

OSHA Inspections and Citations for Fall Protection in Construction and the Impact of COVID-19

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OVERVIEW

The Occupational Safety and Health Administration (OSHA) has been responsible for the enforcement of workplace [safety and health standards](#) in the United States since its establishment in 1970. OSHA also allows [states to develop and operate their own programs](#), requiring them to promulgate standards “at least as effective” as federal OSHA standards. From 2011 to 2020, there were [859,593 inspections](#) across all industries conducted by federal or state OSHA, of which 44.4% occurred in the construction industry. This Data Bulletin analyzes federal and state OSHA enforcement in construction with a focus on fall protection violations. Data on *inspections* from 2011 to 2020 and their corresponding *citations* were pulled from publicly available OSHA Enforcement data. Number of *establishments* was estimated from the 2011-2019 (most recent data available) County Business Patterns, an annual data collection of the U.S. Census Bureau. Inspection and citation trends were compared by state, major construction subsector, establishment size, and year, particularly since the start of the COVID-19 pandemic. *Fall citations* include fall protection citations under federal standards. Average and total *penalties* were calculated and adjusted for inflation providing a better comparison over time.



THIS ISSUE

This issue examines OSHA inspections and citations for fall protection in construction from 2011 to 2020, including the impact of COVID-19.

KEY FINDINGS

In 2019, OSHA conducted 37,500 inspections and issued 70,300 citations in construction, declines of 20% and 7%, respectively, since 2011.

Chart 1

The number of inspections and citations in construction plummeted by over one-third from 2019 to 2020.

Chart 1

Establishments with 1-9 employees accounted for 70% of inspections in construction but 83% of fall citations in 2019.

Charts 5-6

More than 90% of fall citations were serious, willful, or repeat from 2011-2020 on average, compared to 74% of overall construction citations.

Chart 8

In 2019, the citation penalties in the construction industry totaled \$139 million, of which over one-third (\$51 million) were for fall citations.

Chart 9

Fall protection remained the top citation cause in construction.

Chart 10

NEXT DATA BULLETIN

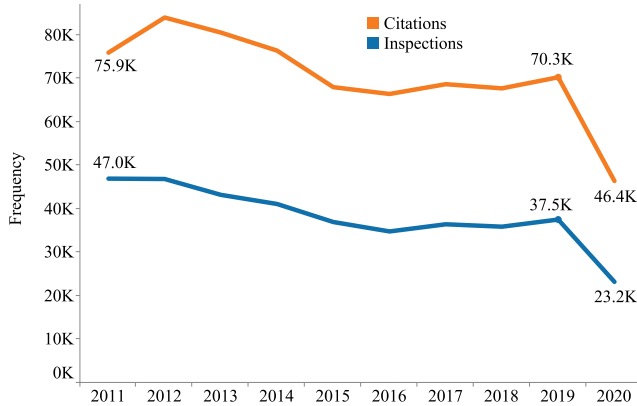
Construction safety management during the COVID-19 pandemic

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Numbers in text and charts (except chart 10) were calculated by the CPWR Data Center. The numbers tabulated by CPWR were based on calendar year, which may differ from the numbers reported by OSHA based on fiscal year.

In 2019, OSHA conducted 37,500 federal and state inspections in construction, which resulted in 70,300 citations (chart 1). The number of construction inspections and citations declined by 20.2% and 7.4%, respectively, between 2011 and 2019. From 2019 to 2020, the number of inspections and citations plummeted by over one-third (drops of 38.1% and 34%, respectively). This trend reflects an effort by OSHA to [reduce face-to-face interactions](#) during the COVID-19 pandemic.

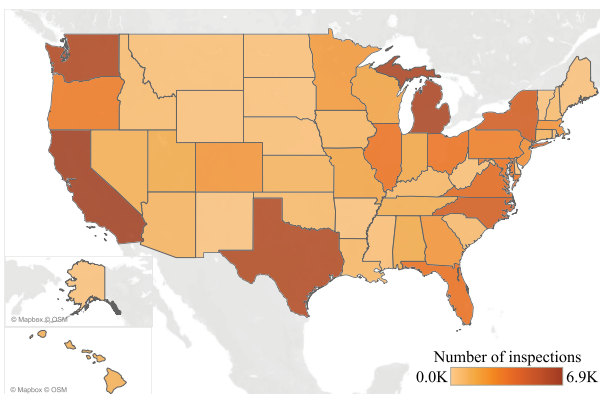
1. Number of OSHA inspections and citations in construction, 2011-2020



Source: Occupational Safety and Health Administration, Federal and State Inspections Data.

The three states with the most construction inspections from 2018 to 2020 (each with more than 6,200) were California, Michigan, and Washington (chart 2). California ranked the top state for both inspections and number of [payroll construction establishments](#).

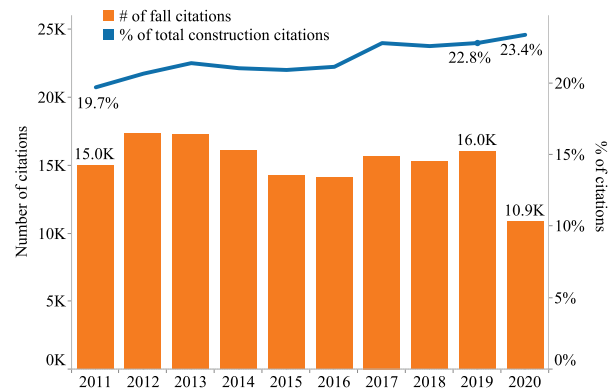
2. Number of OSHA inspections in construction, by state, sum of 2018-2020



Source: Occupational Safety and Health Administration, Federal and State Inspections Data.

On average, roughly over one in five construction citations from 2011 to 2020 were for inadequate fall protection according to federal OSHA standards. From 2011 to 2019, the number of fall citations annually fluctuated from 14,000 to 17,400, before dropping to 10,900 during the COVID-19 pandemic in 2020. While the number of citations issued in 2020 decreased, the percentage of fall citations slightly increased from 22.8% in 2019 to 23.4%.

3. Number and percentage of OSHA fall citations in construction, 2011-2020



Source: Occupational Safety and Health Administration, Federal and State Inspections Data.

Specialty Trade Contractors (NAICS 238) had the highest number of citations per inspection in the construction industry, about two citations per inspection on average (chart 4). While the number of overall citations per inspection was lowest in the Construction of Buildings subsector (NAICS 236), the number of fall citations per inspection was lowest in Heavy and Civil Engineering Construction (NAICS 237). Fall citation trends are consistent with [fall injury patterns](#) by construction subsector and may reflect OSHA enforcement priorities in fall prevention.

4. Number of OSHA citations per inspection, all versus fall citations, 2011-2020

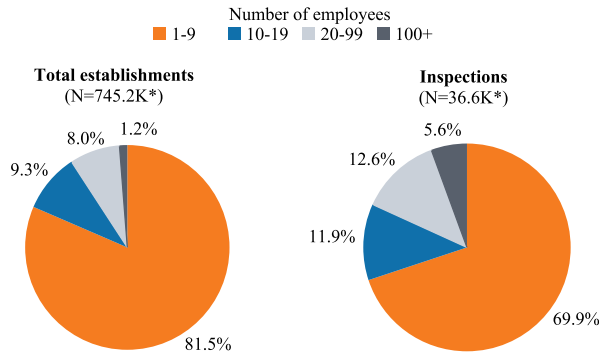
Construction of Buildings Heavy & Civil Engineering Specialty Trade Contractors

Period	All citations			Fall citations			
	Construction of Buildings	Heavy & Civil Engineering	Specialty Trade Contractors	Construction of Buildings	Heavy & Civil Engineering	Specialty Trade Contractors	
2011-2013	1.3	1.5	2.0	0.23	0.05	0.46	
	2014-2017	1.4	1.7	2.1	0.23	0.04	0.52
		2018-2020	1.3	1.7	2.2	0.20	0.03
Number per inspection			Number per inspection				

Source: Occupational Safety and Health Administration, Federal and State Inspections Data.

Although small establishments (fewer than 10 employees) accounted for over 80% of construction establishments in 2019, they received less than 70% of construction inspections this year (chart 5). That same year, small establishments accounted for 76% of overall citations and 83.2% of fall citations in the industry (chart 6).

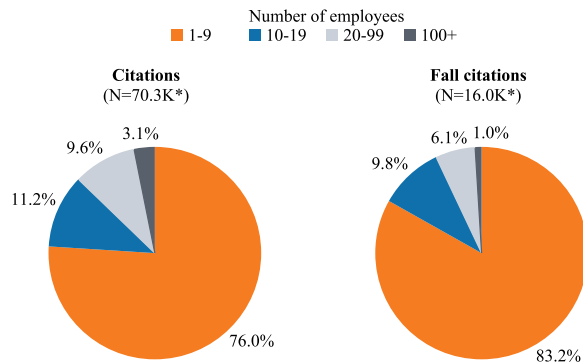
5. Distribution of construction establishments and inspections by establishment size, 2019



Sources: U.S. Census Bureau, County Business Patterns; and Occupational Safety and Health Administration, Federal and State Inspections Data.

*Cases missing establishment size were excluded from the chart.

6. Distribution of construction citations by establishment size, all versus fall citations, 2019

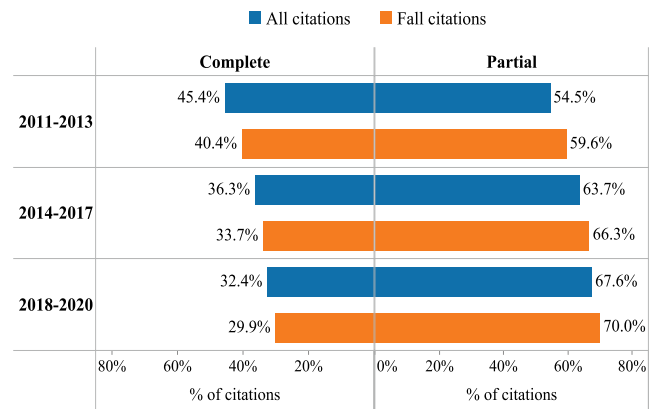


Source: Occupational Safety and Health Administration, Federal and State Inspections Data.

*Cases missing establishment size were excluded from the chart.

On average, 67.6% of overall citations and 70% of fall citations in the industry from 2018 to 2020 occurred following a *partial inspection* (chart 7). This proportion increased throughout the study period, and fall citations were slightly more likely to arise from partial inspections than citations overall. This *trend* may indicate that OSHA has shifted its focus from conducting full inspections to looking for targeted hazards, such as falls.

7. Scope* of OSHA citations in construction, fall versus all citations, average of selected years

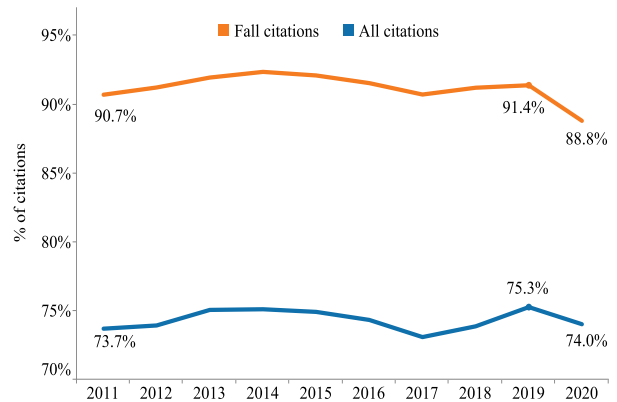


Source: Occupational Safety and Health Administration, Federal and State Inspections Data.

*Cases with scopes of "Records" or "No Inspection" (<0.04%) were excluded.

The percentage of OSHA citations that were *serious, willful, or repeat* (SWR) remained relatively constant from 2011 to 2019, though there was a small decline in this proportion in 2020 (chart 8). Fall citations were more likely than overall citations to be SWR; 91.3% of fall citations were SWR during the study period, compared to 74.4% of citations overall.

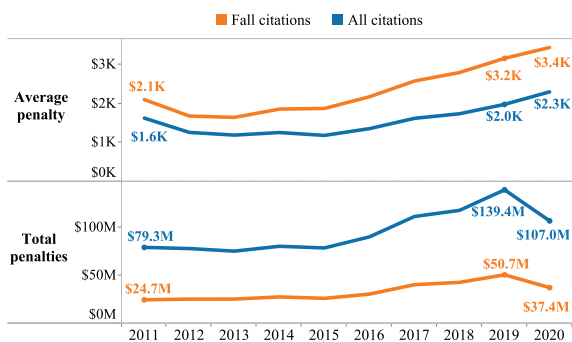
8. Percentage of serious, willful, or repeat OSHA citations in construction, all versus fall citations, 2011-2020



Source: Occupational Safety and Health Administration, Federal and State Inspections Data.

In 2019, the total penalties in the construction industry reached \$139.4 million, the highest level since 2011 after adjusting for inflation (chart 9). Over one-third (\$50.7 million) of the total was tied to fall citations. Consistent with the drop in citations, there were decreases of 23.2% in total penalties and 26.2% in fall penalties in 2020. Despite this reduction in total penalties, the average penalty increased in 2020 for overall citations and fall citations. From 2011 to 2020 the average penalty for overall and for fall citations in construction increased by 43.8% and 61.9%, respectively. In 2020, the average penalty for fall citations was nearly 50% higher than the average penalty for overall citations (\$3,400 versus \$2,300).

9. Average penalty per OSHA citation and total penalties in construction, 2011-2020 (December 2018 dollars)



Source: Occupational Safety and Health Administration, Federal and State Inspections Data.

Failure to fulfill the duty to have fall protection (CFR 1926.501) ranked as the most common cause for federal citations and involved more investigations than other categories in construction from October 2019 to September 2020 (Fiscal Year 2020; chart 10). Related to fall hazards (emphasized with darker colors), citations for general requirements for scaffolds (CFR 1926.451), ladders (CFR 1926.1053), fall protection training (CFR 1926.503), fall protection systems criteria and practices (CFR 1926.502), and aerial lifts (1926.453) also ranked among the top 10 causes for citations. This trend is similar to what has been observed in [past years](#).

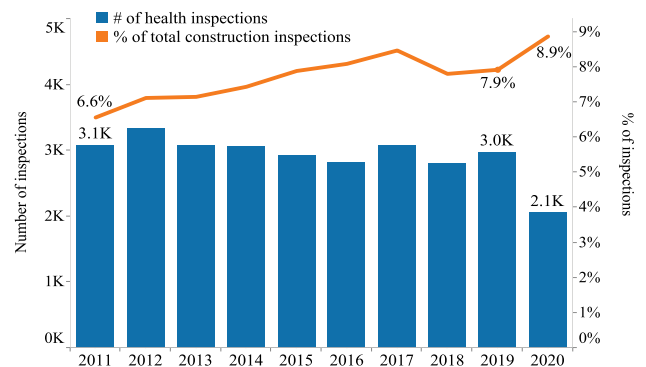
10. Number of federal OSHA inspections and citations for the top 10 violation causes in construction, October 2019 - September 2020

Rank	Standard	Number of inspections	Number of citations
1	Duty to have fall protection (1926.501)	4.4K	4.5K
2	General requirements for scaffolds (1926.451)	0.9K	1.9K
3	Ladders (1926.1053)	1.5K	1.7K
4	Fall protection training (1926.503)	1.3K	1.4K
5	Eye/face protection (1926.102)	1.2K	1.2K
6	General safety/health (1926.20)	0.7K	0.7K
7	Head protection (1926.100)	0.6K	0.6K
8	Excavation requirements (1926.651)	0.4K	0.6K
9	Fall protection systems criteria/practices (1926.502)	0.4K	0.5K
10	Aerial lifts (1926.453)	0.4K	0.5K

Source: Occupational Safety and Health Administration, Industry Profile for an OSHA Standard. <https://www.osha.gov/pls/imis/industryprofile.html>

Health hazards were less likely to be inspected and cited [in construction than in all industries](#). There were fewer than 3,400 *health inspections* in construction each year from 2011 to 2019, ranging from 6.6% to 7.9% of overall inspections in the industry (chart 11). Despite the drop in the number of health inspections in construction by more than 30% from 2019 to 2020, their share of overall inspections increased to 8.9%, suggesting that health inspections may have become more frequent because of the pandemic.

11. Number and percentage of OSHA health inspections in construction, 2011-2020



Source: Occupational Safety and Health Administration, Federal and State Inspections Data.

Overall, OSHA inspections and citations in construction decreased from 2011 through 2019. The impact of the COVID-19 pandemic on OSHA enforcement was substantial, with both OSHA inspections and citations dramatically dropping in 2020. The percentage of citations in construction related to fall protection slightly increased in 2020, and fall citations were more likely to be SWR than overall citations in the industry during each year of the study period. Since only fall citations by federal standards were counted in the report, the real severity may be underestimated. To assist construction employers in fall prevention, CPWR and its partners have developed numerous free materials and resources that can be found on <https://www.cpwr.com>, as well as on the Falls Campaign website <https://stopconstructionfalls.com>.

Protecting workers from COVID-19 has become a priority for OSHA, NIOSH, and CPWR. OSHA has provided [updated guidance](#) on mitigating and preventing the spread of COVID-19 in the workplace. NIOSH has addressed [special topics](#) related to COVID-19 and vaccinations for workers. CPWR has developed several resources to help construction employers and workers understand the [science and benefits of the COVID-19 vaccine](#), in addition to a [COVID-19 Construction Clearinghouse](#) to support construction employers and workers as they respond to the pandemic.

ACCESS THE CHARTS & MORE

View the [charts](#) in PowerPoint and the [data](#) underlying the charts in Excel. Downloading will start when you click on each link.

Detailed inspection and citation information is available in the [OSHA Inspections and Citations in Construction](#) dashboard. In addition, the 2011-2019 establishment data are available in the [Construction Payroll Establishments and Employees](#) dashboard.

DEFINITIONS

Citation – Violation of any OSHA standard resulting from an inspection in the construction industry (NAICS 23).

Establishment (in construction) – A single physical location occupied by a relatively permanent main or branch office. When multiple activities occur in one place under one ownership, a single establishment is counted by its major activity. The individual construction sites and projects of such dispersed activities are not considered to be establishments.

Fall citation - Citation in the construction industry for violating OSHA CFR 1926 Subpart M - Fall Protection, including the duty to have fall protection (1926.501), fall protection systems criteria and practices (1926.502), and fall protection training (1926.503).

Health inspection – OSHA inspection focusing on health issues.

Inspection – Inspection with a closed case status in the construction industry, conducted by either federal or state OSHA offices in a calendar year.

Partial inspection – An inspection focusing on specific potentially hazardous areas, operations, conditions, or practices at the establishment, as opposed to a full inspection of the worksite.

Penalty – Current penalty assessed for a citation, adjusted for inflation to December 2018 dollars.

Serious, willful, or repeat – A serious violation is issued for a hazard in a workplace with a high probability of causing death or serious physical harm and that employers knew or should have known about. A willful violation is issued when an employer knowingly does not abide by OSHA standards and makes no effort to rectify the situation. A repeated violation is when employers are repeatedly cited for the same OSHA violation.

ACKNOWLEDGMENTS

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DATA SOURCES

U.S. Department of Labor, OSHA Enforcement Data, 2011-2020. https://enforcedata.dol.gov/views/data_catalogs.php

U.S. Census Bureau, County Business Patterns, 2019. <https://www.census.gov/programs-surveys/cbp.html>

REFERENCES

CPWR – The Center for Construction Research and Training. [2021]. COVID-19 Vaccine Resources for Construction. <https://www.cpwr.com/covid-19-resources/covid-19-vaccine-resources>

CPWR – The Center for Construction Research and Training. [2021]. CPWR COVID-19 Construction Clearinghouse. <https://covid.elcosh.org>

CPWR – The Center for Construction Research and Training. [2020]. New Trends of Fatal Falls in the Construction Industry. <https://www.cpwr.com/wp-content/uploads/DataBulletin-Falls-Special-Issue-2020.pdf>

CPWR – The Center for Construction Research and Training. [2018]. OSHA Enforcement and Injury Costs – OSHA Enforcement of Construction Safety and Health Regulations: Inspections. In: the Construction Chart Book, 6th ed. <https://www.cpwr.com/research/data-center/the-construction-chart-book/chart-book-6th-edition-osha-enforcement-and-injury-costs-osha-enforcement-of-construction-safety-and-health-regulations-inspections>

Occupational Safety and Health Administration. [2021]. Inspections within Industry. <https://www.osha.gov/pls/imis/industry.html>

Occupational Safety and Health Administration. [2020]. Inspection Procedures. In: Field Operations Manual. <https://www.osha.gov/enforcement/directives/cpl-02-00-164/chapter-3>

Occupational Safety and Health Administration. [1970]. OSH Act of 1970. <https://www.osha.gov/laws-regs/oshact/doc>

Occupational Safety and Health Administration. [1979]. Regulations (Standards - 29 CFR). <https://www.osha.gov/laws-regs/regulations/standardnumber>

Occupational Safety and Health Administration. [2021]. Protecting Workers: Guidance on Mitigating and Preventing the Spread of COVID-19 in the Workplace. <https://www.osha.gov/coronavirus/safework>

Occupational Safety and Health Administration. [n.d.]. State Plans. <https://www.osha.gov/stateplans>

U.S. Department of Labor. [2021]. COVID-19: Increased Worksite Complaints and Reduced OSHA Inspections Leave U.S. Workers' Safety at Increased Risk. <https://www.oig.dol.gov/public/reports/oa/2021/19-21-003-10-105.pdf>

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The CPWR Data Center is part of CPWR—The Center for Construction Research and Training. CPWR is a 501(c)(3) nonprofit research and training institution created by NABTU, and serves as its research arm. CPWR has focused on construction safety and health research since 1990. The Data Bulletin, a series of publications analyzing construction-related data, is part of our ongoing surveillance project funded by the National Institute for Occupational Safety and Health (NIOSH).

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- Construction Safety and Health Network
<https://safeconstructionnetwork.org/>
- Construction Solutions
<https://www.cpwrconstructionsolutions.org/>
- Construction Solutions ROI Calculator
<https://www.safecalc.org/>
- COVID-19 Construction Clearinghouse
<https://covid.elcosh.org/index.php>
- COVID-19 Exposure Control Planning Tool
<https://www.covidcpwr.org>
- Electronic Library of Construction Occupational Safety and Health
<https://www.elcosh.org/index.php>
- Exposure Control Database
<https://ecd.cpwrconstructionsolutions.org/>
- Safety Climate Assessment Tool (S-CAT)
<https://cpwr.com/safetyclimate>
- Safety Climate Assessment Tool for Small Contractors (S-CAT^{SC})
<https://www.cpwr.com/scat-sc>
- Stop Construction Falls
<https://stopconstructionfalls.com/>
- Work Safely with Silica
<https://www.silica-safe.org/>

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