ILR Buffalo Co-Lab

TESTIMONY

Russell Weaver, PhD
Research Director, Cornell University ILR School Buffalo Co-Lab

New York City Council Committee on Parks and Recreation and Committee on Contracts

September 29, 2025

Good afternoon, and thank you for the opportunity to participate in today's hearing. My name is Russell Weaver, and I am the Research Director at the Buffalo office of the Cornell University School of Industrial and Labor Relations, or ILR School. Together with my colleague, Dr. Anne Marie Brady of the Cornell ILR School's Worker Institute, and in partnership with the Local 1010 Laborers-Employers Cooperation and Education Trust, I've been engaged in a months-long empirical investigation of recent tree-planting contracts issued by the New York City Department of Parks and Recreation ("DPR").

Please allow me to begin by saying how much I appreciate the City's, and DPR's, commitment to providing the public with rich, high-quality, and well-documented data on municipal activities through the NYC Open Data Program. I'd also like to express appreciation for the City's, and DPR's, evident commitment to tree-planting and tree-care. Your team sets a high standard that cities across New York and the nation would do well to emulate.

On that note, I'll briefly describe the work that Dr. Brady and I have been doing, and I'll summarize some of our key findings that might be relevant to this body and today's hearing. Our full report will be available for public distribution later this Fall, and we can ensure that a member of this panel will forward the final document when it is available.

In short, our report evaluates measurable outcomes from recent tree-planting contracts, specifically those that have been issued between Fiscal Years 2021 and 2024. In total, 43 DPR tree-planting contracts were identified and included in the analyses. Of those contracts, 36 were associated with competitive bidding and bid history data available through the NYC PassPortCentral website. Twelve of those 36 contracts (33.3%) were awarded to Local 1010 firms, and the remaining 24 contracts (66.7%) were awarded to non-Local 1010 firms. Drawing on street tree planting data from NYC DPR, we identified 27,769 individual trees that have been planted or scheduled for planting in recent years. More than 70% of those trees (n=19,477) were associated with contracts (and Work Orders) executed between 2021 and 2024. In total, 8,156 of these trees were marked as "Completed" and having been planted in the DPR street tree planting dataset. The bid- and contract-level analyses I am about to share are based on the 36 contracts for which complete bid histories are available, and the 8,156 trees planted under those contracts.

First, we observed ample competition for recent contracts. While we only studied outcome metrics for the 36 projects for which we were able to obtain complete data, the 43 projects we initially identified as occurring between FY21 and FY24 were associated with 183 unique bid proposals, or about 4.25 bids per project.

Second, although proposals from Local 1010 firms were linked to slightly higher bid prices – namely, the median Local 1010 bid was about 8% higher than the median non-Local 1010 bid – there was no significant

difference between contract awards. Thus, contrary to many popular claims that union labor tends to be more expense than non-union competitors, we did not observe significant differences between Local 1010 and non-Local 1010 median award costs.

Next, for the sample of 8,156 completed tree plantings that could be directly linked to one of the DPR contracts under investigation we found that the median Estimated Time to Planting – or number of days between a contract execution and a given tree-planting – was fourteen days, or two weeks, faster under Local 1010 contracts compared to non-Local 1010 contracts. That difference was highly statistically significant.

Fourth, of the 8,156 planted trees that can be linked to recent (2021-2024) DPR contract solicitations, 5,067 were associated with non-missing values in the field that describes the "condition of [a given] tree based on biological health and physical structure". For the 3,860 such trees that were planted under contracts won by Local 1010 firms, 75.9% are presently rated "Excellent" (i.e., the highest rating available) in the DPR dataset. Only 61.4% of the 1,207 trees planted under contracts won by non-Local 1010 bidders have "Excellent" ratings. Similarly, the percentage of non-Local 1010 tree-plantings coded as "Dead" (16.5%) is 1.25-times greater than it is for Local 1010 plantings (13.2%).

Consistent with longstanding empirical evidence that union construction labor might exhibit quality and safety advantages over non-union labor, these findings suggest that greater use of well-trained union tree-planters can generate long-term benefits with respect to tree preservation and survival in NYC.

Fifth, we examined the density of sidewalk safety complaints made to DPR via NYC's 311 system in the year 2025. We then overlaid the locations of the 8,156 tree points associated with trees that have already been planted under a recent (2021-2024) DPR Forestry contract onto the density of these 311 complaints. The median density of new (2025) sidewalk complaints made around the 4,913 trees shown in orange (Local 1010 planted) is 134.8 per square mile, compared to a median complaint density of 148.0 per square mile in the locations depicted in white (non-Local 1010 planted trees). This difference is highly statistically significant, meaning that it cannot be the product of chance alone. The implication of these findings is that spaces in which Local 1010 labor performed recent tree-planting work are associated with fewer – and a lower density of – sidewalk-related 311 complaints than the spaces where non-Local 1010 labor performed planting services. Importantly, defective DPR sidewalks cost taxpayers roughly $20 million in insurance settlements between fiscal years 2017 and 2023, according to open data on insurance claims filed against the City.

Based on these findings, as well as their compatibility with longstanding empirical literature on union advantages in construction labor, my co-investigator and I argue that efforts to apply prevailing union standards – e.g., for work quality, for wages, for benefits, worker training, and so on – to DPR tree-planting contracts has the potential to save trees, time, and money in New York City.

###

ILR Buffalo Co-Lab and ILR Worker Institute

SAVING TREES, TIME, AND MONEY FOR NEW YORK CITY RESIDENTS

ANALYSIS OF NEW YORK CITY DEPARTMENT OF PARKS AND RECREATION FORESTRY CONTRACTS FROM 2021-2024 SHOWS EVIDENCE OF MULTIPLE "UNION ADVANTAGES" ON TREE-PLANTING JOBS

This fact sheet previews selected findings from a forthcoming (Fall 2025) report authored by researchers at the Cornell University School of Industrial and Labor Relations ("ILR School") Buffalo Co-Lab and Worker Institute,[i] with support from the Local 1010 Laborers-Employers Cooperation and Education Trust ("1010 LECET"). The findings herein are taken from the report section that evaluates measurable outcomes from recent (2021-2024) tree-planting contracts executed by the New York City ("NYC") Department of Parks and Recreation ("DPR"). In total, 43 DPR tree-planting contracts were identified and included in the analyses. Of those contracts, 36 were associated with competitive bidding and bid history data available through the NYC *PassPortCentral* website.[ii] Twelve of those 36 contracts (33.3%) were awarded to Local 1010 firms, and the remaining 24 contracts (66.7%) were awarded to non-Local 1010 firms. Drawing on street tree planting data from NYC DPR,[iii] the authors identified 27,769 individual trees that have been planted or scheduled for planting in recent years. More than 70% of those trees (n=19,477) were associated with contracts executed between 2021 and 2024. In total, 8,156 of these trees were marked as "Completed" and having been planted in the DPR street tree planting dataset. The bid- and contract-level analyses below are based on the 36 contracts for which complete bid histories are available, and the 8,156 trees planted under those contracts. All analyses are based on open-source, freely available data. Detailed data and methodological specifications are provided in the forthcoming report.

THERE IS NO SIGNIFICANT PRICE DIFFERENCE BETWEEN LOCAL 1010 AND NON-LOCAL 1010 TREE-PLANTING CONTRACT AWARDS

Using the NYC PassPortCentral website, the research team identified 183 unique proposals submitted in response to DPR tree-planting projects that were subject to competitive solicitation between 2021 and 2024. Of these proposals, 90 were submitted by non-Local 1010 firms, 75 by Local 1010 firms, and 18 by firms whose status was not identifiable and therefore omitted from analyses. The median Local 1010 bid for tree-planting contracts between 2021 and 2024 was $3,519,890 (2024$), roughly 8% greater than the median non-Local 1010 bid of $3,248,400 (2024$).[iv]

QUICK FACTS

> **Local 1010 tree-plantings occur roughly two weeks sooner**

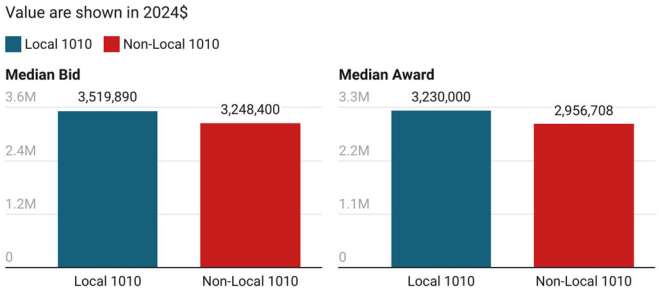
> **Local 1010-planted trees are more likely to be rated in "Excellent"** condition and less likely to be coded as "Dead"

> **Areas where tree-plantings were performed by Local 1010 labor have lower densities of defective sidewalk complaints**

The median contract *award* for Local 1010 firms was $3,230,000 (2024$), about 9% higher than the median award of $2,956,708 (2024$) for non-Local 1010 firms. However, statistical testing revealed no significant difference in these [median] award amounts.[v]

- Thus, in the aggregate, the cost of contracting with a Local 1010 or non-Local 1010 firm for DPR tree-planting projects might be roughly equal.
- As shown below, though, tree-planting labor performed by Local 1010 firms appears to have several quality and efficiency advantages that arguably create long-term benefits for NYC which outweigh the minor, non-statistically significant difference in contract award costs.

Comparison of Median Bid Prices and Median Contract Awards by Local 1010 Status, FY2021 - FY2024



Median Bid Universe: n=165 bids on competitive solicitations from FY2021 through FY 2024
Median Difference Universe: n=36 winning bids with complete data

Source: Authors' Analyses of NYC Open Data • Created with Datawrapper

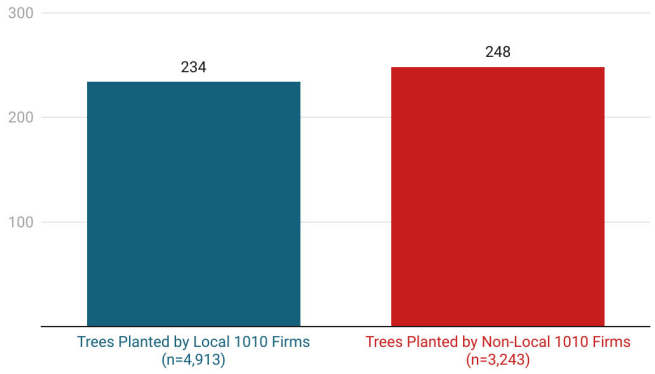
LOCAL 1010 CONTRACTS ARE LINKED TO FASTER TREE-PLANTING

As part of its street tree planting program, NYC DPR provides data on where and when trees are planted.[vi] Alongside identifying tree information, the DPR data show whether a tree planting is "Completed" or "Not Complete". The research team compared the planting date for "Completed" trees to their respective contract start dates.

For the sample of 8,156 completed tree plantings that could be directly linked to one of the DPR contracts under investigation we found:

- The median Estimated Time to Planting for Local 1010 firms was 234 days versus 248 days for non-Local 1010 firms.
- In other words, the median number of days between a contract execution and a tree-planting is two faster for Local 1010 firms compared to their counterparts.[vii]

Median Days Between Contract Start Date and Completed Planting for Selected Trees



Universe: 8,156 trees with completed planting dates planted under competitive bidding contracts awarded between FY2021 and FY2024.

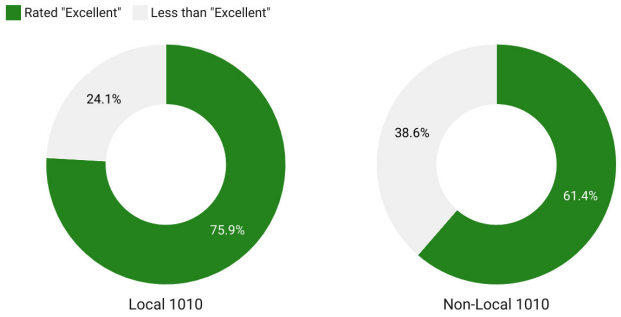
Source: Authors' analyses of NYC Open Data • Created with Datawrapper

LOCAL 1010 CONTRACTS SHOW BETTER TREE OUTCOMES AND LOWER TREE RISK RATINGS

Of the 8,156 planted trees that can be linked to recent (2021-2024) DPR contract solicitations, 5,067 were associated with non-missing values in the field that describes the "condition of [a given] tree based on biological health and physical structure".[viii]

- For the 3,860 such trees that were planted under contracts won by Local 1010 firms, 75.9% are presently rated "Excellent" (i.e., the highest rating available) in the DPR dataset. Only 61.4% of the 1,207 trees planted under contracts won by non-Local 1010 bidders have "Excellent" ratings.[ix]
- Similarly, the percentage of non-Local 1010 tree-plantings coded as "Dead" (16.5%) is 1.25-times greater than it is for Local 1010 plantings (13.2%).[x]

Percent of Recently Planted Trees in "Excellent" Condition



Universe: n=5,067 tree plantings completed under contracts executed between FY2021 and FY2024

Source: Authors' analyses of NYC Open Data • Created with Datawrapper

Relatedly, of the trees that were matched to non-missing condition ratings in the Forestry Tree Points dataset, 1,398 records exhibited non-missing values in the "Risk Rating" attribute, where higher values mean greater risk of tree failure. For the 954 of these records that were associated with Local 1010 contracts, the median risk rating was 4, compared to a median risk rating of 5 for the 444 trees linked to non-Local 1010 planting contracts.

> *"...the percentage of non-Local 1010 tree-plantings coded as "Dead"...is* ***1.25-times*** *greater than it is for Local 1010 plantings..."*

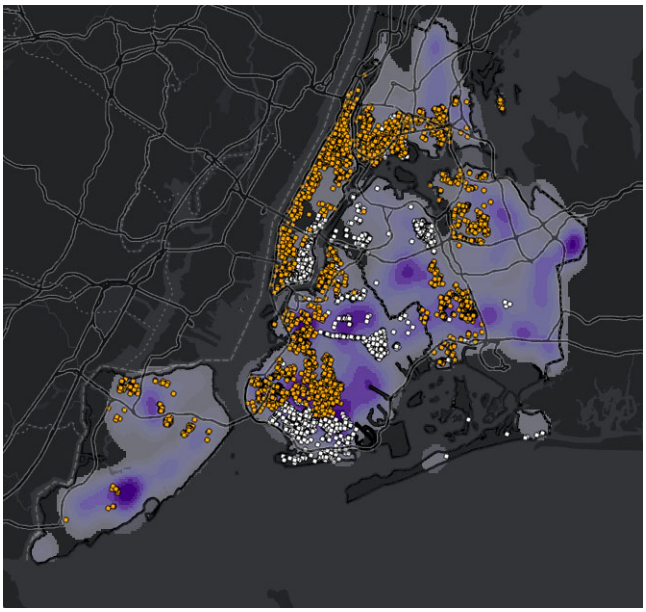
Consistent with longstanding empirical evidence that union construction labor often exhibits quality and safety advantages over non-union labor,[xi] these findings suggest that greater use of well-trained union tree-planters can generate long-term benefits with respect to tree preservation and survival in NYC.

THE DENSITY OF 311 COMPLAINTS FOR DPR TREE-RELATED SIDEWALK DANGER IS LOWER IN LOCAL 1010 CONTRACT PERFORMANCE AREAS

The final comparison looks at the density of sidewalk safety complaints that have been made to DPR via NYC's 311 system since the start of 2025. In the heatmap on the following page, darker-shaded purple areas represent spaces where the density of DPR sidewalk complaints per acre is high. Lighter purple and

light grey spaces are territories where 311 sidewalk complaints are relatively low. Overlaid onto the 311 complaint density layer is a layer containing the 8,156 tree points associated with trees that have already been planted under a recent (2021-2024) DPR Forestry contract. Orange points are trees planted under contracts won by Local 1010 firms, whereas white points show trees planted by non-Local 1010 firms.

The median density of new (2025) sidewalk complaints made around the 4,913 trees shown in orange (Local 1010 planted) is 134.8 per square mile, compared to a median complaint density of 148.0 per square mile in the locations depicted in white (non-Local 1010 planted trees).[xii] This difference is highly statistically significant, meaning that it cannot be the product of chance alone.[xiii]



The implication of these findings is that:

- Spaces in which Local 1010 labor performed recent tree-planting work are associated with fewer – and a lower density of – sidewalk-related 311 complaints than the spaces where non-Local 1010 labor performed planting services.
- Defective DPR sidewalks cost taxpayers roughly $20 million in insurance settlements between fiscal years 2017 and 2023, according to open data on insurance claims filed against the City.

$19.74 Million

Between Fiscal Year 2017 and Fiscal Year 2023, New York City paid out nearly $20 million for settlements related to defective sidewalks under DPR control.

CONCLUSIONS

Overall, our analyses found that there is likely a "union advantage" in NYC tree-planting. Namely, trees planted by Local 1010 firms appear to be

(1) more likely to exhibit "Excellent" condition,
(2) less likely to be "Dead" and at less risk for failure, and
(3) situated in areas characterized by fewer defective sidewalk complaints per square mile.

Moreover:

(4) whereas Local 1010 have slightly higher initial bid prices than non-Local 1010 firms,
(5) the median contract award value to Local 1010 firms is not significantly different from the median contract awarded to non-Local 1010 firms, and
(6) Local 1010 firms are seemingly faster to plant trees once a contract is officially executed.

The authors therefore conclude that efforts to apply prevailing union standards – e.g., for quality, wages, benefits, worker training, etc. – to DPR tree-planting contracts has the potential to save trees, time, and money in New York City.

ACKNOWLEDGEMENTS

The authors thank Local 1010 LECET for sponsoring this project.

ILR Buffalo Co-Lab

ILR Worker Institute

LABORERS-EMPLOYERS COOPERATION AND EDUCATION TRUST 1010

ILR School

NOTES

[i] Contact information for authors:
Russell Weaver, PhD: rcweaver@cornell.edu;
Anne Marie Brady, PhD: ab2532@cornell.edu

[ii] https://a0333-passportpublic.nyc.gov/index.html

[iii] https://www.nycgovparks.org/trees/street-tree-planting/locations

[iv] A Wilcoxon test reveals that this difference is significant at a 95% level of confidence. The Wilcoxon test is roughly a test for the equality of two medians (see: Weaver, R., Bagchi-Sen, S., Knight, J., & Frazier, A. E. (2016). *Shrinking cities: Understanding urban decline in the United States*. Routledge.). (n=165)

[v] Unlike the case with bids, this difference was not statistically significant at conventional confidence levels. Here, the p-value for the Wilcoxon test of the null hypothesis that Local 1010 and non-Local 1010 firms have equal median contract awards is 0.322, suggesting that the null hypothesis cannot be rejected at conventional (e.g., 95% or 99%) levels of confidence.

[vi] https://www.nycgovparks.org/trees/street-tree-planting/locations

[vii] This difference was highly statistically significant (>99% level of confidence). The p-value for the Wilcoxon test was less than 0.0001, indicating that the observed difference is almost certainly not the result of chance alone.

[viii] DPR Forest Tree Points dataset available on NYC OpenData https://data.cityofnewyork.us/Environment/Forestry-Tree-Points/hn5i-inap/about_data

[ix] This difference is highly statistically significant (Pearson chi-square[1]=92.8; $p<<0.001$)

[x] This difference is highly statistically significant (Pearson chi-square[1]=92.8; $p=0.004$)

[xi] See, for example, the discussion in: Weaver, R., & Brady, A. M. (2023). Building Responsible Projects in New York City: Assessing the Impact of Prevailing Wage Benefits on Workers, Contractors, and the New York City Economy.

[xii] For each tree point represented in the map, the research team extracted the corresponding value from the 311 complaint density layer in that location. Importantly, 311 sidewalk complaints are not necessarily linkable to a specific tree. Complaints are often described spatially based on their location relative to the City's street address network, and locations are not always precise. As such, the summary data that follow are not specific to the trees shown on the map. They are, rather, indicative of whether complaints are generally higher or lower around trees planted by union or non-union firms in recent years.

[xiii] The p-value for the Wilcoxon test of the null hypothesis of (rough) equality of medians is less than 0.0001.