

MECHASY5

# MG Construction saves \$124k USD on a large multi-residential project with Mechasys

## Project Background

- Project: Oria II Solar Uniquartier (311 Units)
- Location: Brossard, Quebec
- Type of project: Drywall track marking & installation
- Scope of case study:
  - 36,416 m (119,474 ft) of drywall track
  - 30,780 m<sup>2</sup> (331,313 ft<sup>2</sup>) of floor space



## Highlights

**16 Units**  
Marked per day

**124k Dollars**  
USD In savings

**5.3 Times**  
Faster

MG Construction required a swift layout resolution to uphold project schedules for a large multi-residential project. Emphasizing speed and cost efficiency, Mechasys emerged as the ideal choice, significantly reducing total layout duration to just a single shift, overseen entirely by one carpenter.

## Challenge

MG Construction was tasked with the coordination of drywall layout and installation for a towering 19-story multi-residential construction project. As the lack of skilled labor intensified and the complexity of layout, MG Construction recognized the need for a new solution to accelerate speed, and keep high quality standards.

Drawing from MG's calculations, conventional drywall layouts typically achieve a marking rate of 12m<sup>2</sup>/hour (130ft<sup>2</sup>/hour) in multi-residential projects. With the project encompassing over 30,000m<sup>2</sup> (331,000ft<sup>2</sup>), adhering to a manual layout approach would have imposed a staggering 2600-hour burden on the overall project timeline - equivalent to nearly 8 months of full-time work, necessitating a two or three-man layout crew.

# Solution

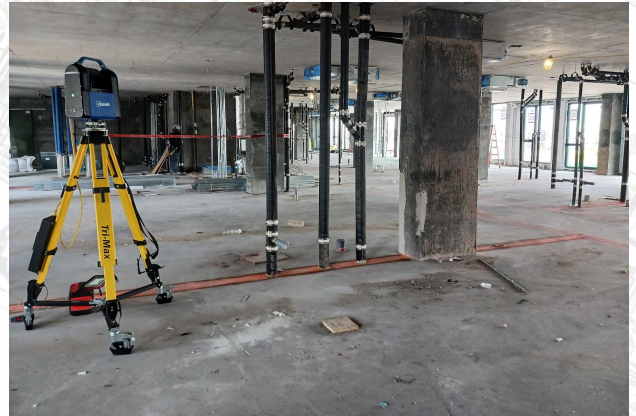
Mechasys' projector presents a significant leap in efficiency across diverse project types and use cases. Anchored by an advanced positioning system and bolstered by highly precise scanning technologies, the projector easily translates 2D plans into a comprehensive projected layout. The simplicity of the user interface, accessible via a mobile device and managed by just one carpenter, underscores its remarkable intuitiveness, while concurrently slashing labor expenses.

Moreover, the Mechasy's projector has consistently showcased a notable gain in productivity, elevating levels of accuracy and consistency. By transcending conventional methods such as chalk lines and markers, it has expanded the horizons of layout possibilities, offering unparalleled precision and efficiency.

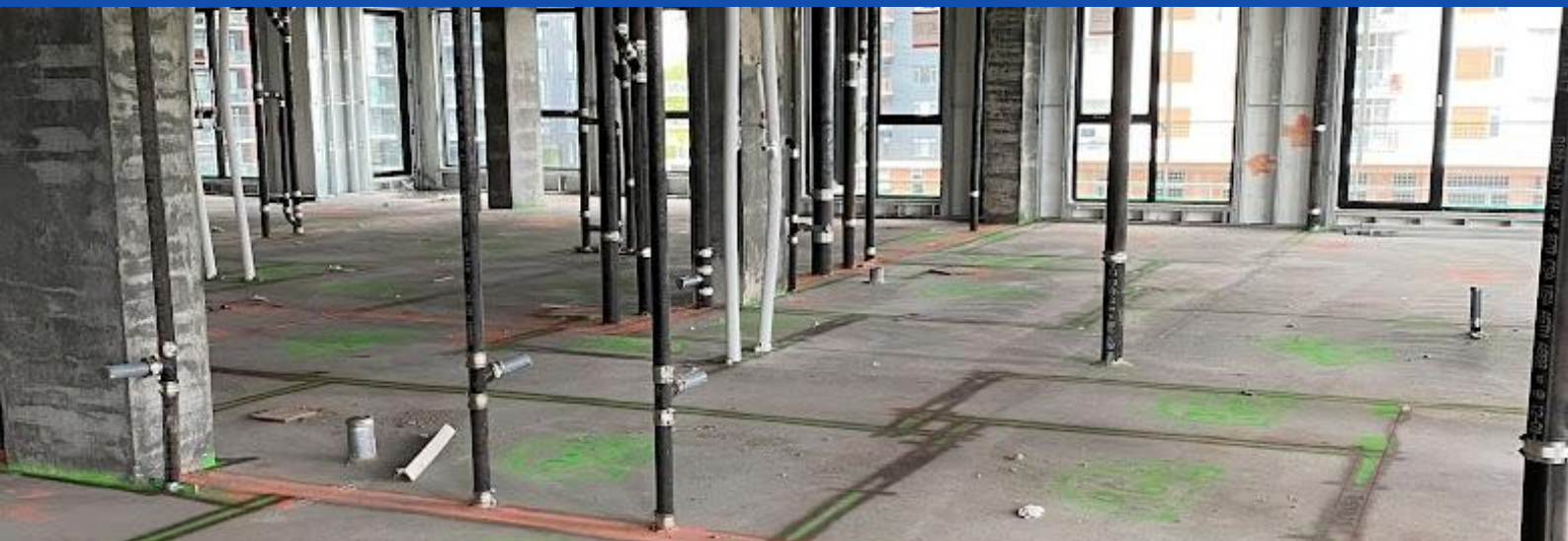
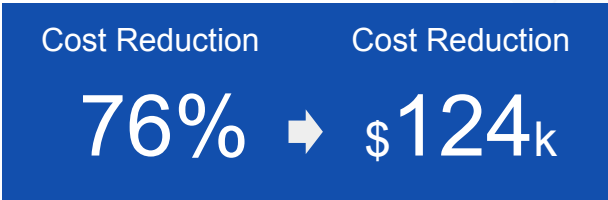
# Results

Mechasys' projector surpassed expectations by streamlining the layout process, slashing 132 days from the timeline. This achievement not only accelerated the project but also instilled greater confidence in the final layout among stakeholders. The projector managed to reduce costs by 76%, while achieving a constant 3mm (1/8 inch) tolerance window.

Beyond these quantifiable metrics, the projector offered numerous qualitative advantages. By transferring more information directly from the digital model to the field, it empowered MG Construction's layout carpenter and installation teams to make informed decisions throughout the process, from planning to hands-on installation work.



“ Using the projector, I was able to layout an entire floor (16 units) in one day, with very high accuracy  
- Philippe Michaud-Chea, Senior Layout Carpenter



# Comparative Analysis

These metrics represent the most tangible benefits of Mechasys' projector for multi-residential layout. In the fiercely competitive construction sector, the adoption of a projector is crucial for advancing both your own interests and those of your clients on a large scale.

Wall Layout (Marking)			
		Chalk Lines	Mechasys
<b>Initial Data</b>	Total Floor Area	30,780m <sup>2</sup> (331,313ft <sup>2</sup> )	
	Total Wall Length	36,416m (119,474ft)	
	Hourly Labor Cost (USD)	\$62.55	
	Team Composition	2 Workers	1 Worker
<b>Productivity</b>	Avg. Productivity (Units/Day)	6	16
	Avg Productivity (Wall Length/m-h)	14 m/m-h (46ft/m-h)	75 m/m-h (245ft/m-h)
<b>Time</b>	<b>Total Time (man-hours)</b>	<b>2601</b>	<b>485</b>
	Total Time (Team-Day)	163	30
<b>Cost</b>	Total Labor Cost (USD)	\$162,700	\$30,371
	Rental Cost + CAD (USD) <small>2 months</small>	-	\$8,297
	<b>Total Cost (USD)</b>	<b>\$162,700</b>	<b>\$38,668</b>
<b>Unit Cost</b>	Unit Cost (Wall Length)	\$4.47/m (\$1.36/ft)	\$1.06m (\$0.32/ft)
	Unit Cost (Floor Area)	\$5.29/m <sup>2</sup> (0.49/ft <sup>2</sup> )	\$1.26/m <sup>2</sup> (0.12/ft <sup>2</sup> )



Learn more at [www.mechasys.ca](http://www.mechasys.ca)

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