provide

37. Embroker. (n.d.). Workers comp calculator: How much does workers comp insurance cost? https://www.embroker.com/blog/workers-comp-insurance-cost/
38. Ibid.

fringe benefits packages at lower rates. Because of the large gulf in benefits provision in the construction industry by unionization—whereby union construction workers are around one-and-a-half times more likely than their non-union counterparts to receive employer-provided fringe benefits (see above)—it follows that union bidders on PW projects ought to experience meaningfully lower workers' compensation costs relative to non-union bidders. This potential cost difference grows even wider when one factors in empirical observations that union firms tend to be safer, with lower risk of injury to workers, than their non-union competitors.[39]

COST SAVINGS SOURCE 2: APPRENTICESHIP

Prior to performing a thought exercise and calculations that estimate how large of a difference in labor costs there might be between union and non-union bidders on a PW project due to differences in workers' compensation premia, it is important to highlight a second potential source of cost savings with respect to using union labor on PW jobs: robust apprenticeship programs. On this topic, recent writing by Frank Manzo and Erik Thorson is worth quoting at length:

> Construction apprenticeship programs are sponsored either jointly by labor unions and employers who are signatories to collective bargaining agreements (joint labor-management programs) or solely by employers. Joint labor-management programs are cooperatively administered with standards, trainee wages, and apprentice-to-worker ratios established in collective bargaining agreements (CBAs). Funding for training in joint labor-management apprenticeship programs is financed by "cents per hour" contributions that are part of the total wage and fringe benefits package negotiated with signatory contractors. **Under this system, investments in training the next generation of skilled tradespeople are institutionalized, included in project bids and paid by project owners.** Conversely, employer-only apprenticeship programs are sponsored by an employer or group of employers—usually through a trade association—who unilaterally determine the content, length, and standards for their apprenticeship programs. **Funding for employer-only programs relies on voluntary contributions from contractors, who often have an incentive to forgo long-term workforce training investments in order to win project bids.**
>
> ...Nearly all...investment [in construction apprenticeship] comes from joint labor-management programs cooperatively administered by labor unions and signatory employers. Joint labor-management programs account for 97 percent of all active construction apprentices in Illinois, 94 percent in Indiana, 82 percent in Ohio, 82 percent in Wisconsin, 79 percent in Kentucky, 78 percent in Michigan, and 63 percent in Oregon.[40]

Once again, comparable numbers to the ones cited by Manzo and Thorson above are not immediately available for New York State and New York City. However, it is reasonable to claim that unions likewise dominate the apprenticeship landscape in these locations. Nationally, 75% of construction apprentices are trained in joint labor-management programs.[41] And the most visible

39. Manzo et al. (2021).

40. Manzo & Thorson (2021), pp. 2-3 [emphases added].

41. North America's Building Trades Unions. (n.d.) Enhance your skills, advance your life. https://nabtu.org/wp-content/uploads/2021/09/NABTU_ApprenticeshipPrograms2021-Web.pdf

TABLE 1. Current (2023-24) Prevailing Wages for Four Trades Represented in The Cement League

	High Rise Carpenter	Cement & Concrete Worker	Cement Mason	Metallic Lather
A-Book/ Journey Level (if applicable)	$51.48	$46.28	$53.77	$46.40
B-Book/ Provisional Level (if applicable)	$40.89	$35.80	N/A	N/A
Apprentice Year 1	$18.27	$18.97	$19.92	$22.55
Apprentice Year 2	$24.70	$24.70	$24.82	$23.60
Apprentice Year 3	$31.28	$30.43	$30.22	$24.60
Apprentice Year 4 (if applicable)	$38.90	N/A	N/A	$37.18

and recognizable construction apprenticeship and pre-apprenticeship programs in New York City are all union run.[42] For these reasons, it is defensible to claim that, on balance, union bidders on PW projects will have ready access to apprentices, while their non-union counterparts will not.

The reason why well-designed apprenticeship programs potentially reduce labor costs for union firms is an obvious one: apprentices, even under PW laws, can be paid less than their experienced counterparts. For instance, Table 1, above, shows the current (2023-24) PW schedules for construction workers[43] and construction apprentices[44] in New York City, for the four main occupations/trades represented in The Cement League.[45] As the table shows, unions have reliable access to skilled apprentices who earn just 37% to 95% of their closest-ranked, full-employee counterparts.[46]

The upshot is that, when costing out a proposal for a PW project, union bidders can confidently reserve a non-trivial percentage of estimated labor hours for apprentices,[47] who earn a fraction of fully qualified tradespersons; while estimated labor hours for non-union bidders would presumably all—or at least mostly—be assigned to fully qualified tradespersons, thereby leading to higher overall labor costs (assuming that each bidder requires approximately the same number of labor hours to complete the job).

42. Fuchs et al. (2014); also see Jobs NYC. (n.d.) Construction training to prepare you for a union apprenticeship. https://jobready.nyc.gov/programs/construction-pre-apprenticeship/
43. NYC Comptroller. (n.d.-a).
44. NYC Comptroller. (n.d.-b).
45. The Cement League. (n.d.) Unions & CBAs. http://www.cementleague.org/unions-cbas/
46. For High Rise Carpenters and Cement & Concrete Workers, the closest-ranked full employee to an apprentice are B-Book and Provisional workers, respectively. For Cement Masons and Lathers, in the current PW schedule, there are no A/B or Journey/Provisional tiers.
47. PW laws dictate what ratios of journey-level or A-book workers to apprentices are permissible.

RECAP

Although it is probably possible to identify numerous other sources of potential cost differences between union and non-union contractors (e.g., differences in other insurance or taxation costs, further exploration of differences in quality and durability of completed structures, labor efficiency, etc.), this section demonstrated how—in theory—workers' compensation costs and apprentice labor, together, are likely to give union bidders a considerable advantage when bidding on PW projects. To generate estimates of the potential relative size of that advantage, the next section introduces and performs a simple thought exercise, focused on labor costs for four selected trades (High Rise Carpenters, Cement & Concrete Laborers, Cement Masons, and Lathers), designed to compute wage, fringe, and workers' compensation costs related to constructing a 10-story, 150,000-square-foot building in New York City.

THOUGHT EXERCISE: HYPOTHETICAL LABOR COSTING FOR A 10-STORY, 150,000-SQUARE-FOOT BUILDING IN NYC

Because (1) unsealed bids on prevailing wage (PW) projects are generally not publicly available, and (2) this project lacks the funding and resources that would be needed to obtain relevant bid data and outcomes through a combination of Freedom of Information Act requests, stakeholder interviews, and archival research (if requisite data are even available), it is necessary to rely on a "second best" strategy to attach some concrete numbers to the possible cost savings described in the preceding section. We propose that one such second-best strategy is to perform some tractable math in a thought exercise that draws numbers from appropriate, real-world sources. The remainder of this section briefly sets up, and then performs, such a thought exercise for the hypothetical case of building a large (10-story, 150,000-square-foot) building in New York City (NYC).

METHODOLOGY

To operationalize the thought exercise, the research team obtained the following data from the sources listed below:

Total Estimated Labor Hours

Total Estimated Labor Hours in each of four categories—High Rise Carpenter, Cement & Concrete Laborer, Metallic Lather, and Cement Mason—were obtained through interviews and meetings with leadership at The Cement League (TCL) and the Cement & Concrete Workers District Council (CCWDC). The stakeholders' estimates were drawn directly from internal bid data TCL and CCWDC had for a recent building project at 57 Marcus Garvey Boulevard, a 10-story, 150,000-square-foot residential development.

Total Estimated Labor Hours were subdivided by the research team's TCL and CCWDC contacts into two additional categories: **Hours Worked at the A-Book or Journeyman Levels** (if applicable); and **Hours Worked by Apprentices**. For the latter, TCL and CCWDC referenced allowable journey-to-apprentice ratios under existing PW laws.

All remaining hours (i.e., Total Estimated Hours – Hours Worked at A-Book/Journey Levels – Hours Worked by Apprentices) were recorded as **Hours Worked at the B-Book or Provisional Levels** (where applicable).

INPUTS AND FORMULA USED TO COMPUTE ROUGH COSTS OF A HYPOTHETICAL 10-STORY, 150,000-SQUARE-FOOT BUILDING IN NYC

COSTS FOR FOUR CATEGORIES OF WORKER:

High Rise Carpenter, Cement & Concrete Laborer, Metallic Lather and Cement Mason

WAGES

Total Estimated Labor Hours of:

- Hours Worked at the A-Book/ Journeyman Levels
- Hours Worked by Apprentices
- Hours worked at the B-Book/ Provisional Levels

FRINGE

- Percent of non-union employees who receive group benefits through their employment
- Welfare and Pension Fund as a Percent of Fringe Benefit Rate
- Prevailing Wage Rate and Supplementary Benefit Prevailing Wage Rate

WORKERS' COMPENSATION

- NSIF Class Code Rate
- Bidder Experience Modification Rate (EMR)

TOTAL ESTIMATED LABOR COSTS:

Union and non-union PW project bidders

	Total Wages	=	Σ(Ht*pt,i*PWt,i)
	Total Fringe	=	Σ(Ht*pt,i*SBPWt,i)
+	**Total Workers' Compensation**	=	Σ((Payrollt/100)*Class Codet*EMRb)
	LABOR COSTS		

Σ: Sum the terms included in the parentheses

Ht = Total labor hours estimated for trade t

pt,i = Percentage of hours estimated for trade t that will be assigned to rank i (for union bidders, i includes, where appropriate, A-Book/Journey, B-Book/Provisional, and First-, Second-, Third-, and Fourth-Year Apprentices; for non-union bidders, i is assumed to include only the first two of these ranks)

PWt,i = The prevailing wage for trade t at rank i from the 2023-24 NYC Wage Schedules

SBPWt,i = The supplemental benefit prevailing wage rate from the 2023-24 NYC Wage Schedules

Payrollt = Sum of wages and qualifying fringe benefits for trade t, where qualifying fringe benefits include only the non-pension and non-health benefits portions of a worker's fringe package—if, as is the case for most non-union shops, some meaningful percentage of a bidder's workers do not receive employer-provided fringe benefits, then, for that percentage of workers, qualifying fringe is equal to total fringe

Class Codet = The NYSIF workers' comp class code for trade t

EMRb = Bidder's workers' comp experience modification rate. For simplicity, estimates of union labor costs assume that the total hours worked by apprentices (HApprentices) is split evenly across all available categories of apprentice—i.e., for Carpenters, each of the four levels of apprentice (first through fourth year) are assigned 0.25*(HApprentices) hours.

Percent of Non-Union Employees who Receive Group Benefits through their Employment

The Percent of Non-Union Employees who Receive Group Benefits through their Employment was estimated from the 2022 U.S. Census Bureau Current Population Survey (CPS) Outgoing Rotation Group (ORG) sample and the current (2017-21) U.S. Census American Community Survey (ACS) Public Use Microdata Samples (PUMS), as detailed in footnote 33.

For each trade, **Welfare and Pension Fund as a Percent of Fringe Benefit Rate** was computed from the current collective bargaining agreement (CBA) for that trade.[48]

For each trade, the **Prevailing Wage Rate** and **Supplementary Benefit Prevailing Wage Rate** was obtained from the current (2023-24) NYC Prevailing Wage Schedules for Construction Workers and Construction Apprentices.[49] And, for each trade, the current New York State Insurance Fund (NYSIF) **Class Code Rate** for workers' compensation calculations was obtained from the Enforce Coverage Group.[50]

With these data in hand, the following equation can be used to compute total estimated labor costs for union and non-union PW project bidders:

Labor Costs = Total Wages + Total Fringe + Total Workers' Compensation

where:

Total Wages = Σ(Ht*pt,i*PWt,i)

Total Fringe = Σ(Ht*pt,i*SBPWt,i)

Total Workers' Comp = Σ((Payrollt/100)*Class Codet*EMRb)[51]

As expanded on in footnote 51, for union firms, *Total Wages* and *Total Fringe* include hours worked at lower wages found in the NYC Construction Apprentice Schedule; whereas, for non-union firms, all hours are assigned wages from the NYC Construction Workers Schedule. Further, for workers' comp calculations, *Payroll* is equal to the sum of total wages plus *qualifying fringe*, where qualifying fringe is equal to the value of fringe benefits *other than* group health and pension benefits. For bidders characterized

48. The Cement League. (n.d.)
49. NYC Comptroller. (n.d.) *NYC wage standards, prevailing wage schedules.* https://comptroller.nyc.gov/services/for-the-public/nyc-wage-standards/wage-schedules/
50. Enforce Coverage Group, LLC. (n.d.) NY contractors workers comp rates. https://www.enforcecoveragegroup.com/click-your-industry-for-access-to-immediate-rates/ny-workers-comp-constructioncontractors/

51. In these equations, the symbol **Σ** is a summation operator that instructs the analyst to sum over the terms included in the parentheses. Those terms are as follows: **Ht** is equal to the total labor hours estimated for trade *t*; **pt,i** is the percentage of hours estimated for trade *t* that will be assigned to rank *i* (for union bidders, *i* includes, where appropriate, A-Book/Journey, B-Book/Provisional, and First-, Second-, Third-, and Fourth-Year Apprentices; for non-union bidders, *i* is assumed to include only the first two of these ranks); **PWt,i** is the prevailing wage for trade *t* at rank *i*, as drawn from the 2023-24 NYC Wage Schedules; **SBPWt,i** is the supplemental benefit prevailing wage rate, as drawn from the 2023-24 NYC Wage Schedules; **Payrollt** is the sum of wages and qualifying fringe benefits for trade *t*, where qualifying fringe benefits include only the non-pension and non-health benefits portions of a worker's fringe package—if, as is the case for most non-union shops, some meaningful percentage of a bidder's workers do not receive employer-provided fringe benefits, then, for that percentage of workers, qualifying fringe is equal to total fringe; **Class Codet** is the NYSIF workers' comp class code for trade *t*; and **EMRb** is the bidder's workers' comp experience modification rate. For simplicity, estimates of union labor costs assume that the total hours worked by apprentices (*HApprentices*) is split evenly across all available categories of apprentice—i.e., for Carpenters, each of the four levels of apprentice (first through fourth year) are assigned 0.25*(*HApprentices*) hours.

by large percentages of workers who do not receive employer-provided fringe benefits (i.e., most non-union bidders), those workers are paid the *Supplemental Benefit Prevailing Wage* (SBPW). Thus, for that fraction of workers/hours, *qualifying fringe* becomes equal to total fringe. Using this basic mathematical framework, the research team built an interactive calculator[52] in the Tableau software platform that simulates estimated labor costs for the four trades listed in Table 1, drawing on the data described above. In order to round out the thought exercise and generate concrete estimates for what the "union advantage" in labor costs might be for this example, the next subsection poses five hypothetical scenarios for which the thought exercise is implemented. The five scenarios are built in a way that allows for a discussion of the potential union advantage on PW bids in terms of a range as opposed to a single number.

SCENARIOS

As described at the outset of this section, the overarching scenario at work in the present thought exercise deals with the need for four types of skilled tradespersons—High Rise Carpenters, Cement & Concrete Laborers, Cement Masons, and Lathers—in the construction of a 10-story, 150,000-square-foot building in New York City. Toward that end, leadership at The Cement League (TCL) and the Cement & Concrete Workers District Council (CCWDC) in New York City provided the research team with estimates from a recent project that matches these specifications: the 10-story structure built at 57 Marcus Garvey Boulevard. These data are summarized below in Table 2.

Before moving on, it is important to point out that two assumptions underlie all scenarios and analyses that follow. First, recall that PW laws are intended to equalize labor costs (see Figure 1), under the assumption that any given construction project requires a certain number of hours that can be filled by any qualified firm. Although actual numbers of estimated hours will undoubtedly vary between bids, the expectation is that these estimates will not deviate substantially from bid to bid. Along those lines, the research team uses the "Total Estimated Hours" figures from Table 2 for all hypothetical bidders in this thought exercise. Second, the team assumes that the estimated "% of Hours Expected to be

52. http://blogs.cornell.edu/prevailingwage

TABLE 2. Rough Sketch of Estimated Labor Hours Required, by Selected Trade, to Construct a 10-Story, 150,000-Square-Foot Building in NYC

Trade	Total Estimated Hours	% of Hours Expected to Be Worked at A-Book/Journey Level (if applicable)	% of Hours Expected to Be Worked by Apprentices
High Rise Carpenters	18,245	44%	12%
Cement & Concrete Laborers	22,367	40%	20%
Cement Masons	3,207	N/A	20%
Lathers	13,233	N/A	40%

Worked at A-Book/Journey Level" is the same for both union and non-union bidders. Thus, for High Rise Carpenters, the analyses assume that both union and non-union firms require 18,245 hours from carpenters, and that 44% of those (roughly 8,028) hours will be worked at the A-Book rate. For union firms, the remaining 56% of hours would be split between Apprentices (12% of total hours) and B-Book Carpenters (44% of total hours). For non-union, however, the remaining 56% would presumably all be worked at the B-Book rate.

Grounded in the foregoing assumptions and the data from Table 2, the research team crafted five scenarios in which to compute estimated labor costs. Each scenario is briefly described below, followed by a summary table that succinctly captures the essential flavor of each scenario.

SCENARIO #1: NO APPRENTICE LABOR AVAILABLE

In the first, and most conservative, scenario under investigation, the research team assumes that no apprentice labor is available. Thus, both union and non-union bidders fill all estimated hours, for each trade, in the same manner (e.g., for High Rise Carpenters, 44% of hours are worked at the A-Book rate and 56% are worked at the B-Book rate [refer to Table 2]). Scenario #1 further assumes that the hypothetical non-union bidder provides comprehensive benefits packages to 61% of its employees, which is the industry-wide average observed in national studies and is roughly equal to the estimate that our research team generated for the NYC construction industry (60.1%) from current U.S. Census Bureau data (refer to note 33). Finally, despite convincing empirical evidence that union shops, on balance, tend to be safer, more efficient, and more experienced than their non-union competitors, Scenario #1 assumes that both the hypothetical union bidder and the hypothetical non-union bidder are equally safe and experienced. This assumption is operationalized by assigning each firm an *Experience Modification Rate* (EMR) of 1.0 when computing workers' compensation premia.

It is worth noting that, based on observable data and information on union apprenticeship[53] and the safety and experience advantages union firms tend to enjoy over their non-union competitors,[54] **Scenario #1 is an extreme case that is not likely to be observed in reality.** However, including it in the analyses allows for the creation of a hard floor below which estimates of a "union advantage" in prevailing wage bids are extremely unlikely to fall.

SCENARIO #2: NO WORKERS' COMPENSATION COST SAVINGS ("HIGH ROAD" NON-UNION BIDDER)

In the same vein as Scenario #1, Scenario #2 assumes away one of the potential sources of union advantage described earlier in this report. Specifically, here the researchers assume that the non-union bidder in the scenario is a "high road" firm that provides all of its workers (100%) with fringe benefits packages that are at least as comprehensive as the collectively bargained benefits packages that are available to their union counterparts.[55] Also mirroring Scenario #1, Scenario #2 assumes that both the hypothetical union bidder and the hypothetical high-road non-union bidder are equally safe and experienced, as

53. Manzo & Thorson (2021); Fuchs et al. (2014).
54. Manzo et al. (2021).
55. The literature on "high road" economic development and "high road" firms goes beyond the scope of this research report. For reading on these topics, see: Wright, E.O., & Rogers, J. (2011). *American society: How it really works*. WW Norton & Company; and Weaver, R. (2020). Defining and advancing High Road Policy: Concepts, strategies, and tactics. *High Road Policy*, 1(2SE), 1-12.

reflected in Experience Modification Rates (EMRs) of 1.0 in workers' compensation calculations.

Notably, given the observably wide gap in benefits provision between union construction firms (which provide almost all workers with benefits packages) and non-union firms (which lag well behind their union competitors in benefits provision),[56] **this scenario is also extremely conservative and highly unrealistic.**

SCENARIO #3: MEDIAN OUTCOME

In the median, third scenario, both sources of union advantage described in this document are present. Namely, (1) apprentice labor is available and used by union bidders at the rates specified in Table 2; and (2) because non-union firms only provide comprehensive benefits packages to a fraction of their employees (61%, or the industry average), the supplemental benefit prevailing wages that these employers are required pay to the remainder of their workers (39%) count as payroll in their workers' compensation cost calculations, thereby increasing their workers' comp costs above and beyond those of their union competitors.

In addition to these assumptions, Scenario #3 leans into the recurring empirical finding that union construction firms tend to be safer and more experienced than their non-union counterparts. According to a very recent national estimate, "after accounting for construction sector and the scope, type, region, and month of inspection, union worksites average 31 percent fewer health and safety violations" than their non-union counterparts.[57] To introduce this factor into the analyses, Scenario #3 manipulates the Experience Modification Rates (EMRs) that are used to compute each bidder's workers' comp costs.

56. Center on Policy Initiatives (2009); Manzo & Thorson (2021).
57. Manzo et al. (2021), p. i.

Briefly, EMRs, which were defined above, tend to range from 0.75 to 1.25, such that an "EMR above 1.0 will increase workers compensation costs and an EMR below 1.0 decreases costs."[58] Put differently, safer, more experienced firms save money when purchasing workers' compensation insurance plans compared to their less safe, less experienced competitors. Compared to the aforementioned finding that union firms might be as much as 31% safer than their non-union counterparts, Scenario #3 specifies a relatively moderate 20% difference in EMR for the hypothetical union and non-union bidders under examination. Specifically, the non-union bidder's EMR is kept at 1.0, which neither decreases nor increases the bidder's workers' compensation costs; while the union bidder's EMR is lowered to 0.8, suggesting that the firm will benefit (via lower insurance costs) from its safety and experience.

Despite what might appear to be a conservative estimate with respect to the relative safety of the hypothetical union bidder in Scenario #3 relative to its non-union competitor, we argue that **this scenario is perhaps the most realistic and ought to give a clear picture of what the "union advantage" in a functional PW legal system might look like.**

SCENARIO #4: AN EVEN MORE EXPERIENCED, SAFER UNION BIDDER

This scenario adopts all the same assumptions as Scenario #3, with one exception: it allows for the gap in safety and experience between the union and non-union firms to enlarge to 31%, which reflects the recent (2021) finding that union construction sites "average 31% fewer health and safety violations" than their non-union

58. Embroker (n.d.).

competitors.[59] To accomplish this change, EMR for the union bidder is lowered to 0.75, while the non-union's EMR is set at 1.13—the difference between these two EMR values comes out to 30.6%, or roughly the 31% value cited above.

SCENARIO #5: AN EVEN MORE EXPERIENCED, SAFER UNION BIDDER + "LOW ROAD" NON-UNION BIDDER

To round out the analyses, Scenario #5 adopts all the same assumptions as in Scenario #4 save for the percentage of non-union workers who receive group pension and health benefits through their employment. Whereas Scenario #4 uses the observable average for this variable (61%), Scenario #5 assumes that the non-union bidder is a "low road" firm that only provides fringe packages to approximately one-third (33%) of its workers. Although this specification is admittedly somewhat arbitrary, it was chosen as a rough midpoint between the industry average and a situation in which a firm withholds fringe benefits from all of its workers.

SUMMARY

Table 3 summarizes key variables for the five scenarios explicated in this subsection. They are arranged from most conservative (top, Scenario #1) to least conservative (bottom, Scenario #5), with the middle row (Scenario #3) representing a median, or arguably most realistic, outcome.

RESULTS

Table 4 presents the total estimated labor costs for the hypothetical union and non-union bidders in each of the five scenarios described above. The final two columns of the table summarize the size of the "union advantage" in each scenario. By design, the scenarios are sorted in ascending order, from the most conservative (i.e., smallest union advantage [Scenario #1]) to least conservative (Scenario #5). The median, or arguably most realistic scenario (#3) is associated with a 12.6% union advantage over the hypothetical non-union bidder. In the most conservative scenario, wherein no apprentice labor is available and both bidders are equally safe and experienced, the union advantage is just 1.3%. At the other end of the spectrum, labor costs for a relatively safe and experienced union firm are estimated to be 15.3% less than corresponding costs for a "low road" non-union bidder.

59. Manzo et al. (2021), p. i.

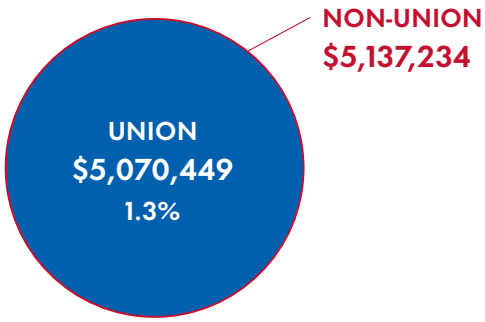
TABLE 3. Summary of the Five Scenarios Evaluated for this Project

Scen.	Apprentice Labor	Fringe Benefits Provision	Safety and Experience
1	None available	Universally provided by union bidders; Provided by non-unions at average rate (61%)	Union and non-union bidders are equally safe and experienced, as reflected in equal Experience Modification Rates (EMRs)
2	Available and used by union bidders at levels specified in Table 2	Universally provided by all bidders	Union and non-union bidders are equally safe and experienced, as reflected in equal EMRs
3	Available and used by union bidders at levels specified in Table 2	Universally provided by union bidders; Provided by non-union at average rate (61%)	Union bidders are slightly safer and more experienced than non-union bidders, as reflected in unequal EMRs (union EMR = 0.8; non-union EMR = 1.0 → union bidder is roughly 20% safer and more experienced)
4	Available and used by union bidders at levels specified in Table 2	Universally provided by union bidders; Provided by non-union at average rate (61%)	Union bidders are safer and more experienced than non-union bidders, as reflected in unequal EMRs (union EMR = 0.75; non-union EMR = 1.08 → union bidder is roughly 31% safer and more experienced)
5	Available and used by union bidders at levels specified in Table 2	Universally provided by union bidders; Provided by non-union at a below-average rate (33%)	Union bidders are safer and more experienced than non-union bidders, as reflected in unequal EMRs (union EMR = 0.75; non-union EMR = 1.08 → union bidder is roughly 31% safer and more experienced)

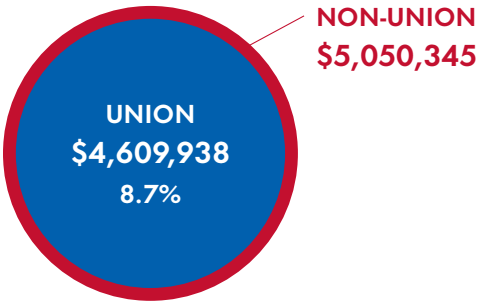
TABLE 4. Summary of Results by Scenario

Scen.	Union Bidder	Non-Union Bidder	Difference (Union – Non-Union)	Size of the Union Advantage
1	$5,070,449	$5,137,234	- $66,785	1.3%
2	$4,609,938	$5,050,345	- $440,407	8.7%
3	$4,489,357	$5,137,234	- $647,877	12.6%
4	$4,459,212	$5,195,282	- $736,070l	14.2%
5	$4,459,212	$5,262,655	- $803,443	15.3%

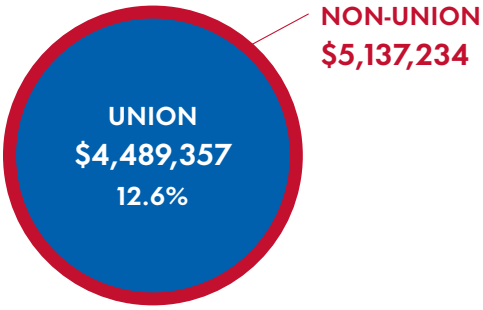
SCENARIO 1



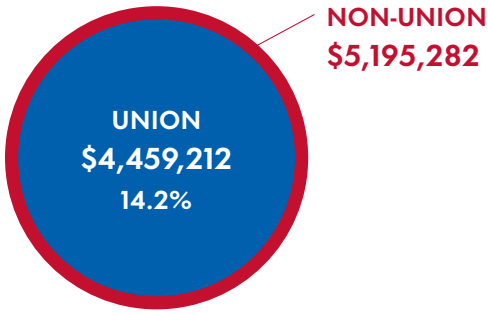
SCENARIO 2



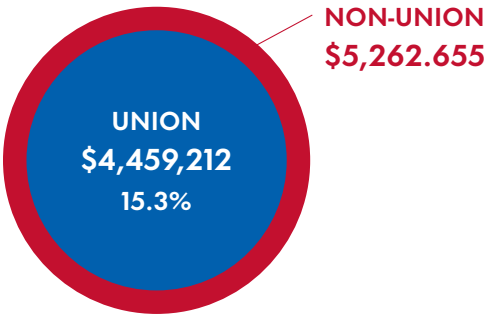
SCENARIO 3



SCENARIO 4



SCENARIO 5



CONCLUSIONS AND IMPLICATIONS

Extant literature on prevailing wage (PW) laws notes that such laws generate societal benefits in the form of upward pressure on wages and benefits for non-union workers, as well as protection of local construction industries (workers, workers' families, and employers alike) from the wage and benefit erosion that could happen if external competition entered the local market from lower-wage geographies and persistently undercut local firms.[60] This research report illustrates how, beyond these and related benefits, **PW laws might make union construction labor more cost effective than non-union construction labor for PW jobs.** Such an outcome could have significant upsides. Among other things, supporting union firms: increases those firms' ability to take on, train, and pay new apprentices, thereby paving the way for a future experienced, high-quality workforce; gives those firms more capacity to hire additional qualified workers at journey and provisional levels, thereby putting upward pressure on union density in the industry; and, arguably, puts pressure on non-union firms to raise wages and benefits to levels that are more competitive with their union counterparts. In other words, insofar as PW laws contribute to stronger unions and better compensated workers, they are "high road" policies that can lead to greater shared prosperity in local economies over time.[61]

The thought exercise and accompanying analyses in this research report strongly support this claim. Indeed, the evidence generated hereinbefore illustrates that, through a combination of (1) robust apprenticeship programs, (2) widespread, generous provision of collectively bargained benefits that help to defray workers' compensation costs, and (3) advantages in safety and experience, union bidders on PW projects are likely to face *lower labor costs* than their non-union competitors. Although other costing elements (e.g., materials, technology, profits, etc.) might not be characterized by similar patterns, the results of this project show that union labor cost savings can be quite substantial—the scenarios analyzed for just four trades working to construct a 10-story building show that savings may lie somewhere between $600,000 and $800,000. Factoring in additional trades, those figures could easily climb north of $1 million.

60. Ormiston et al. (2018).

61. E.g., Wright & Rogers (2011); Weaver (2021).

Supporting union firms:

- **Increases those firms' ability to take on, train, and pay new apprentices**
- **Gives firms more capacity to hire additional qualified workers at journey and provisional levels**
- **Puts pressure on non-union firms to raise wages and benefits to levels that are more competitive with their union counterparts**

With that backdrop, why might union bidders lose PW projects to what should be higher-labor-cost non-union firms? Although this question goes beyond the scope of the current report and is deserving of its own dedicated program of research, we conclude with at least three *non-exhaustive* possible reasons that the ostensible "union advantage" on PW projects might go unrealized:

1. **Substantial differences in materials, technology, profit, and other non-labor costs.**
   This explanation is a straightforward one that requires little unpacking. As shown in Figures 1 and 2 in this report, PW laws are intended to essentially "cancel out" labor costs and force bidders to compete on other, non-labor costs. Given that empirical evidence consistently finds that union firms produce higher quality, potentially more durable projects,[62] one might expect that union firms rely on higher-cost materials, tools, and technologies. However, it is unlikely that such differences can account for all instances of union firms being underbid.

2. **Non-union practices of underbidding that lead to cost overruns.**
   A second possibility is that non-union firms regularly underbid PW projects through, for instance, underestimating the number of labor hours needed for the work. Evidence for such practices could take the form of cost overruns and (potentially multiple) change order requests throughout a project's life cycle. Future research that investigates project awards and tracks cost overruns and change order requests will make valuable contributions to this line of inquiry.

62. Manzo et al. (2021); also see: Manzo, F., Petrucci, L., & Bruno, R. (2022). *The union advantage during the construction labor shortage: Evidence from surveys of Associated General Contractors of America member firms*. Illinois Economic Policy Institute.

3. Misclassification of workers by non-union bidders

PW laws are only effective to the extent that compliance with them is both closely monitored and actively enforced. If, for example, some non-union firms hire workers under the title of Laborer (for which the current PW is $44.50) but then assign that employee to perform the work of a Cement Mason (for which the current PW is $53.77), then that firm is effectively cheating the PW law—and their employee—to the tune of at least $9.27 per hour worked.[63] As above, future research on this possibility will add substantial value to the PW literature.

Of these three possibilities, the latter two, which both seem likely to occur in practice, undermine the spirit and intent of PW laws. That these possibilities exist point to an urgent need for more and stronger enforcement of existing laws. New York City and New York State will be well served by investing in building the capacity of PW enforcement divisions across the board, through some combination of more staff, more training, and more resources. With greater enforcement will come greater opportunity for PW laws to realize their potential, by translating their built-in "union advantage" into higher union density, higher wages, more comprehensive benefits, and greater shared prosperity throughout New York's construction industry and regional economy.

63. NYC Comptroller. (n.d.-a).

ILR Worker Institute

The Worker Institute at Cornell
570 Lexington Avenue, 12th Floor
New York, NY 10022

ilr.cornell.edu/worker-institute