



PC Construction

Why Does Building in the State of Vermont Come at a Cost Premium?

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Presented by Kurt Naser



PCCONSTRUCTION.COM



Today's Discussion

- Factors at Play
- Case Study
- Summary
- Questions / Discussion

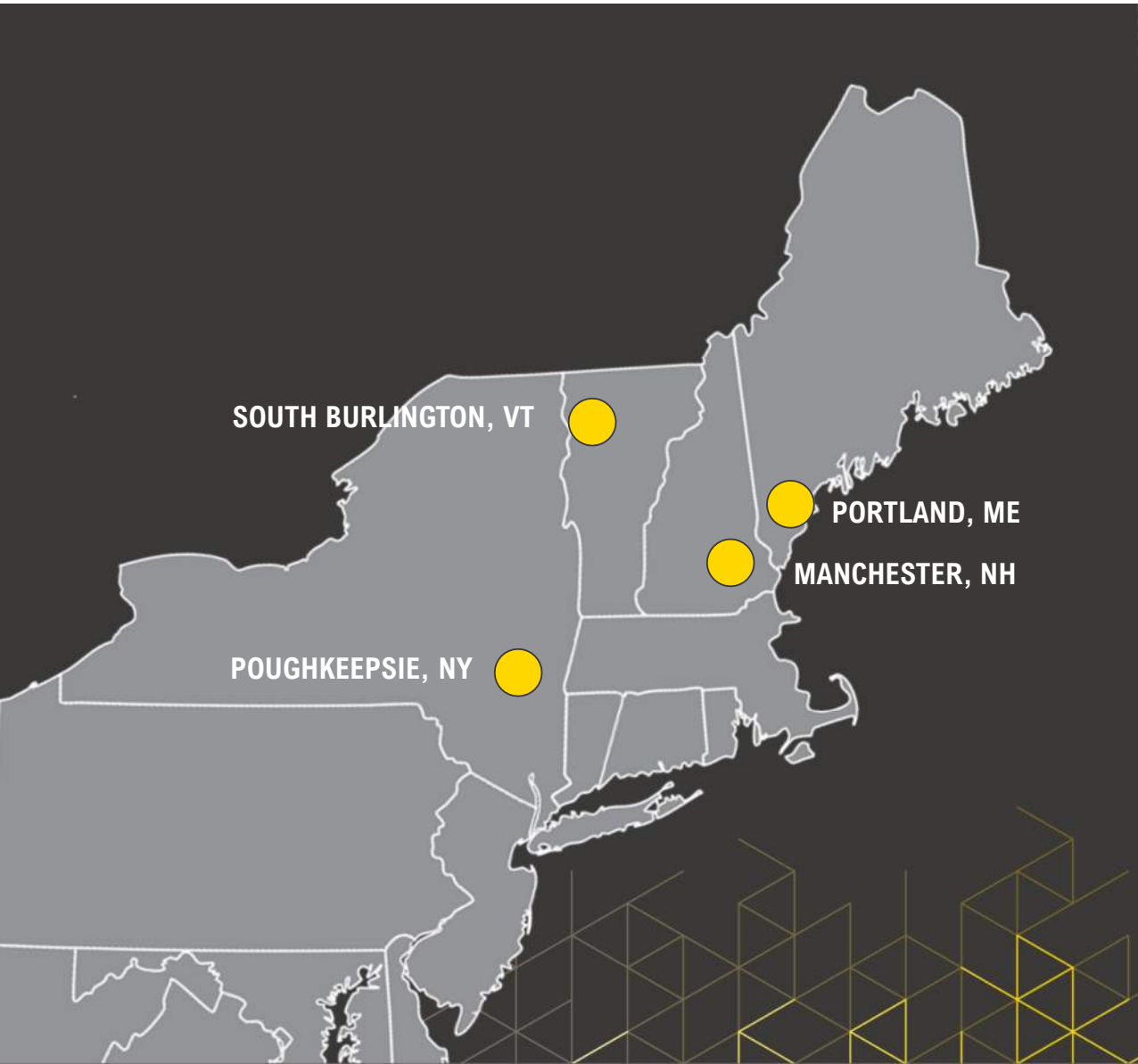


BUSINESS KURT



FUN KURT







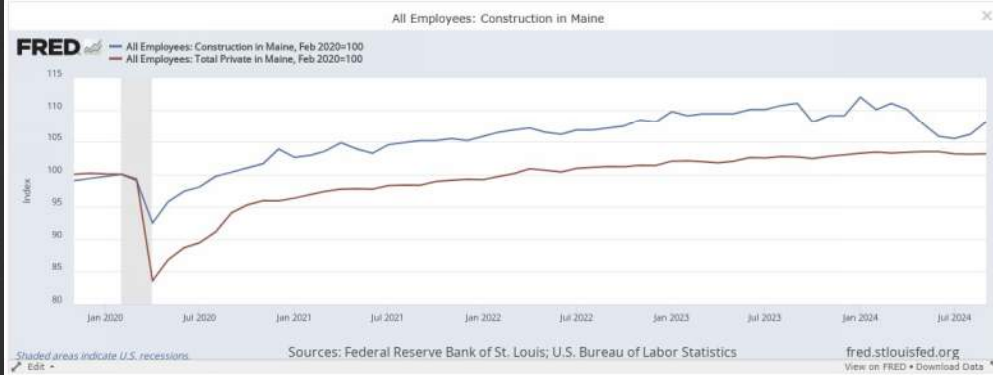
Factors at Play

- Available Resources
- Construction Wages
- Energy Requirements

Available Resources

	Growth of “All Employees” Since February 2020	Growth of “Construction Workers” Since February 2020	All Employees	Construction Workers
Vermont	0.20%	1.30%	260,100	15,500
New Hampshire	4.30%	11.10%	624,200	32,000
Maine	3.20%	8.10%	553,600	33,200
Nation	4.80%	9.00%		

Available Resources



A black and white photograph of construction workers at a site. One worker in the foreground is using a circular saw to cut a piece of wood. Other workers are visible in the background. The image is overlaid with text boxes.

Construction Wages

\$31.70 / HR

Vermont

\$28.56 / HR

New Hampshire

\$30.78 / HR

Maine



Construction Wages

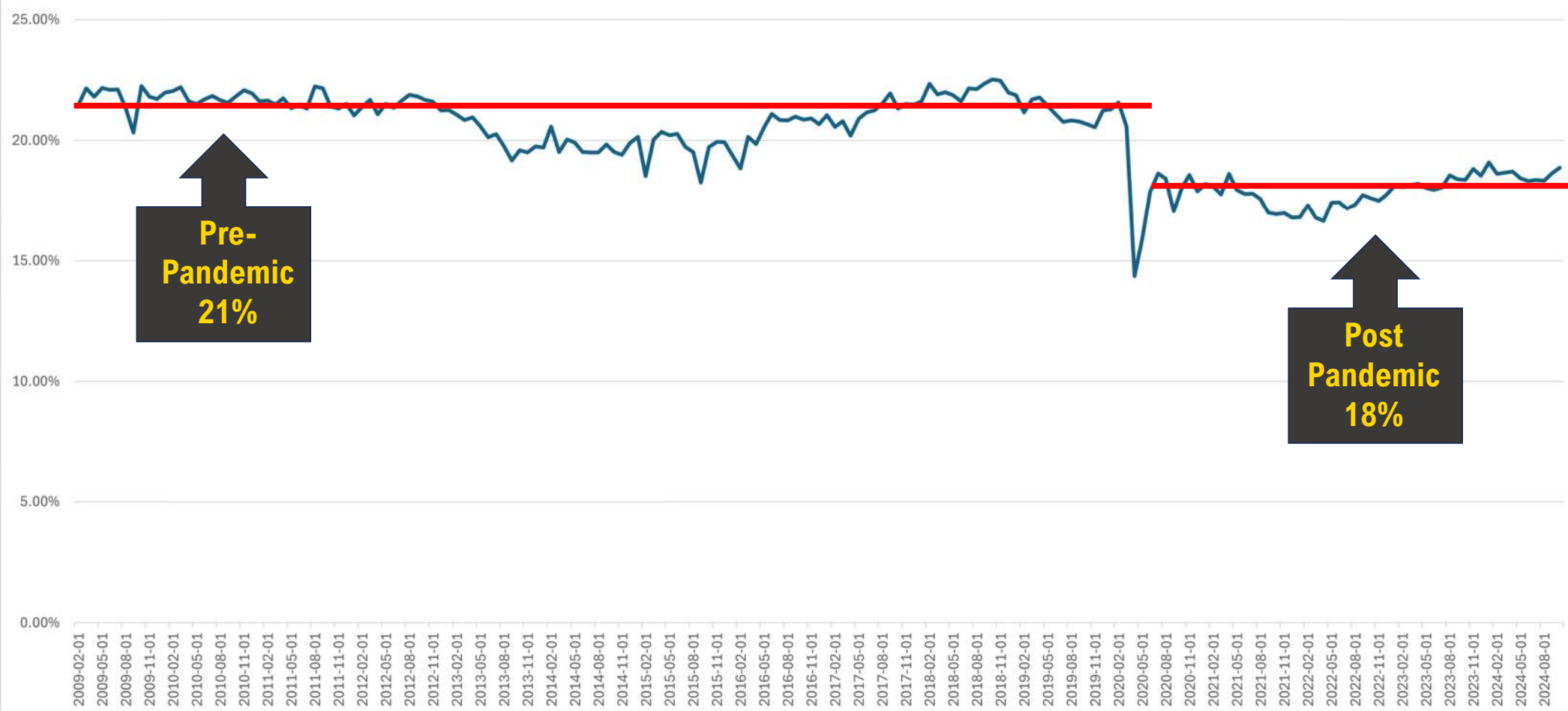
+ 7.49%

Average VT Wages vs
NH Past 7 Years

+ 1.16%

Average VT Wages vs
ME Past 7 Years

Construction Premium for Construction Production and Non-Supervisory Workers vs. Total Private

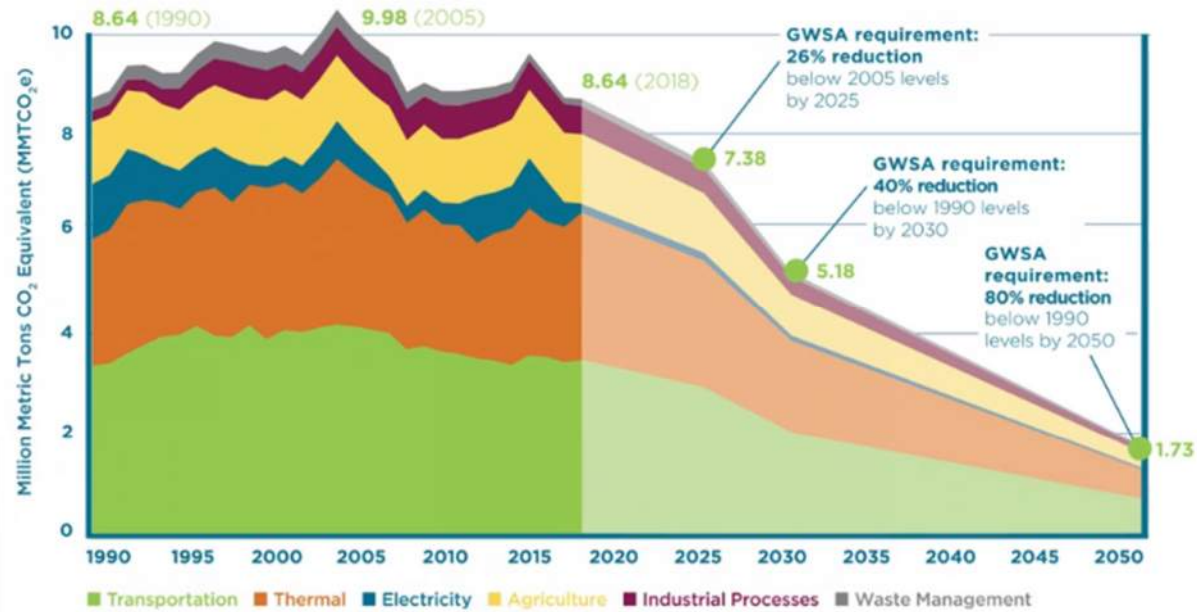


**Pre-Pandemic
21%**

**Post
Pandemic
18%**

Energy Requirements (CBES)

Vermont's historical GHG emissions and future requirements



Source: Vermont Agency of Natural Resources, Vermont GHG Emissions Inventory and Forecast (1990-2017), 2021.

Energy Requirements (CBES)

Multi-Family Construction Code Requirement Comparison			
Item	ME	NH	VT
Exterior Walls	R-13 + R-7.5ci (Zone 6 and 7) Or... R-20 + R-3.8ci (Zone 6 and 7) Thickness subject to change based on type of insulation Wood Framed Buildings	R-13 + R-7.5ci (Zone 5 and 6) Or... R-20 + R-3.8ci (Zone 5 and 6) Thickness subject to change based on type of insulation Wood Framed Buildings	R-13 + R-16ci Or... R-19 + R-12ci Or... 25ci Wood Framed Buildings
Foundation Insulation	R-7.5ci (Zone 6) R-10ci (Zone 7) ci = continuous insulation Thickness subject to change based on type of insulation	R7.5ci (Zone 5) R-10 (Zone 6) *updated in 2021 version	R-20ci
Underslab Insulation	R-10 for 24" below (unheated slabs) R-15 for 36" below (heated slabs) Thickness subject to change based on type of insulation	R-15 for 24" below (Zone 5) (unheated slabs) R-20 for 24" below (Zone 6) (unheated slabs) RR-15 for 24" below + R-5 full slab (Zone 5 and 6) (heated slabs) Thickness is subject to change based on type of insulation	R-20 for 48" below
Roof Insulation	R-49 (Zones 6 and 7)	R-49 (Zones 5 and 6)	R-45ci (insulation entirely above deck) R-49 (attic and other classification for R-2 occupancy) R-2 = multifamily housing

Case Study: New Hampshire Multi-Family

Rendering by Market Square Architects



Multifamily Construction Project Manchester, NH vs Vermont

	Provided	Vermont
Roofs Insulation Entirely Above Roof Deck	[R30ci]	R45ci
Attic and Other	[R49]	R49
Walls Above Grade Mass	[R13.3ci]	R25ci
Metal Framed	[R13 + R7.5ci]	R13 + R18.8ci
Wood Framed and Other	[R21 + R7.5ci]	R19 + R8ci
Walls, Below Grade Below Grade Wall	[R7.5ci]	R20ci
Floors Mass	[R10ci]	R23ci
Joist/Framing	[R30]	R38
Slab-On-Grade Floors Underheated Slabs	[R10 for 24" below]	R20 for 48" below
Heated Slabs	[R15 for 36" below + R-5 full slab]	R20 for 48" below plus R-15 full slab

Cost Impact

- \$800K (2-4%) in cost premium in divisions 7 and 8
- Additional 3-6% premium for MEP divisions and VT specialty items
- Labor resource scarcity could add an additional 5%-10%
- **Total premium = 10%-15%**

Specialty Vermont Items

- More stringent building air barrier performance testing
- Dwelling unit blower door testing
- Solar ready zones
- Electric energy storage system ready
- Electric vehicle charging requirements
- Electric readiness requirements for future
- Energy efficient credit requirements
- Renewable and load management credits



Factors at Play

- Available Resources
- Construction Wages
- Energy Requirements

Summary Talking Points

- Housing Emergency
- Competitive Disadvantage to Neighboring States
- Focus on Reducing Cost
- Permitting Timeline / Process



Questions?

SPEAKERS

Kurt Naser

PC Construction Company
knaser@pcconstruction.com