McCracken Group LLC

Revolutionizing Concrete by Dramatically Improving its Strength, Durability, Workability, Reliability and Affordability

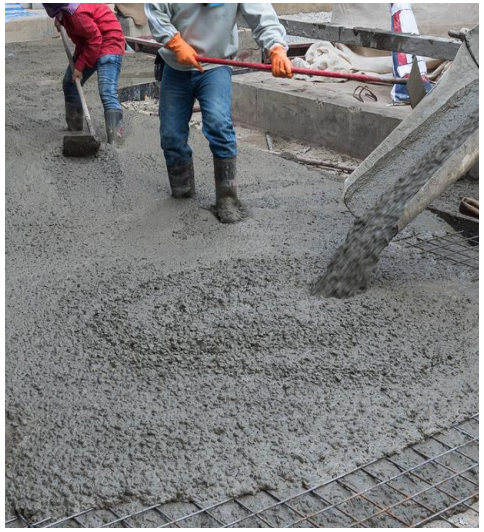
HIGH RISES

RESIDENTIAL

And We Make It GREEN

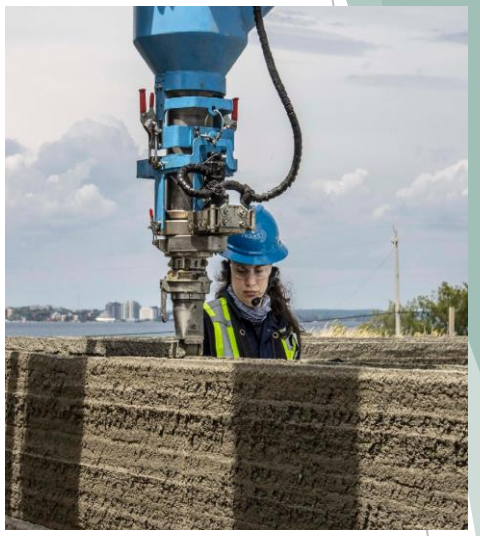
INFRASTRUCTURE

COASTAL SEAWALLS



Pouring

Pumping



Printing

We Make Concrete The Best It Can Be!

- Highest Strength - Rapidly Achieved
- Enhanced Strength even with 75% of Portland Cement Removed
- Mechanical Performance and Low Carbon Achieved with Net Value Add

Core Technologies that Create a New Paradigm

bioCene

The Green Graphene

Worlds Strongest Man-made Material

Is utilized in a variety of substrates

- **Concrete Ad-Mix**
- **Composites**
- **Energy Storage**
- **Electronic devices**
- **Photovoltaics'**
- **Lubricants**
- **Water Treatments**

SEAMIX®

Worlds Strongest Concrete Mix

- **High Early Strength**
- **High Modulus Elasticity**
- **High Abrasion Resistance**
- **High Durability**
- **High Impact Strength**
- **Inhibits Bacterial & Molds**
- **Eliminates Plasticizers**
- **Reduces the Need for Portland**
- **Green Technology**
- **Creates Multiple Cost Savings**

SeaMix Synergizes Basalt Properties with Graphene

Basalt composite FIBER Reinforcement

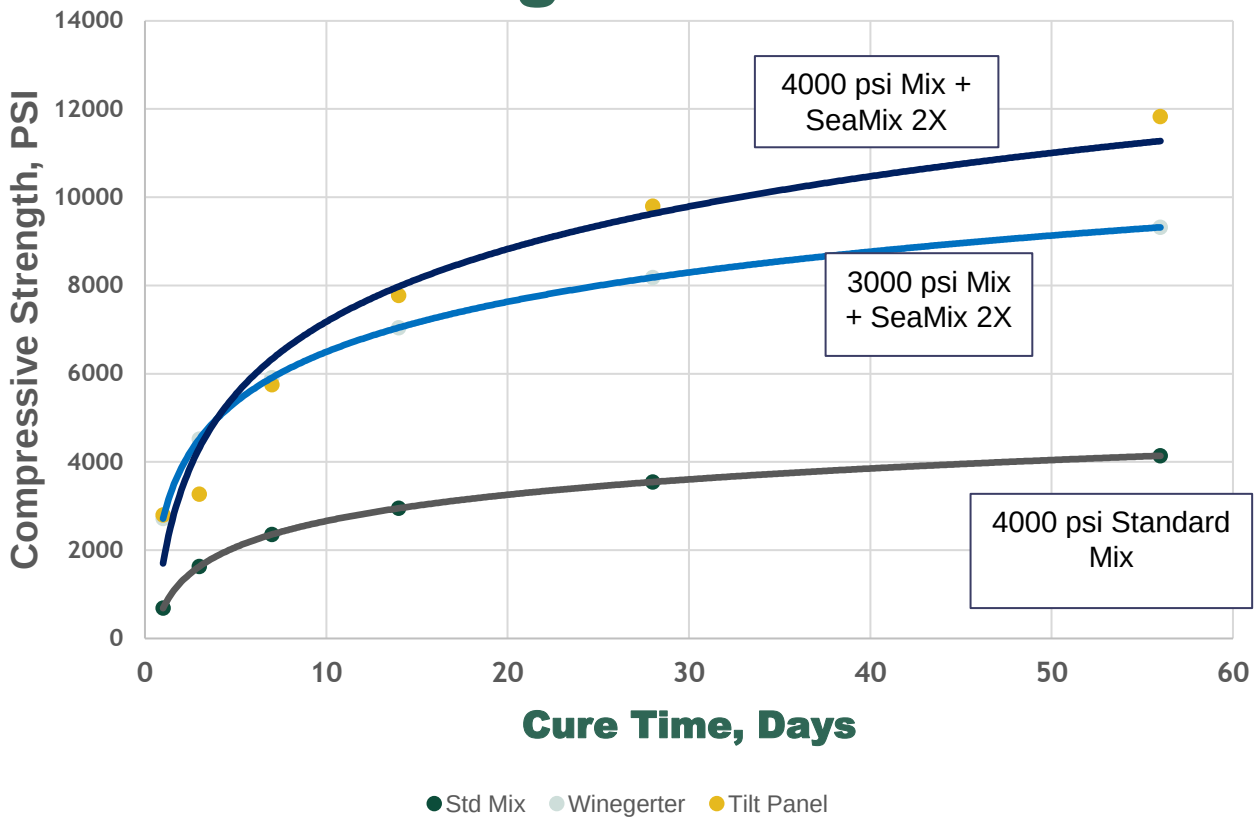
- High chemical resistance (Including Acids)
- High thermal resistance and stability
- Excellent mechanical strength
- Abrasion resistance
- High thermal and acoustic insulation properties
- Excellent adhesion to polymer resins
- Ecologically clean and non-toxic
- Non-corrosive

Basalt Reinforced Composite REBAR

- Flexible (returns to original shape)
- 100 % Corrosion Resistant
- UV and Chemical Resistant
- Superior Strength & Durability
- Light Weight – Easy Transport
- Substantial Cost Savings
- Over 100 Year Life Cycle

Highest Strength - Rapidly Achieved

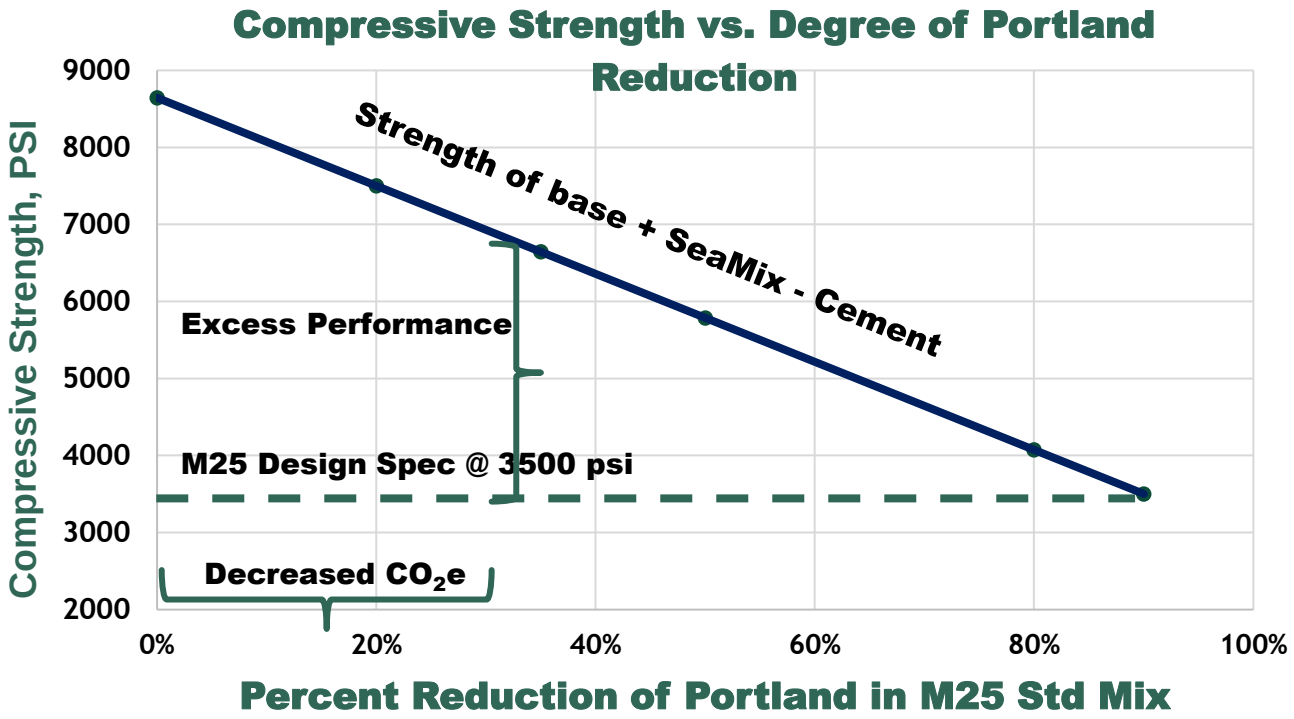
Strength Growth Curves



	Value Achieved ($/Yd)	Time to Ultimate Strength (Days)	Strength Ratio to Design
Standard 4000 psi mix – literature averages	$126	28	1
1:1:2 mix specified for 3000 psi concrete with 3# / yard SeaMix® 2X[1]	$250	2	2.76
Tilt wall standard 4000 psi mix concrete with 3# / yard SeaMix® 2X[2]	$320	3	2.45

[1]Tests preformed by Wingerter Laboratory, Certified by Donald J Flood, PE. March 2020.
Tests performed by Universal Engineering Services, Certified by Liaquat S Khan, PE. November 2022.

Specified Strength Met with 90% of Portland Cement Removed



	28 Day Strength Measured	Portland Content (% Dry)	CO2e per Yard (tons)
Standard M25 (3500 psi) Mix as Baseline	3600	16.7	0.301
M25 Mix + 3# SeaMix® per cubic yard with 20% Portland Cement removed	7500	13.8	0.241
M25 Mix + 3# SeaMix® per cubic yard with 90% Portland Cement removed	3500	1.97	0.030

Tests performed by University of Miami Concrete Lab.

Mechanical Performance and Low Carbon Achieved with Net Value Add

Admix Cost Offset by Mix Savings

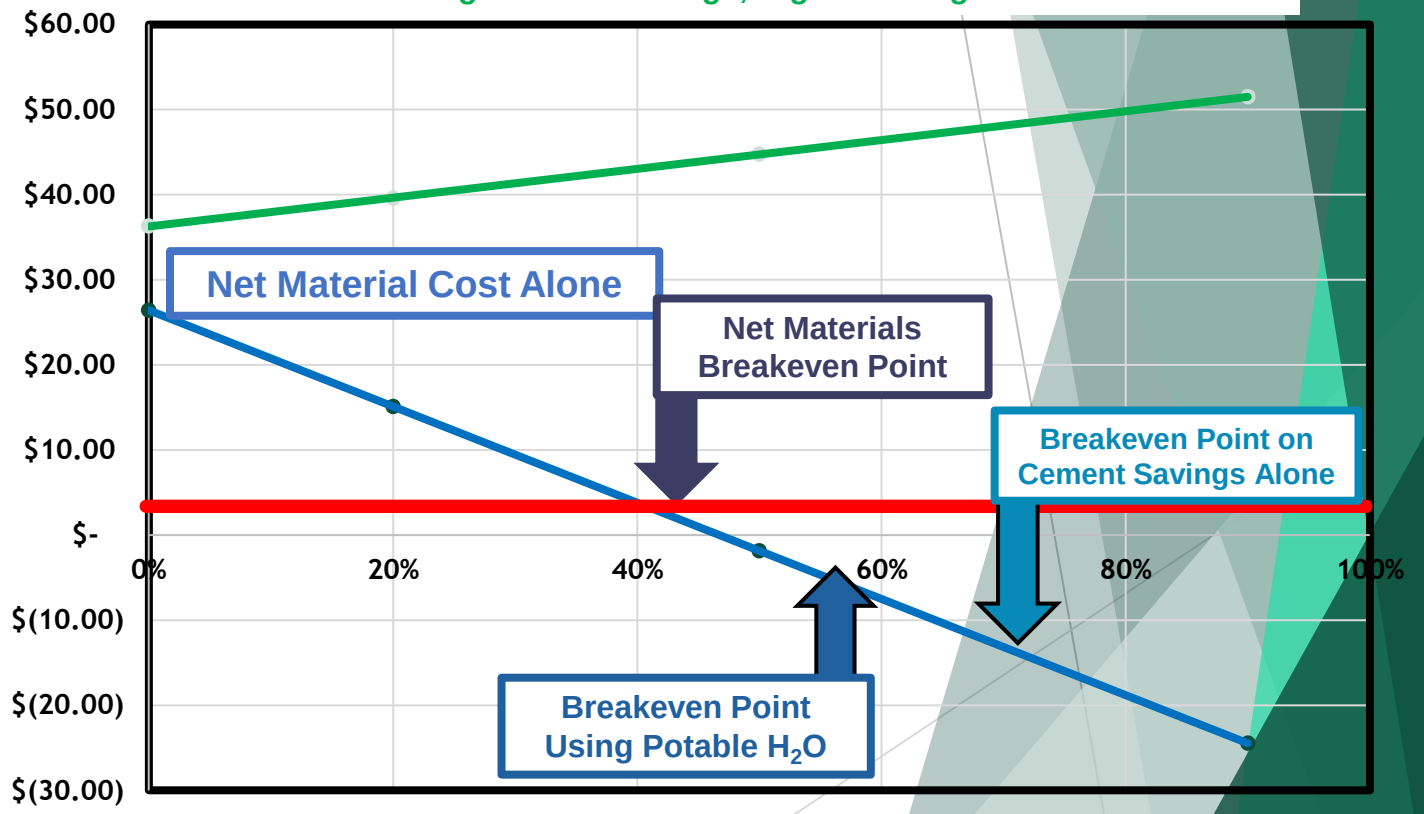
- Admix adds $45 /Yd Cost
- Plasticizer removal saves ~$10/yd
- Use of grey water saves ~$8.50/yd
- **Net Admix Cost: $26.50/ Cu. Yd.**

Portland Removal Further Lowers Cost & Adds Carbon Credit

% Cement Removed	Cement Savings ($/yd)	Value of Added Strength ($/ Yd)	Carbon Credit Value @$50/ton
0%	($0)	$62.75	$0
20%	($11.31)	$48.70	$6.00
50%	($28.27)	$27.89	$15.15
90%	($50.88)	$0	$22.10

Total Net Value Add & Net Material Cost vs. % Cement Removed

Net Value including Material Savings, Higher Strength + Carbon Credits

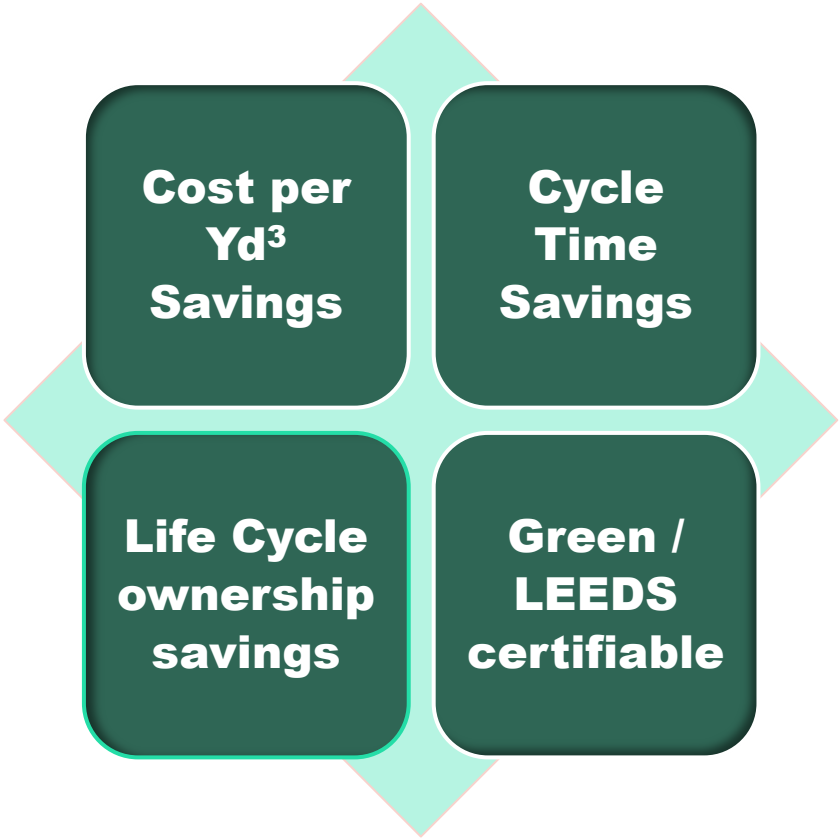


SeaMix® Delivers Multiple Value-Added Features

Example: M25 Concrete

Net Value Add of $30/Yard

Savings in labor and building maintenance cost reduction via crack & freeze resistance



Tilt Panel Pour reaches Ultimate Strength Spec in 7 days vs. Std of 21+ Days

SeaMix® admix allows for 75%+ reduction in Portland Cement with same strength

Basalt Reinforced Composites Rebar – (BFRP)

Key Values & Advantages

- Stronger, Tougher and Lighter than steel
- Rust Proof; 100+ Year Reinforcement Guaranteed Peak Load
- Naturally resistant to alkali and acids
- No need for special coating like GFR Rods
- Flexible
- Does not conduct electricity; non-magnetic
- No interference with RF signals; UV Stable
- Excellent for harsh environments
- #3 Basalt Reinforced Composite Rebar replaces #4 Steel Rebar for all types of Secondary Reinforcement & Crack Prevention

Industry has now adopted the approach / product and has no regulatory barriers to adoption

McGARVEY Development Co. Panel using BFRP

Worlds first zero steel tilt wall building 63,000 SF

Basalt Fiber Reinforced Plastic “Rebar” makes structures lighter and corrosion-proof, even w/ direct saltwater contact. Cost increment vs. steel offset by 2/3 site labor savings & net value add from SeaMix®

Join Us to Build a Stronger, More Economical, and Greener World with

SeaMix® Ultra 2X Concrete Admixture

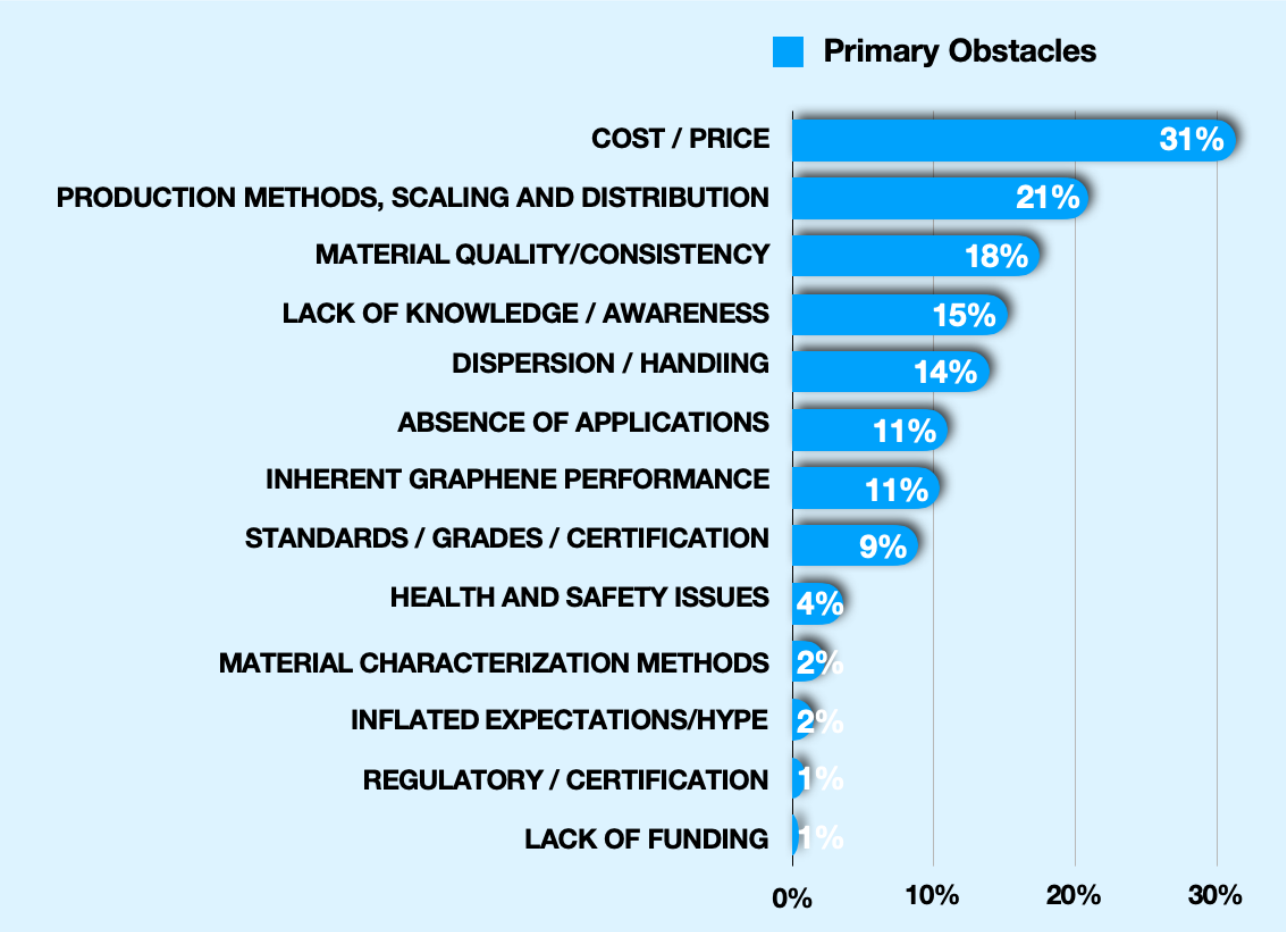
Rapid, and continued high strength-producing concrete admixture.

Enables removal of up to 80% of Portland cement from design mix while maintaining or exceeding design strength to thus achieve low embodied carbon targets.

Suitable for use of fresh, brackish or salt water.*

Improves all concrete projects and is suitable for: POURING, PUMPING, and PRINTING

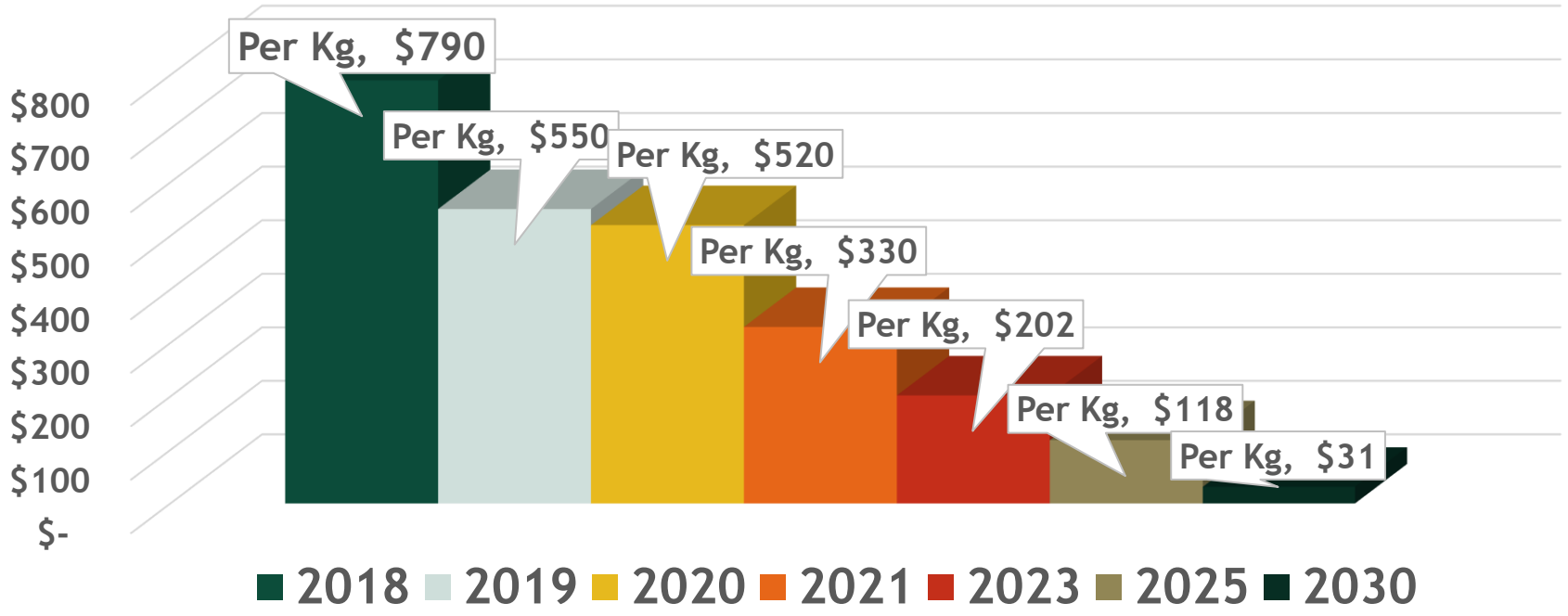
Adoption Constrained by Cost, Capacity & Quality ...Until now



70% of Adoption Obstacles solved by BioCene® Process

- **Demonstrated multi-ton per day capacity**
- **Externally verified, consistent vFL (2-3 layer) graphene quality**
- **Industry leading cost position**

Industry Projections for vFL Graphene Cost Achieved at least 7 Years Ahead of Schedule



- **Process Capability to achieve 2030 Cost Expectations Today**
- **Fully realized with automation at current scale**

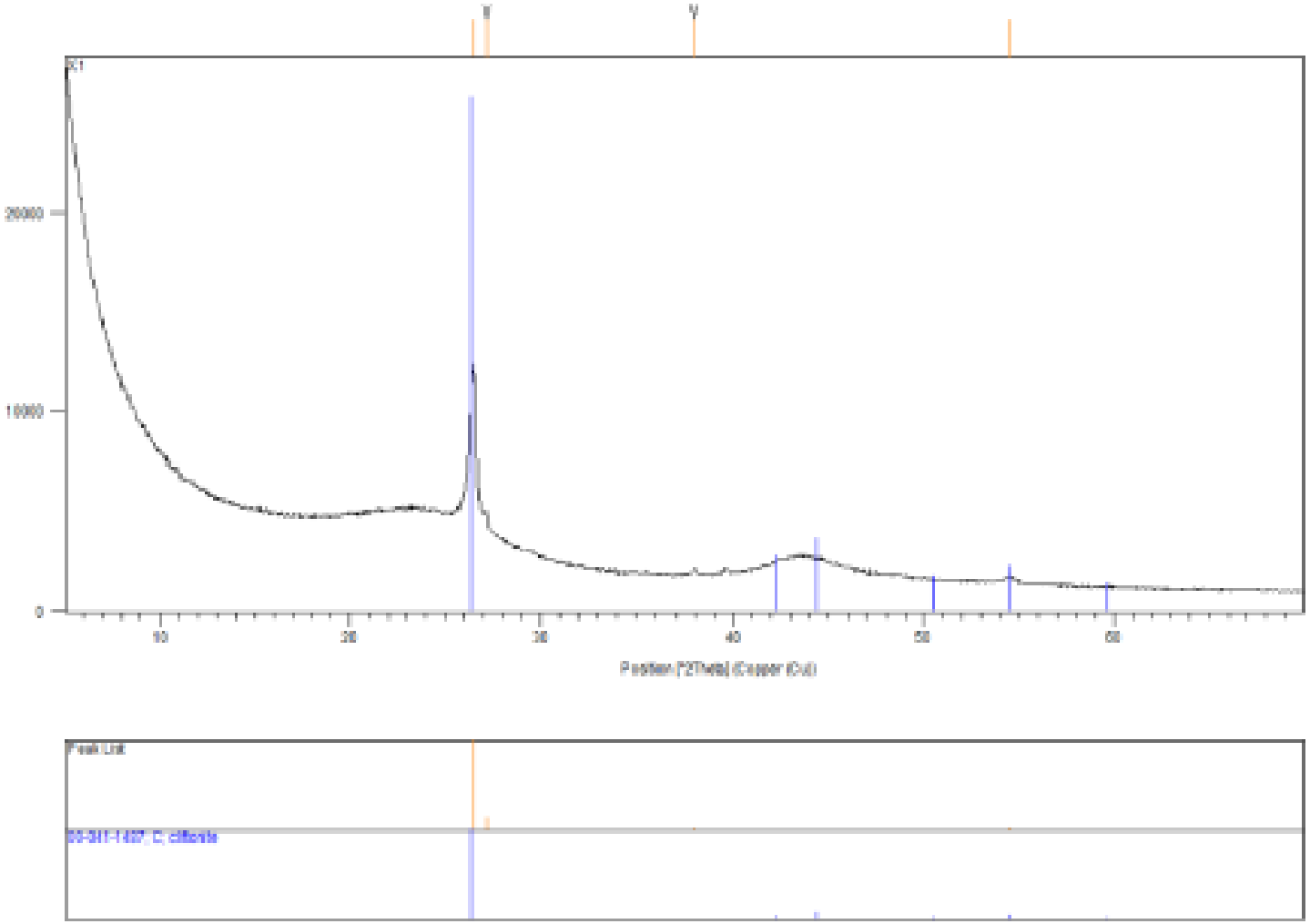
Projected Prices for vFL Graphene Derived from Graphene Council

Multiple Applications in Development

Graphene Power Storage (Battery)	TRL 8
Ballistic Armor Composites	TRL 6
Reinforced Thermoplastics	TRL 3
EMP / EMF Shielding	TRL 7

- **Internal Work on Power, EMF Shielding, and Ballistic Armor**
- **Partnering with Expert firm(s) on Thermoplastics**

Multiple Independent labs confirm BioCene® Graphene vFL Status



Analysis Techniques Utilized:

- XRD
- Raman Spectroscopy
- BET Surface Area
- Atomic Force Microscopy
- Visual Microscopy

Conclusions:

- BioCene® has 2.5 layer average (vFLG*)
- Platelet dimension averages 25 microns (range 10-50 µ)

*Very Few Layer Graphene

Thank You

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