



General Report Methodology Scope for Regional Craft Wage & Per Diem Escalation

Construction Industry Resources will produce a report for a selected region that integrates regional economic prospects, construction activity, skilled labor supply/demand headcount, and wage rates, along with 2 alternative scenarios outlining upside potential and downside risks. The report will focus on wage and per Diem forecasts for the current year plus 4 full years out for the selected region, which may be one state, multiple states or a particular region (E.g. A greater metropolitan region or the Gulf Coast). Additionally, approximately 6 months post-delivery we will update this report with the most recent findings for the same parameters and provide it at no additional cost.

The report will be organized and contain information as follows, but may be customized as desired:

A. Executive Summary

1. Will synopsise the key market supply/demand research findings, which will likely vary across trades and over time.
2. Will summarize the data and methodology used to distinguish differing prospects for different trades in different years. For example, in some occupations, wage rates and per diems jump in the first few years, decline mid-forecast, then reaccelerate by the close of the window while other occupations, may show a different trend.
3. Will cover the risks to the forecast indicating the upside and downside potential.
4. Will review broader economic trends, such as where the U.S. stands in the construction cycle and what other macroeconomic indicators suggest the outlook will be either for better or worse.

B. Skilled Trade Occupations

1. Analysis can be based on high-level craft categories – civil, mechanical, welder, operator and electrical trades; or
2. Analysis can be based on individual trades:

Boilermaker/Boilermaker Welder	Carpenter (Scaffold Builder)
Specialty Welder	Industrial Carpenters
Ironworker/Welder Structural	Ironworker (Reinforcing)
Pipefitter/Combo Welder	Insulator
Operator (Heavy Equipment)	Electrician
Operator (Heavy Crane)	Riggers
Millwrights	Machinist

C. Regional Outlook

1. Will discuss the regional economic prospects with a focus on project demand in key industries, setting the stage for the analysis.
2. Will define two risk scenarios and what may or may not happen if key events and expectations occur either better or worse than expected.
 - Scenario 1 outlines downside risks to regional growth and the construction cycle stemming from significant events in the marketplace (E.g. A prolonged decline in energy prices or a sustained drop in crude prices).
 - Scenario 2 outlines upside potential to the economies of the selected region stemming from significant events in the marketplace (E.g. Strong export markets for energy and chemical products, a weaker dollar, and interest rates).
3. Will provide data showing overall headcount demand/supply by craft within a 100- and 150-mile radius of the selected project's zip code during the construction timeframe; however, the radius can be adjusted for specific project needs.
4. Will provide the selected project's skilled labor craft mix headcount, schedule and craft resource curve and analyze the competition risk for each craft over the construction timeframe of the project based on other projects in the region.

D. Major Project Outlook Impact (Premium Option)

1. Will provide a listing of key publically known projects within a 100-mile radius of a particular project site or within a particular region.
2. Will identify publically known regional mega projects that will draw from the same skilled labor pool and may increase shortage risk.
3. Will provide a summary assessment of the likelihood each would advance under the scenarios.

E. Data Sources and Methodology

1. Will provide a general outline of the forecast model and its viability for addressing wage escalation. This will include linkage of the U.S. economy to the local economy via a set of commonly used U.S. level variables such as interest rates; the price of key commodities like crude petroleum and natural gas; housing starts; inflation rates; and measures of gross state product by industry; among other variables.
2. Will include burden and per diem rates as part of a competitive package offered by employers with initial per diem levels based on Government Service Administration estimates for local markets.
3. Will include local labor market analysis for supply/demand using annual occupational employment data for prices/wages combinations along with residential and non-residential spending. Key to the forecast for trade wages are measures of gross state

product by industry, along with other important measures of the local and state economies. It is these local supply-demand equations along with CLMA supply/demand headcount that enable the elasticity of wages with respect to the demand for the individual skilled construction trades to be estimated.

F. Conclusion

1. Will draw conclusions from the data and macroeconomic analysis.
2. Will provide resources which outline recommendations for how to mitigate potential skilled labor risks due to skilled labor shortages.

SAMPLE Table & Graph Deliverables:

Craft Type	BLS Supply	Peak Head Count	Peak Period	1/1/2015	4/1/2015	7/1/2015	10/1/2015
Boilermaker	XXX	X,XXX	X/X/XXXX	X,XXX	X,XXX	X,XXX	X,XXX
Boilermaker Welder	X,XXX	X,XXX	X/X/XXXX	X,XXX	X,XXX	X,XXX	X,XXX
Carpenter (Scaffold Builder)	X,XXX	X,XXX	X/X/XXXX	X,XXX	X,XXX	X,XXX	X,XXX
Electrician	X,XXX	X,XXX	X/X/XXXX	X,XXX	X,XXX	X,XXX	X,XXX
Instrumentation Technician	X,XXX	X,XXX	X/X/XXXX	X,XXX	X,XXX	X,XXX	X,XXX
Insulator	X,XXX	X,XXX	X/X/XXXX	X,XXX	X,XXX	X,XXX	X,XXX
Ironworker (Reinforcing)	X,XXX	X,XXX	X/X/XXXX	X,XXX	X,XXX	X,XXX	X,XXX
Ironworker / Welder (Structural)	X,XXX	X,XXX	X/X/XXXX	X,XXX	X,XXX	X,XXX	X,XXX
Millwright	X,XXX	X,XXX	X/X/XXXX	X,XXX	X,XXX	X,XXX	X,XXX
Operator (Heavy Crane)	X,XXX	X,XXX	X/X/XXXX	X,XXX	X,XXX	X,XXX	X,XXX
Operator (Heavy Equipment)	X,XXX	X,XXX	X/X/XXXX	X,XXX	X,XXX	X,XXX	X,XXX
Painter	X,XXX	X,XXX	X/X/XXXX	X,XXX	X,XXX	X,XXX	X,XXX
Pipefitter	X,XXX	X,XXX	X/X/XXXX	X,XXX	X,XXX	X,XXX	X,XXX
Pipefitter / Combo Welder	X,XXX	X,XXX	X/X/XXXX	X,XXX	X,XXX	X,XXX	X,XXX

CLMA® Construction Wage & Per Diem Escalation Outlook (TEXAS)

Category	Cost Type	2014 Unburdened	Burden Rate	2014 Burdened	Annual Escalation Rates					
					2014 (B)	2015 (B)	2016 (B)	2017 (B)	2018 (B)	2019 (B)
Boilermakers / Boilermaker Welder	Hourly Wage	\$XX.XX	XX.XX%	\$XX.XX	X.XX%	-XX.XX%	X.XX%	X.XX%	X.XX%	X.XX%
	Per Diem	\$XX.XX	-	-	X.XX%	X.XX%	X.XX%	X.XX%	X.XX%	X.XX%
Pipefitters / Combo Welders[6]	Hourly Wage	\$XX.XX	XX.XX%	\$XX.XX	X.XX%	X.XX%	-XX.XX%	X.XX%	X.XX%	X.XX%
	Per Diem	\$XX.XX	-	-	X.XX%	X.XX%	X.XX%	X.XX%	X.XX%	X.XX%
Ironworker / Welder (Structural)[2]	Hourly Wage	\$XX.XX	XX.XX%	\$XX.XX	-XX.XX%	X.XX%	X.XX%	X.XX%	X.XX%	X.XX%
	Per Diem	\$XX.XX	-	-	X.XX%	X.XX%	X.XX%	X.XX%	X.XX%	X.XX%

