

Color Rules for Data Visualizations



Procore Visualization Color Palette - Main Colors

Design Palette Optimized for Visualizations



Base Design Palette



We can use color effectively for three fundamental purposes in a data display to promote communication:

- 1. To highlight particular data
- 2. To group items
- 3. To encode quantitative values

A color palette optimized for visualizations is designed to solve these common problems with data visualizations:

Problem 1: Low Accessibility

Problem 2: Not Enough Colors

Problem 3: Hard to Distinguish



Color Rules for Data Visualizations

Rule #1 If you want different objects of the same color in a table or graph to look the same, make sure that the background—the color that surrounds them—is consistent

Rule #2 If you want objects in a table or graph to be easily seen, use a background color that contrasts sufficiently with the object.

Rule #3 Use color only when needed to serve a particular communication goal.

Rule #4 Use different colors only when they correspond to differences of meaning in the data.

Rule #5 Use soft, natural colors to display most information and bright and/or dark colors to highlight information that requires greater attention.

Rule #6 When using color to encode a sequential range of quantitative values, stick with a single hue (or a small set of closely related hues) and vary intensity from pale colors for low values to increasingly darker and brighter colors for high values.

Rule #7 Non-data components of tables and graphs should be displayed just visibly enough to perform their role, but no more so, for excessive emphasis could cause them to distract attention from the data.

Rule #8 To guarantee that most people who are colorblind can distinguish groups of data that are color coded, avoid using a combination of red and green in the same display.

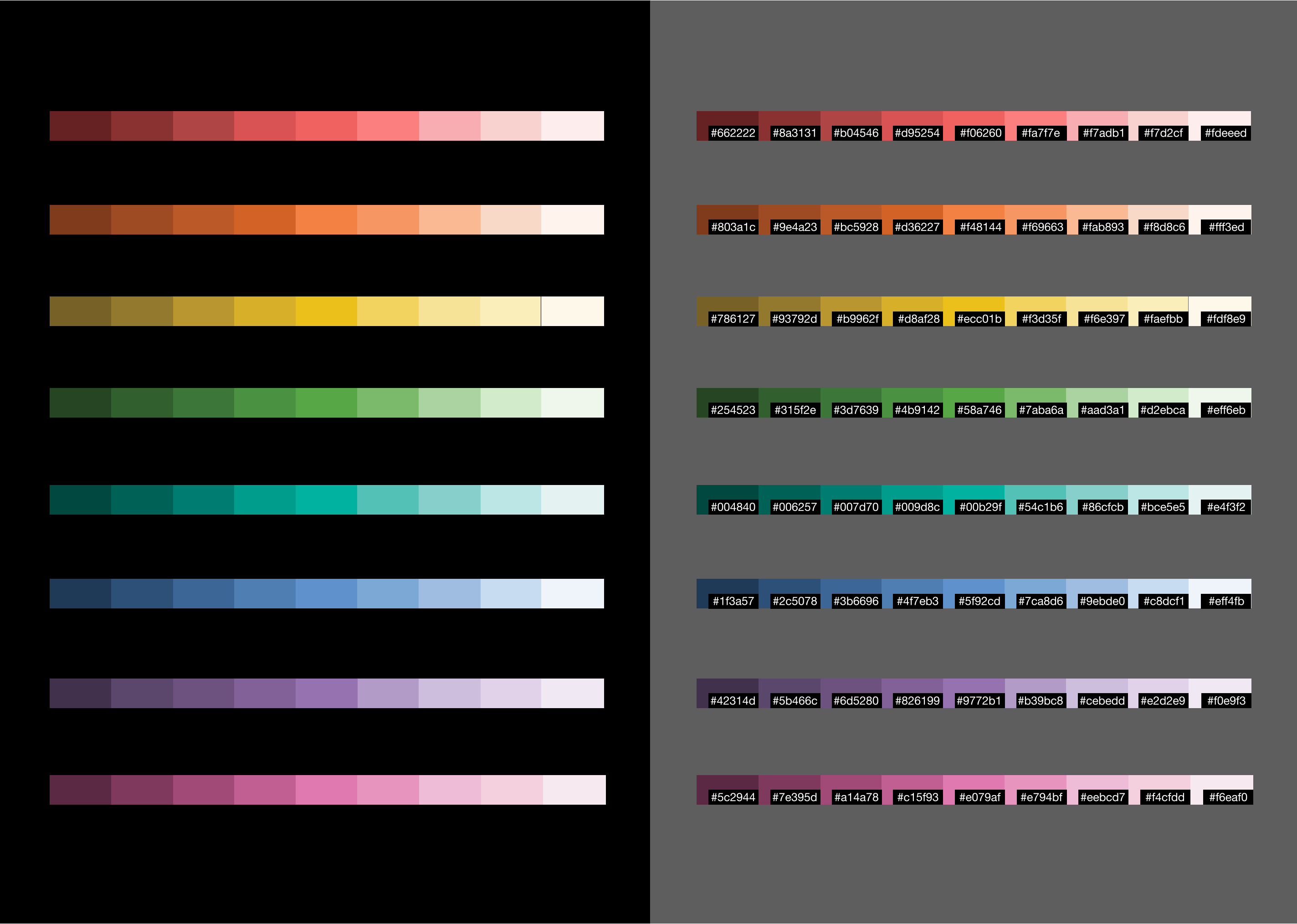
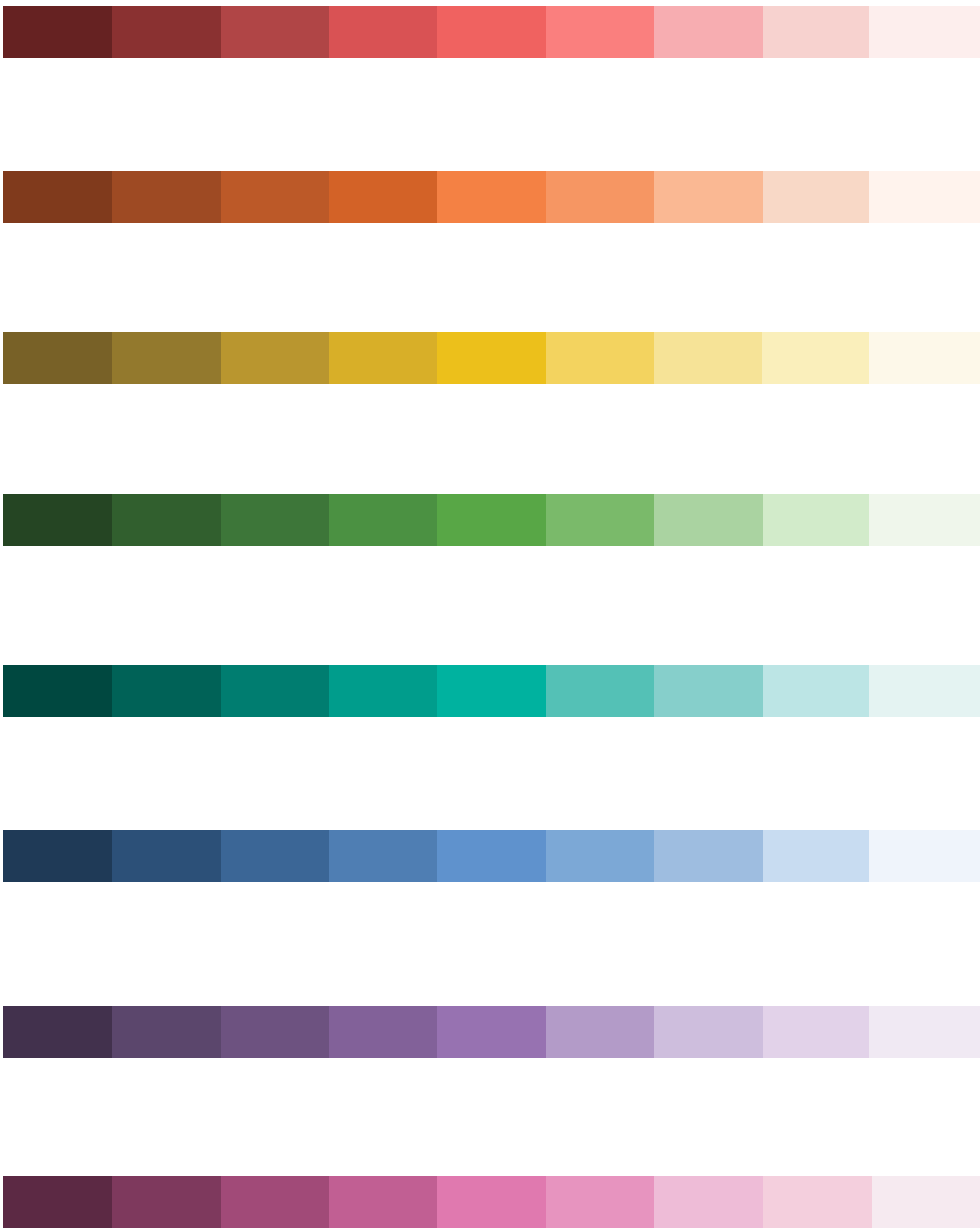
Rule #9 Avoid using visual effects in graphs.

Color Palette Types

Sequential

Sequential palettes are primarily used to encode quantitative differences.

When using color to encode a sequential range of quantitative values, stick with a single hue and vary intensity from pale colors for low values to increasingly darker and brighter colors for high values.



Divergent

Diverging palettes are primarily used to encode quantitative differences.

A diverging palette is one that consists of two sets of sequential colors—one that increases in intensity from the middle of the palette going upwards and one that increases from the middle going downwards.

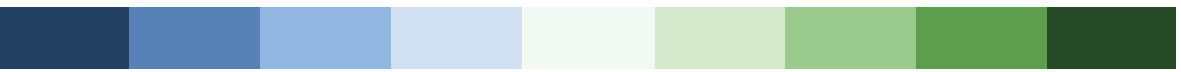
RED - GREEN



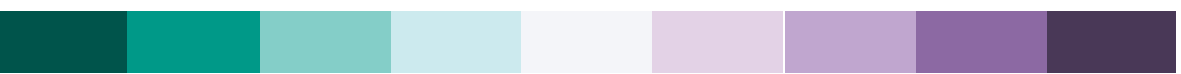
RED - BLUE (Color-blind friendly)



BLUE - GREEN (Color-blind friendly)



TEAL - PURPLE



REVERSE



REVERSE (Color-blind friendly)



RED - GREEN



RED - BLUE (Color-blind friendly)



BLUE - GREEN (Color-blind friendly)



REVERSE



REVERSE



REVERSE (Color-blind friendly)



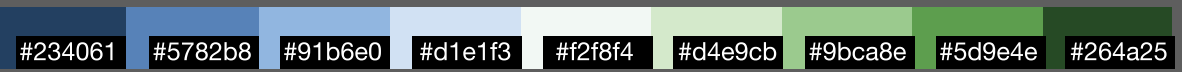
RED - GREEN



RED - BLUE (Color-blind friendly)



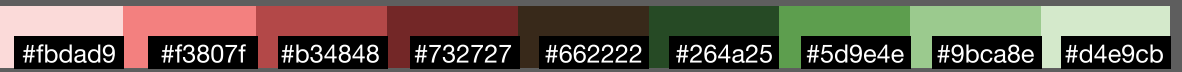
BLUE - GREEN (Color-blind friendly)



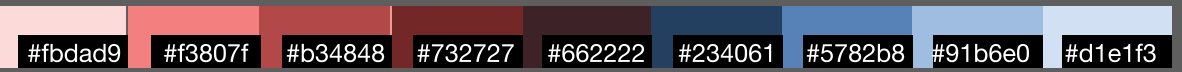
REVERSE



REVERSE



REVERSE (Color-blind friendly)



Categorical

Categorical palettes are used to separate items into distinct groups. The order of the hues are used to create the primary visual differences between classes. These qualitative schemes are best suited to representing nominal or categorical data.

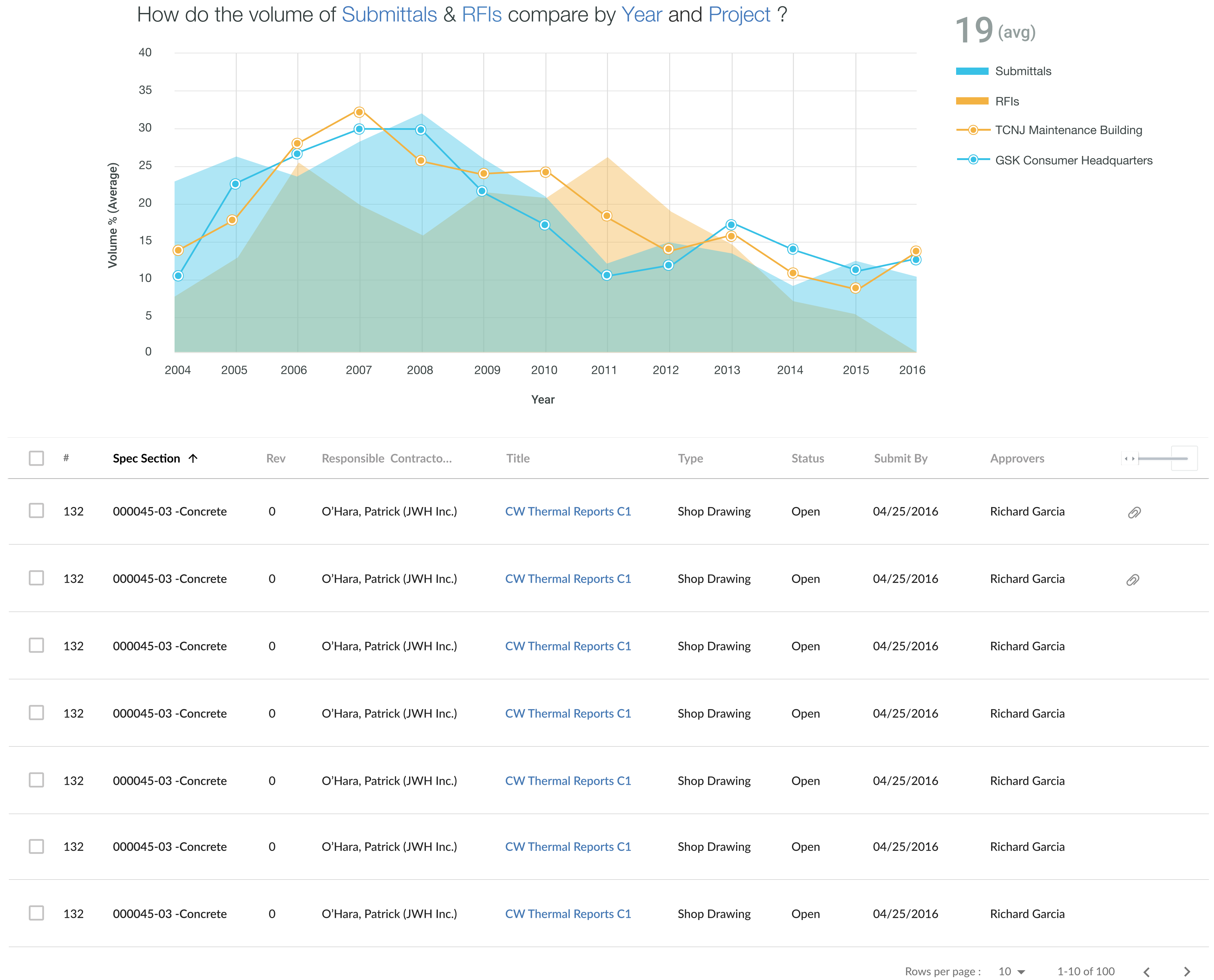
ORDER 1



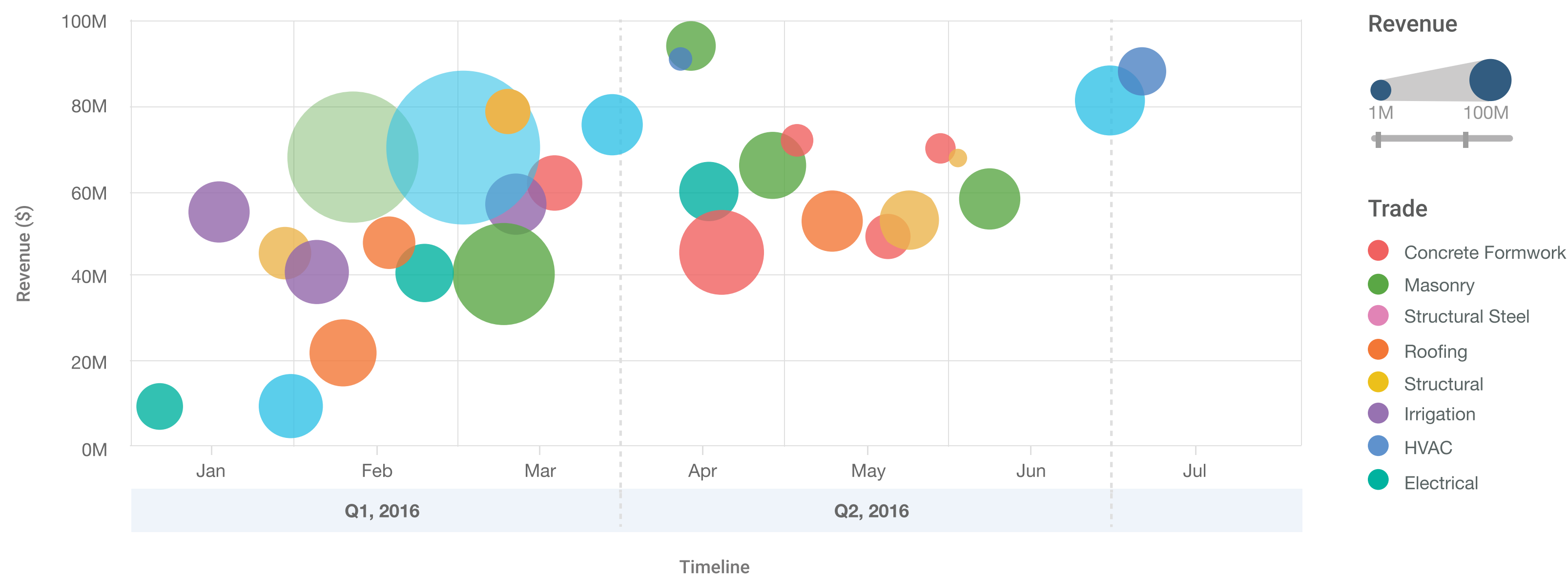
ORDER 2



Palette Applied



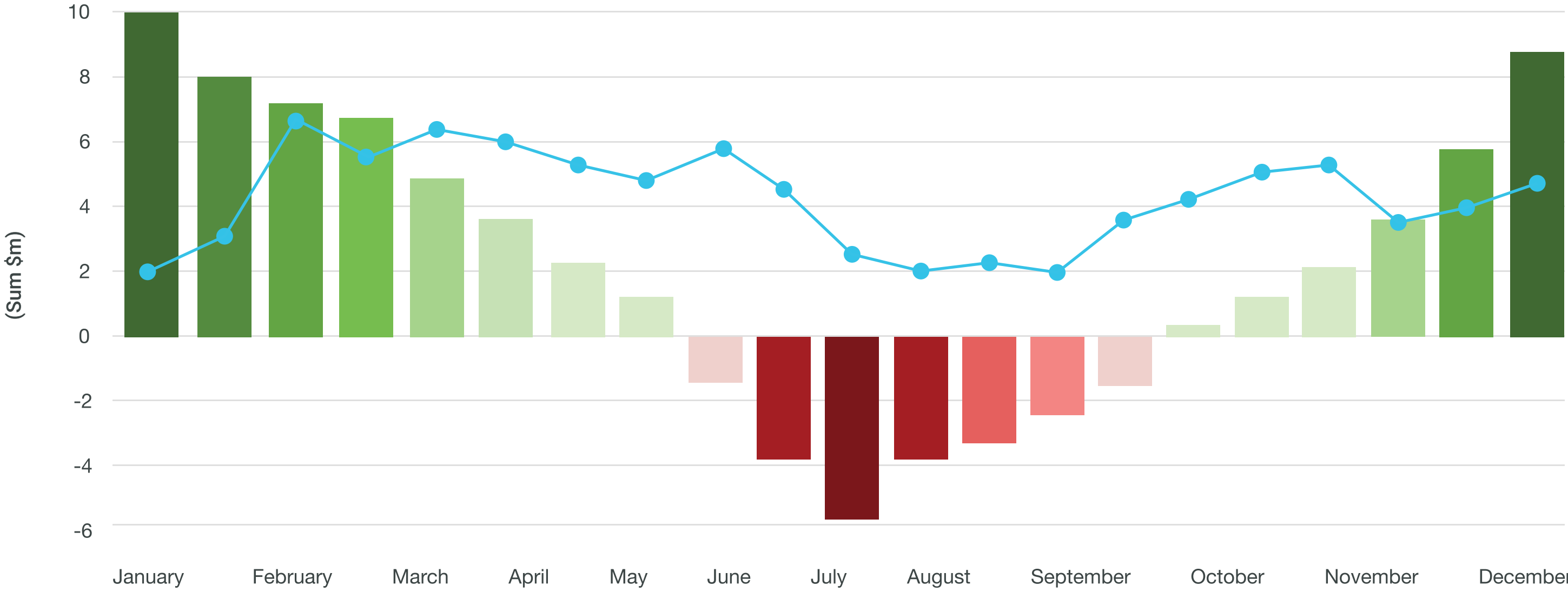
Revenue and Profit by Trade



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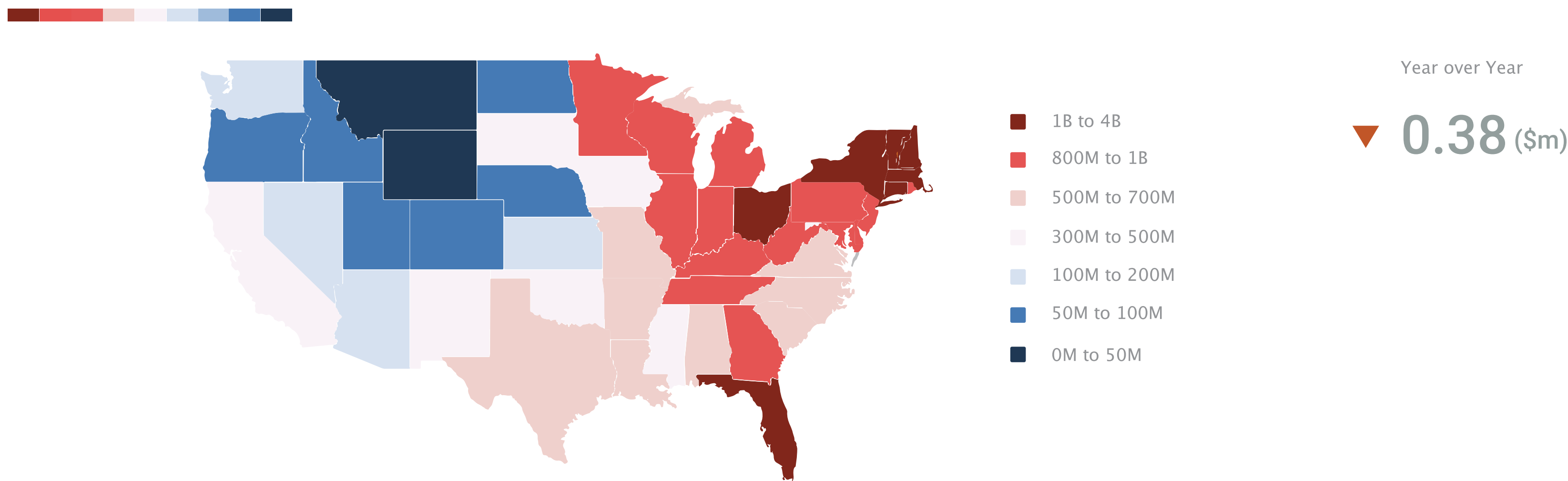
What is the breakdown of Revenue for the year?

+2.16 (\$m)



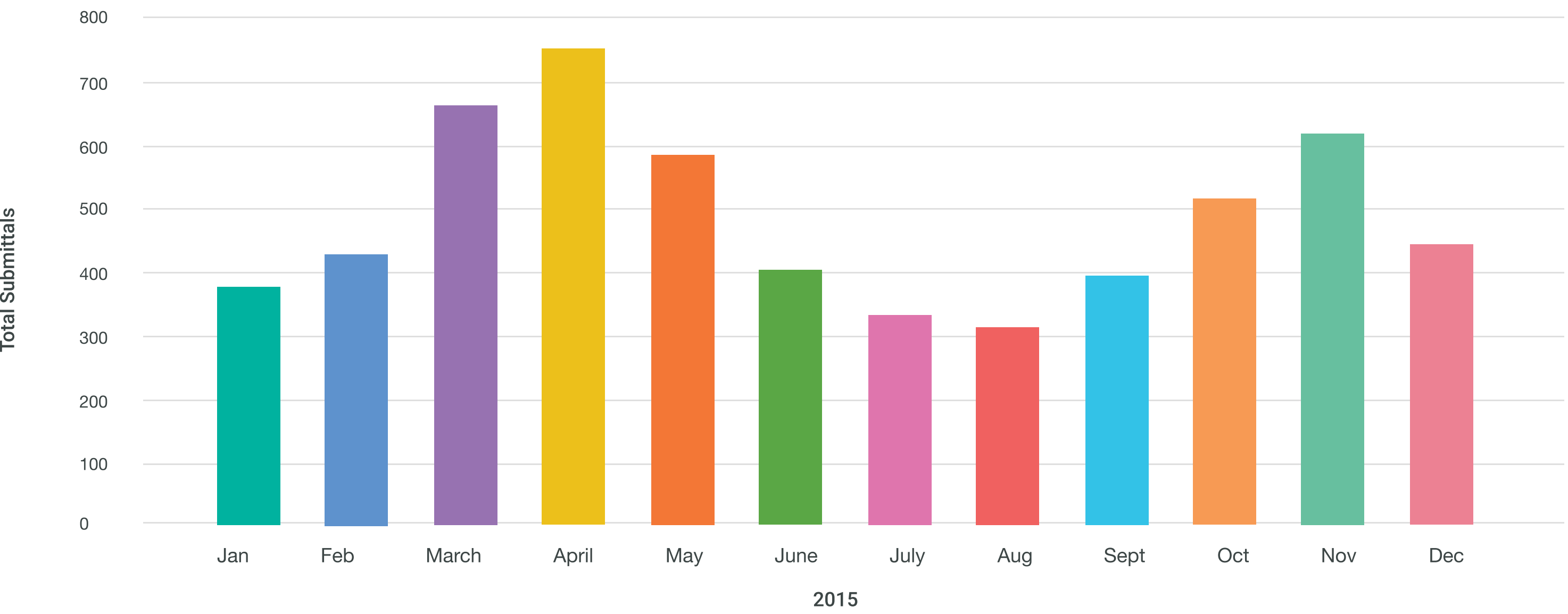
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What is the breakdown of Construction Projects Revenue Spent by State ?



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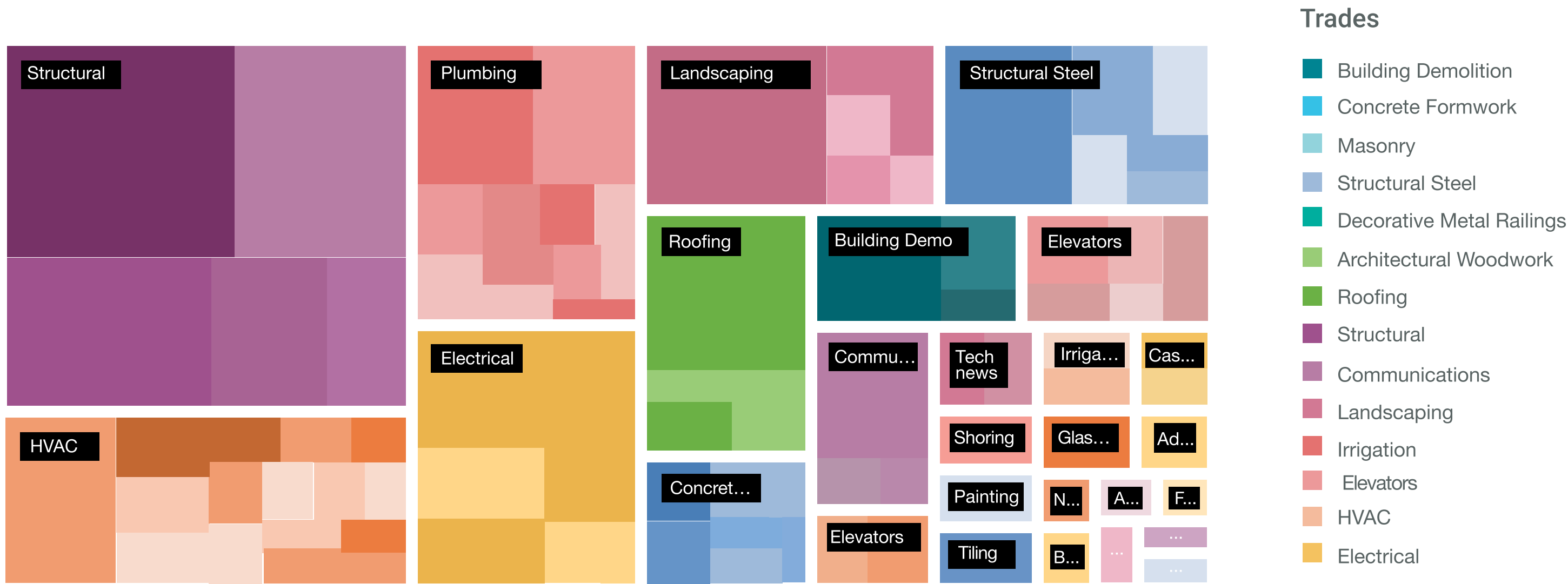
How many Submittals are being closed by Month?



Concrete Package - 003470 Submittals Items | 60% done

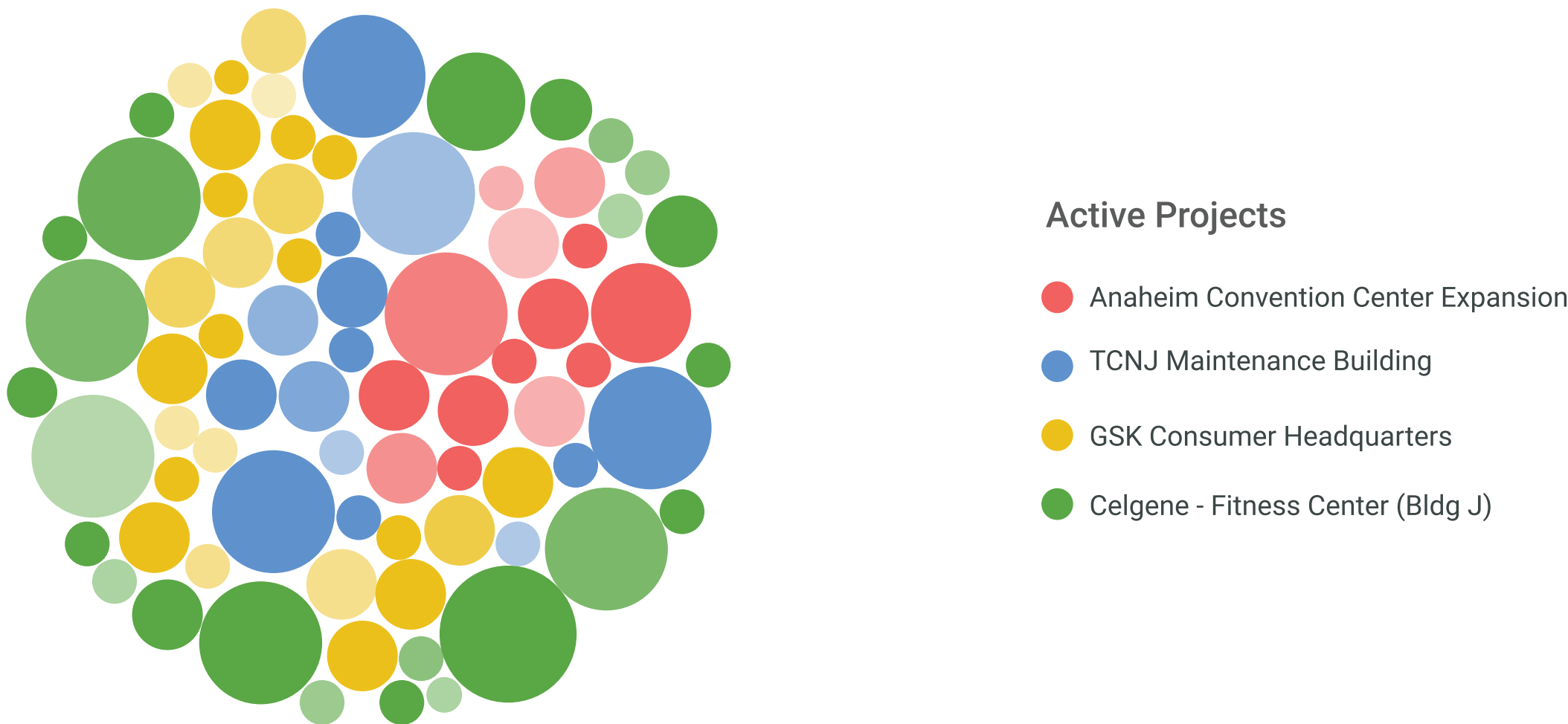
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What is the breakdown of Submittals by Trade Categories?



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What is the breakdown of Submittals by Project ?



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