



ELECTRI **INTERNATIONAL**

Research and Education for the Electrical Construction Industry



Pandemics and Construction Productivity: Quantifying the Impact Task Force



This whole effort is to help electrical contractors through these unprecedented times.

We want these resources to help you with your operations.

If you have questions, please reach out to your local chapter
Josh Bone at: josh.bone@electri.org



Pandemics and Construction Productivity: Quantifying the Impact Task Force



Our work is far from over...

- We will continue to monitor project impacts over the next 12 months
- We are still actively collecting project data.
- We need more data to measure the impact on Line, Systems and Horizontal Projects
- If you are currently working on federal government projects, please contact Josh Bone.
- Everyone that shares their data with us will receive a special report that compares your project data against the national average.
- Contact Josh Bone if you are willing to share your data: josh.bone@electri.org



Pandemics and Construction Productivity: Quantifying the Impact Task Force



Link to Pandemic & Construction Productivity Report

<https://electri.org/product/pandemics-and-construction-productivity-quantifying-the-impact/>

Pandemics and Construction Productivity Study Overview

This video will provide individuals with an overview of the report findings relating to productivity impacts as a result of new PPE requirements and social distancing guidelines.

Pandemics and Construction Productivity Study

This video will provide further details to help quantify productivity impacts by task as a result of new PPE and social distancing guidelines.

Pandemic Mitigation Tracking Overview

This video will provide an overview of the report findings relating to lost hours on jobsites as a result of new safety requirements.

Pandemic Change Order Calculator

This video will help contractors quantify their own project related impacts by using the change order calculator which can be downloaded from the link below.



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Pandemic Business Impacts Overview

This video provides an overview of projects specific impacts that contractors are most frequently facing around the country.

Pandemic Business Impacts Contractor Interviews

This video includes interviews with contractors sharing their personal stories of how their own jobs are being impacted by COVID-19.

Change Order Calculator and Frequently Asked Questions

<https://electri.org/product/pandemics-and-construction-productivity-quantifying-the-impact/>

If you have questions regarding the report or additional support documents

Contact – josh.bone@electri.org

More resources to come to help support our contractors in these unprecedented times.



Pandemics and Construction Productivity: Quantifying the Impact Task Force



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Pandemics and Construction Productivity: Quantifying the Impact Task Force



Thank you to all our contractors that
shared your data!



Pandemics and Construction Productivity: Quantifying the Impact

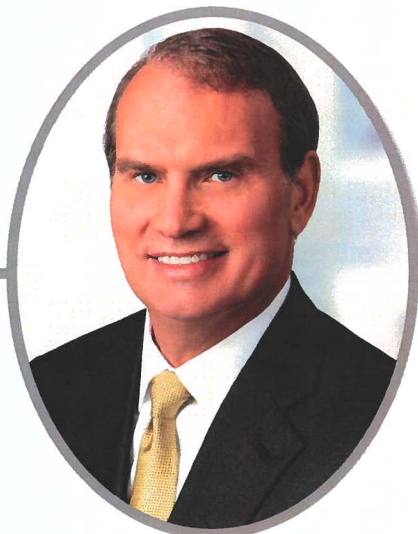
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Study Objectives

Quantify
the Impacts
on Jobsite
Productivity



Provide
a Tool to
Price Change
Orders



Provide
Information
for Pricing
Future
Projects





3 Parts to the Study

- Pandemic Mitigation Tracking
 - Specifically quantifies hours associated with preventative measures such as training, health screenings, cleaning and disinfecting, job site access and administration instituted to minimize exposure.
- Productivity Benchmarking
 - Quantifies the reduction in direct work productivity related to social distancing rules, staggered shifts, reduced crew sizes, increased personal protective equipment requirements and related job site regulations.
- Business and Project Impacts
 - Other impacts experienced contractors who participated in this study.



Preliminary Findings

- The impact of this pandemic suggest that construction productivity has been impacted by nearly 20%.
- A rule of thumb for self-performing contractors is 10% impact on productivity = 100% impact on profitability.
- **Contractors need to consider seriously the impact on their profitability and seek equitable adjustments.**

20% Significant Impacts on Business



labor hours lost on
pandemic mitigation activities



additional overall productivity impact
on vertical construction



Many “ripple effect” indirect impacts
to the business not yet quantified





Pandemic Mitigation Tracking

Part 1



Objective

- Quantify lost productivity directly associated with jobsite pandemic mitigation requirements such as training, health screenings, cleaning and disinfecting, job site access and administration, all instituted to minimize exposure.

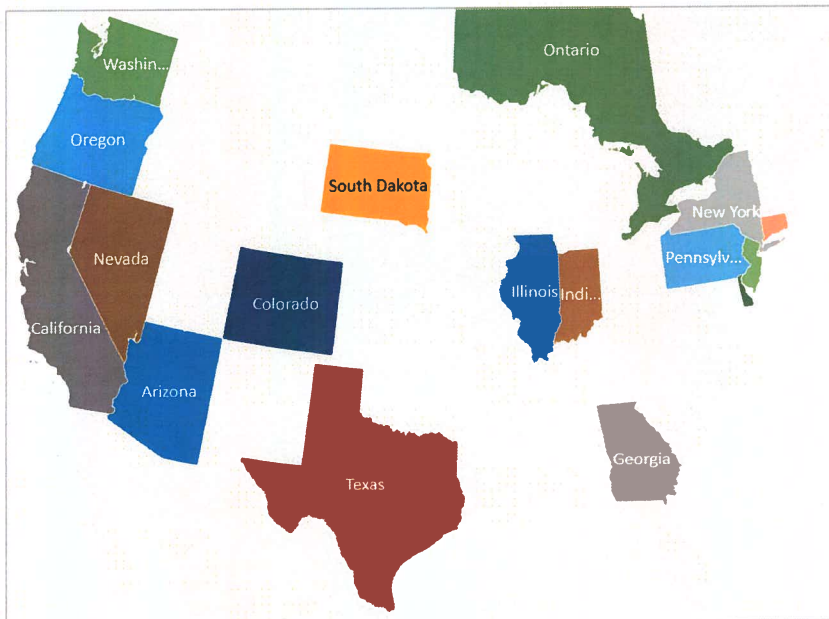


Collected Mitigation Activity

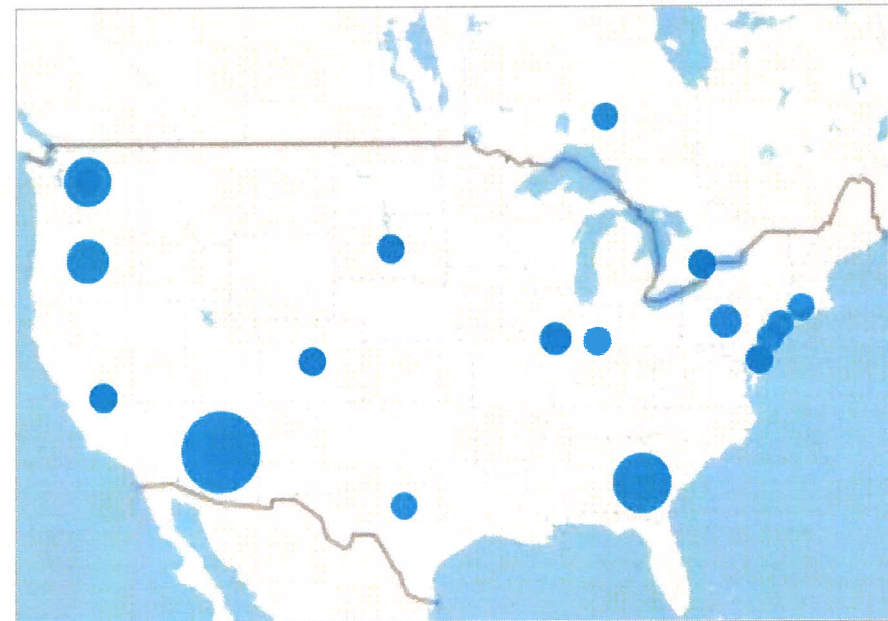
	Total Hours	% of Total Hours	% of Mitigation Hours
Total Hours Available	77,205		
Mitigation Safety & Training	1,598	2.1%	29.6%
Mitigation Distancing & Access Rules	1,865	2.4%	34.6%
Mitigation Cleaning & Disinfecting	1,400	1.8%	25.9%
Mitigation Administration	532	0.7%	9.9%
Total Mitigation Hours	5,394	7.0%	100.0%

State Distribution of Mitigation Samples

State Distribution of Mitigation Data

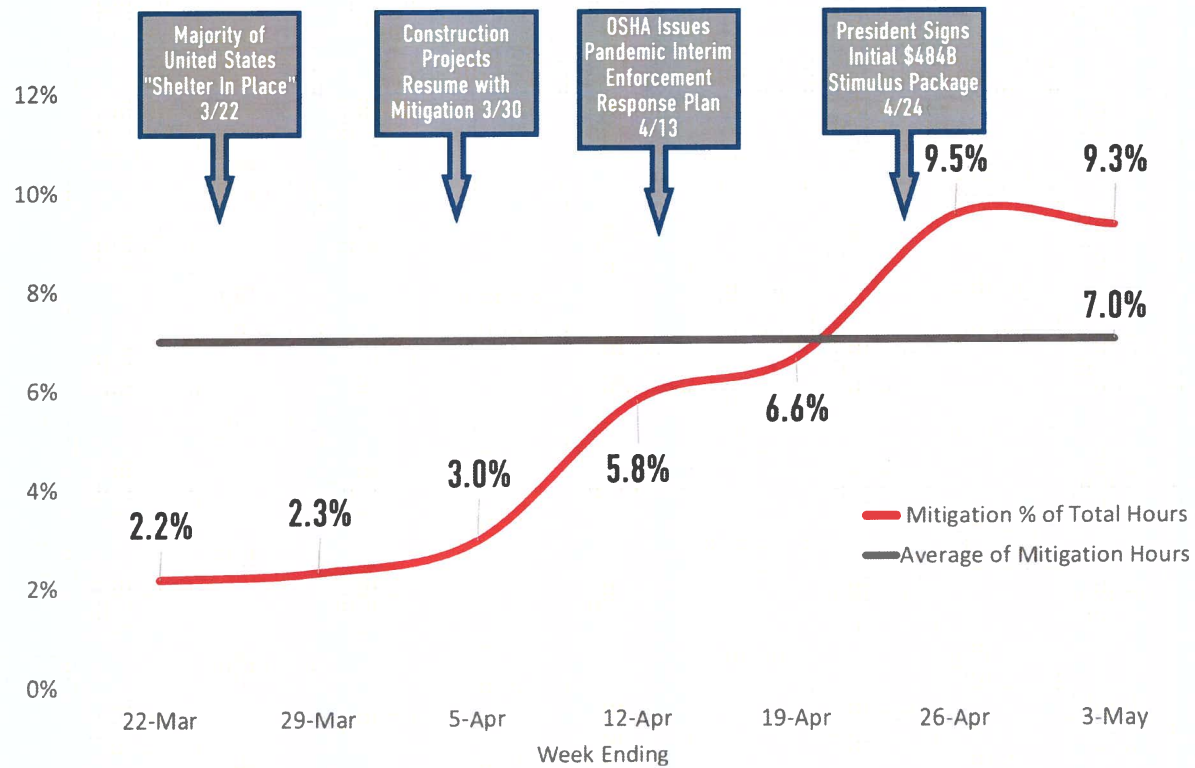


“Heat Map” Distribution of Samples





Mitigation Hours as a % of Total Hours by Week





Productivity Benchmarking

Part 2






Objective

- Measure electrical contractor companies' pre- and post-pandemic direct work productivity
- Measure the impacted tasks by market segment, project/job type and geographic area
- Provide analysis, summary findings and a roadmap to operationalize the results

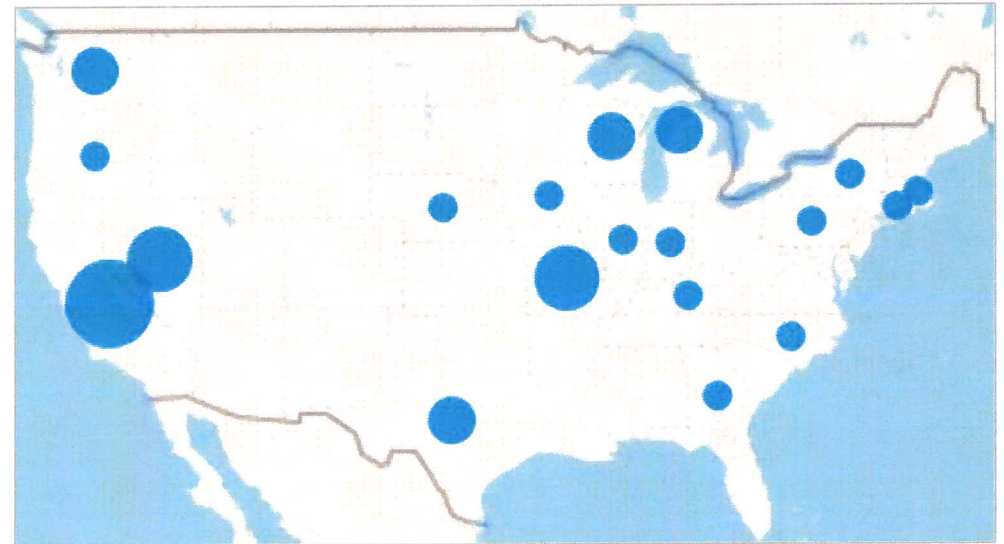
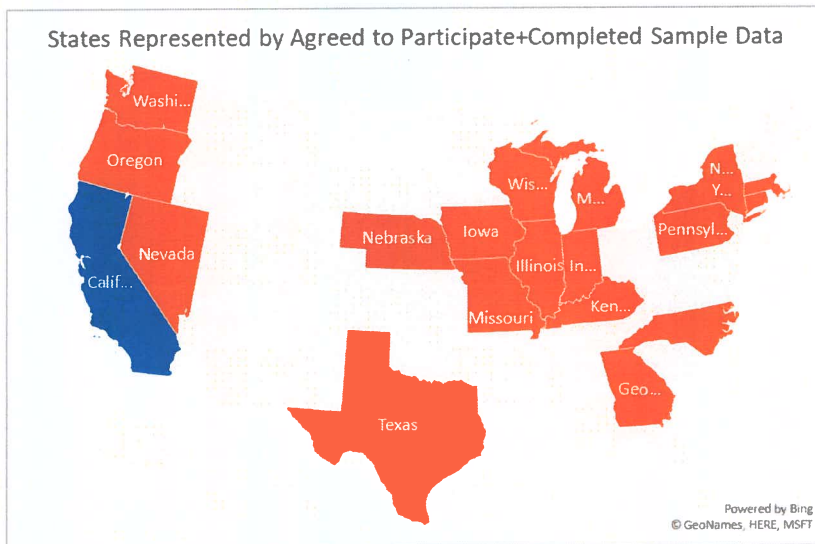


Project Criteria

- 1 Active Projects**
 Projects that have tasks ongoing during COVID-19.
- 2 Capturing Production**
 Isolating pre-impact production vs. post-impact production by market segment and task code.
- 3 Window of Activity**
 Impact window of January 6, 2020 through May 4, 2020.

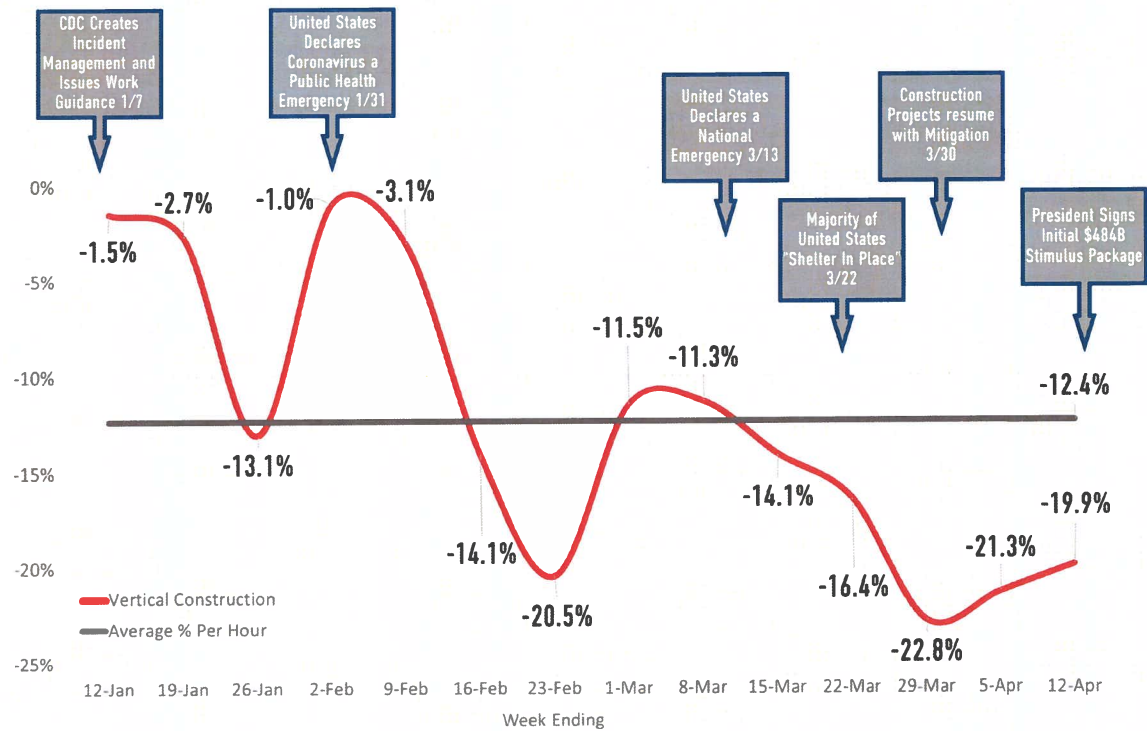
State Distribution of Productivity Samples

State Distribution of Productivity Data “Heat Map” Distribution of Samples



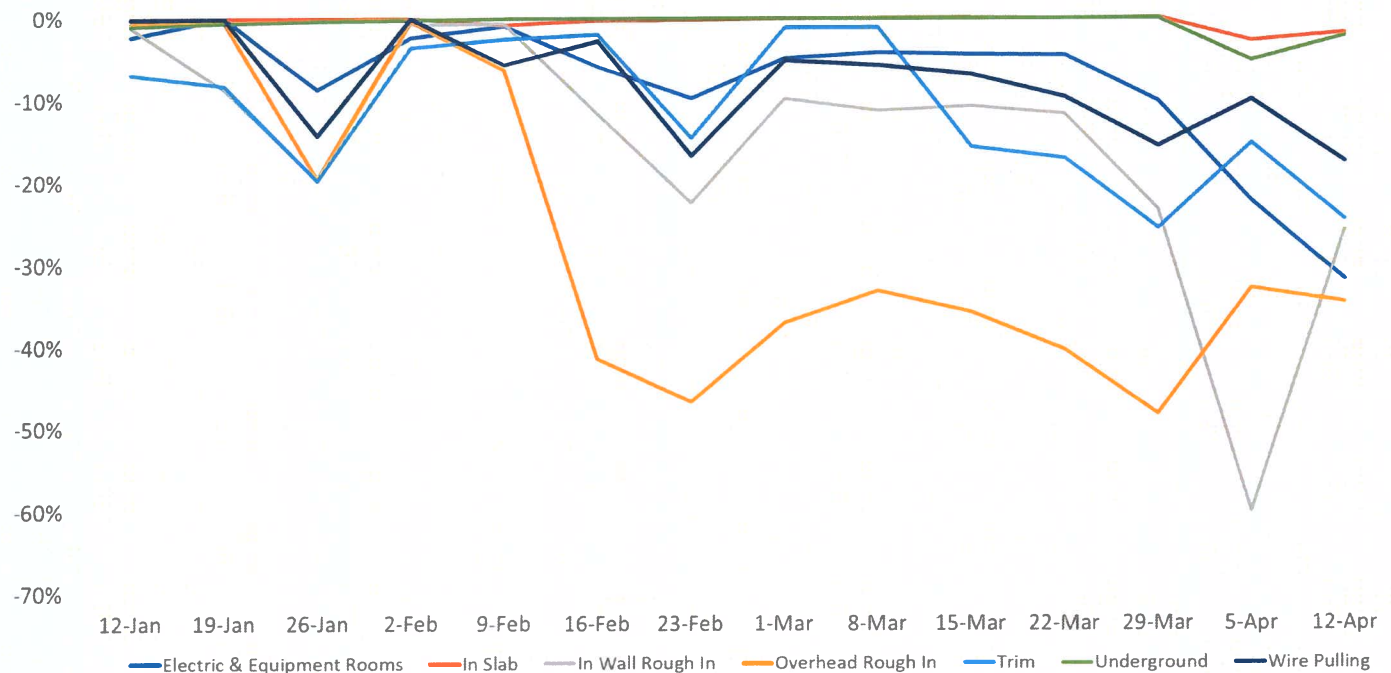


Vertical Construction Productivity Against Events





Vertical Construction Productivity by Task Against Events



- Activities with close proximity work and had to follow social distancing such as Overhead Rough In were impact most.



Contractor Participation Benefits

Your own impact numbers and data set compared to national average

Ability to quantify impacts to on-going work

Ability to quantify impacts to jobs that re-start but are still required to observe new measures

Ability to add costs to future estimates



Business Impact of a Pandemic

Part 3

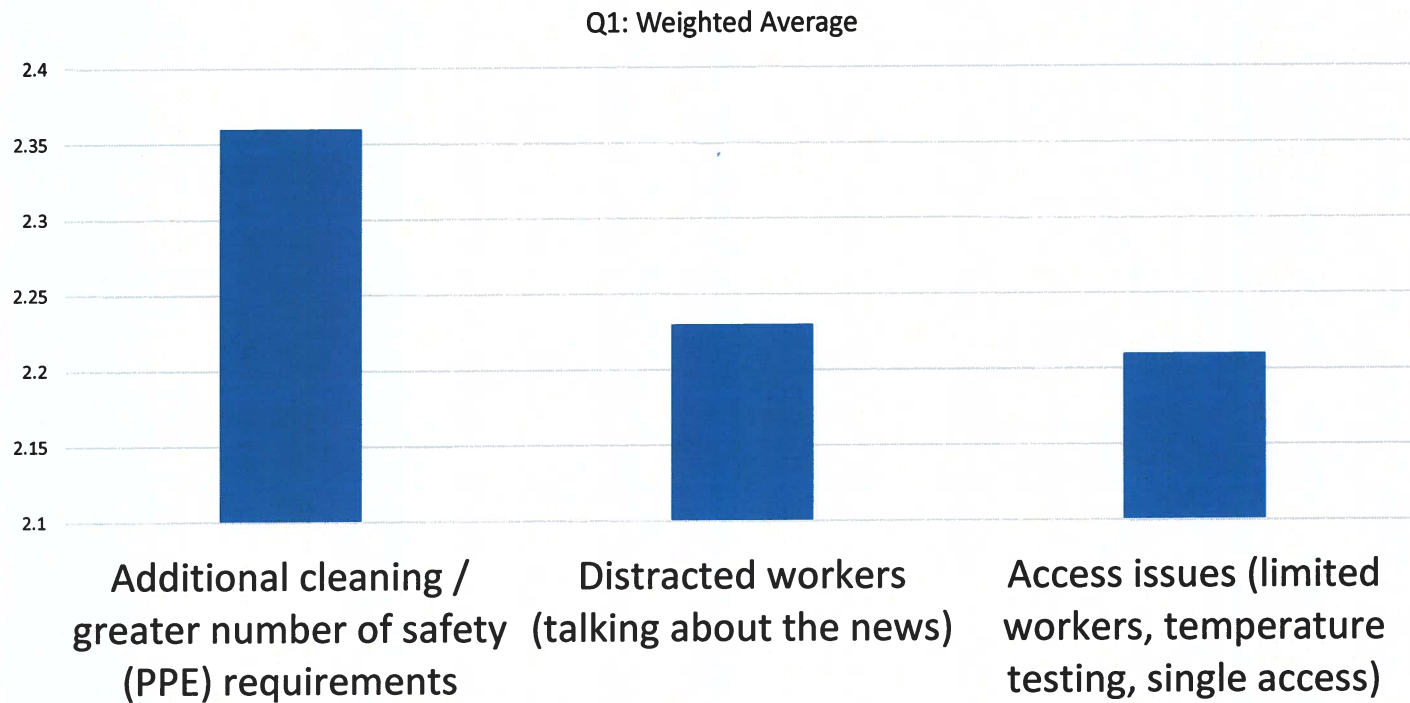


Business Impact Objective

- To develop and identify necessary education and training that would enable Electrical Contractors to better manage their projects and businesses.
- To mitigate the impact of a pandemic on their field and project management staff.
- Focus on three specific areas:
 - Jobsite Impacts
 - Project Management Impacts
 - Business Impacts

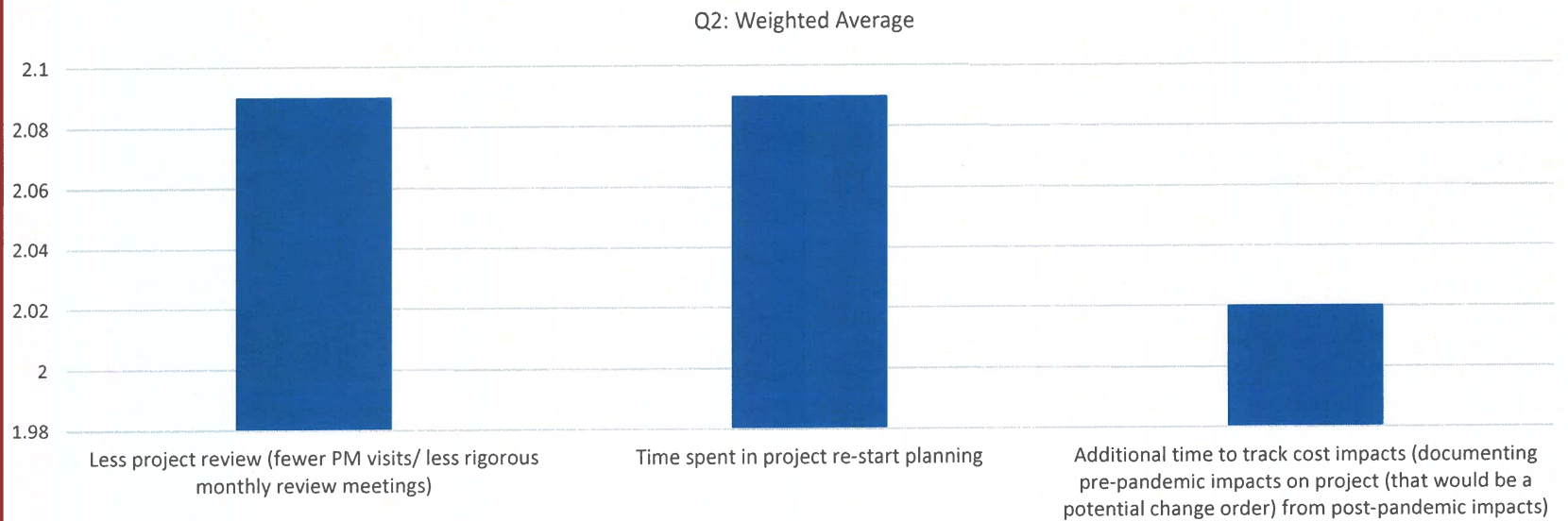


Jobsite Impacts





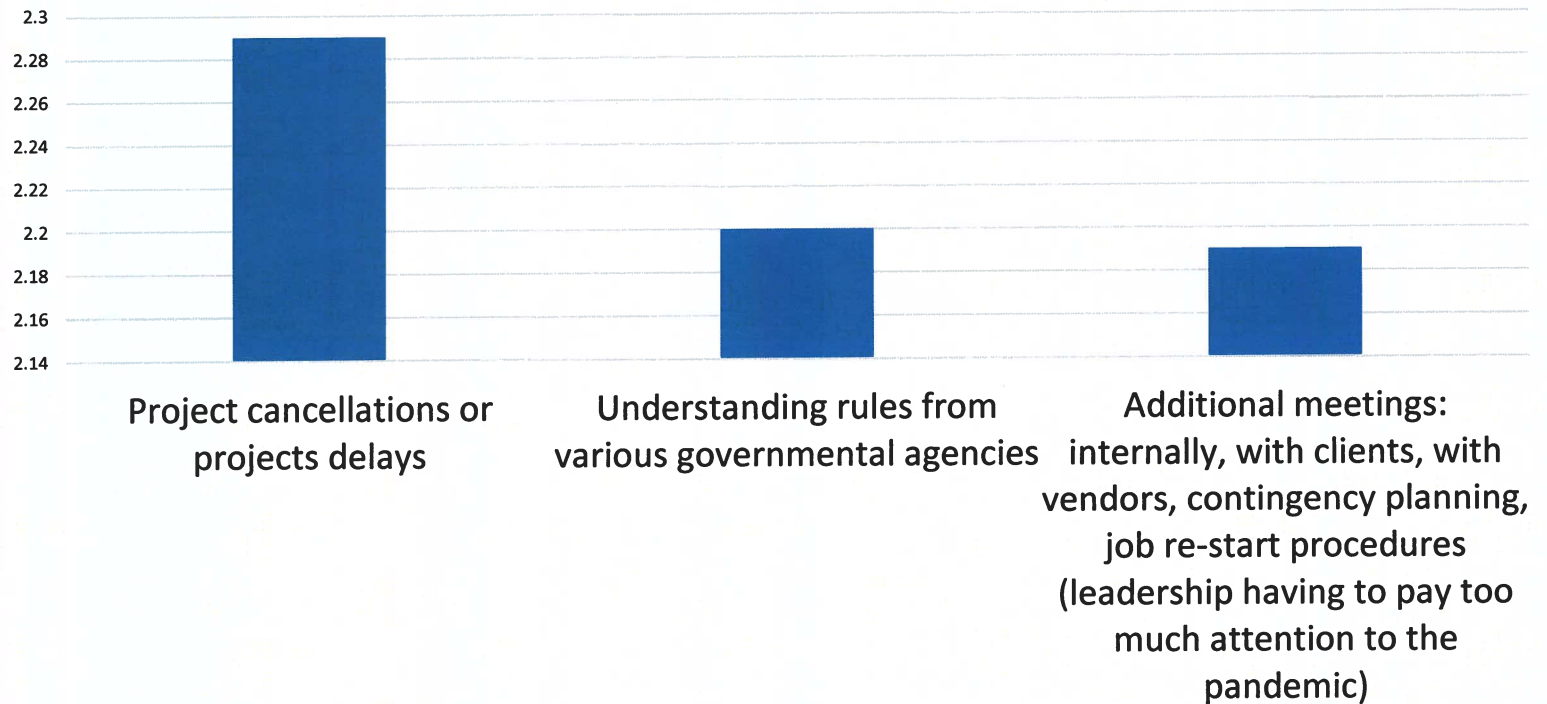
Project Management Impacts





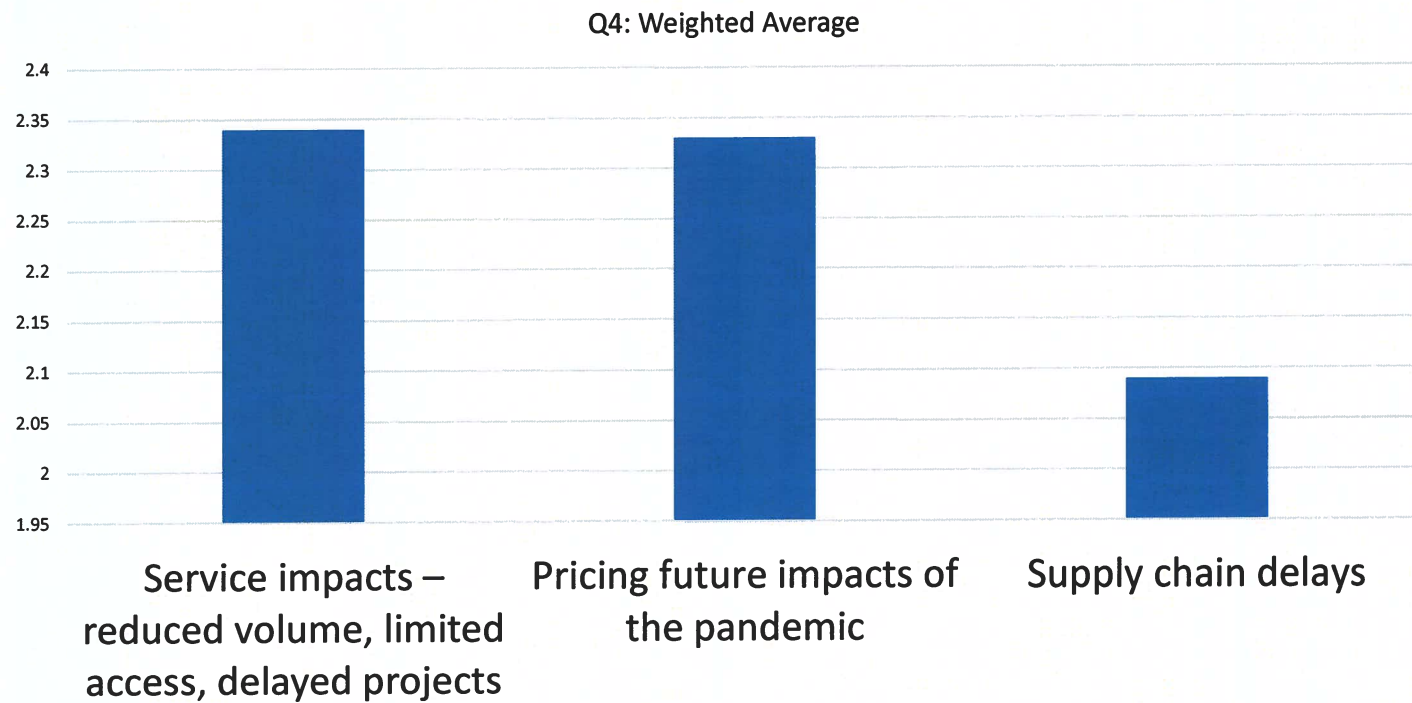
Business Operations Impacts

Q3: Weighted Average





Additional Impacts





If you'd like to take the survey

- <https://www.surveymonkey.com/r/COV19ELECTRI>



Thank You

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