GREEN MECHANICS

Our Resilient Team

70+ years Experience

Michael Carmichael: Stormwater Management and Maintenance Advisor

Larry Davis: Lead Consultant for Green Mechanics

Kelly Fleming: Landscape Architect and Designer Advisor

Dr. Peter May: Ecological Engineer Advisor

Justan Randolph: Environmental Workforce & Education

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Eric Jackson
Executive Director
Black Yield Institute
ejackson@blackyieldinstitute.org

Dear Mr. Jackson

Jul 21, 2025

Green Mechanics Benefit LLC is pleased to provide a construction proposal to Black Yield Institute's Marketplace area.

We are a team of dedicated professionals working in Maryland's green economy. We include Ecological Engineers, Landscape Architects, Environmental Educators and Innovators. Collectively we have great local knowledge, strong working municipal relationships and have carried out multiple similar projects for the public and private sectors. We are extremely well suited to deliver the services outlined in this proposal. The team will be led by myself, Larry Davis.

The project requires a diverse combination of skills and experience from the team and staffing resources. To respond to this challenge, our team is made up of diverse specialists with a deep partnering history working together on sustainable planning including stormwater management and landscape design. This gives us the expertise to integrate the goals of Black Yields goals.

We are grateful for this opportunity to present our proposal to you on this important project and are very happy to discuss any aspects of our proposal.

Yours sincerely,

Larry X. Davis

Executive Summary: Marketplace

This project will deliver a transformative and functional community marketplace through the design, fabrication, and installation of multiple key components—each tailored to enhance the space's usability, sustainability, and long-term value. The focus is on delivering quality infrastructure using repurposed materials, renewable energy, nature-based experiences, and agricultural systems to foster local economic and cultural activity. This summary outlines the major deliverables that will be included in the scope of work.

Fabricated Shipping Containers (Marketplace Units):
The core of the project consists of custom-fabricated shipping containers repurposed as vendor stalls and gathering areas. Each container will be outfitted to meet code-compliant electrical, mechanical, and safety standards. Fabrication includes cutting and welding modifications, insulation, interior wall finishes, mini-split HVAC systems, energy-efficient lighting, and waterproofing. Containers will be anchored to site-poured foundations and positioned to create an inviting flow through the marketplace. No rooftop decks are included in this scope.

Solar-Powered Street Lighting:
To ensure safety and accessibility during evening hours, the project will deploy solar-powered streetlights throughout the site. These self-contained lighting units will eliminate the need for additional trenching or grid connections while reducing the site's carbon footprint. Placement will be strategically designed for maximum illumination of walkways and gathering spaces.

Sensory Gardens and Boardwalk Pathways:
The landscape design will incorporate sensory garden zones—featuring native and edible plant species that engage touch, scent, and sound—providing an interactive and therapeutic environment. These will be integrated with accessible boardwalk-style pathways constructed with durable, weather-resistant decking. The garden areas will contribute to stormwater infiltration and community well-being.

Flow Hive Systems (Apiary Integration):
The site will include installed Flow Hive beekeeping systems, contributing to pollinator health, youth education, and potential economic opportunity through honey production. These systems require minimal maintenance and provide a visible example of sustainable urban agriculture.

Electrical Infrastructure (BGE Hook-In & Site-Wide Wiring):
All units will be powered through a centralized electrical connection from Baltimore Gas and Electric (BGE). The project includes the installation of a master breaker panel, subpanels for each container, underground conduit runs, outlet systems, lighting circuits, and necessary safety disconnects. All electrical work will be code-compliant and completed by a licensed master electrician.

Foundations and HVAC Systems:
Foundations will be constructed for each container to ensure long-term stability and code compliance. HVAC will be provided via high-efficiency mini-split systems in each unit, delivering both heating and cooling with low energy consumption.

Phase 3 Construction Proposal

Project: BYI Marketplace – Mount Clare Site
Location: 409 S. Calhoun St., Baltimore, MD 21223
Project Manager: Green Mechanics
Timeline: August 1, 2025 – xx/xx/xxxx
Total Budget (w/ 10% contingency): $192,332.80
Invoicing Milestones:

- Invoice 1 (50%) – $96,166.40
- Invoice 2 (25%) – $48,083.20
- Invoice 3 (25%) – $48,083.20

Invoice 1 – $96,166.40 (50%)

Focus: Mobilization, site prep, soil stabilization, foundational drainage, and utility prep

Deliverables:

- Final permitting: construction and crane permits
- Soil contamination and geotechnical plan
- Concrete removal and disposal (10-day estimate)
- Equipment and tool rental for demolition and excavation
- Silt fencing (300 LF) and erosion control measures
- Straw mulch placement (6,000 ft^2)
- Tree protection fencing and stone construction entrance
- Foundation excavation and installation of:
    - PVC footing drains (210 LF)
    - Foam glass gravel base (118.5 cubic yards @ $80/$yd^3$)
    - Heavy-duty 60 mil rubber liner (1,760 ft^2)
    - Non-woven geotextile fabric

- Rough grading and site shaping

Invoice 2 – $48,083.20 (25%)

Focus: Utility installation, structural preparation, and equipment integration

Deliverables:

- Electrical service panel installation ($21,500)
- Mini-split HVAC system install ($7,500)
- Solar light procurement and setup (incl. relocation) ($9,250)
- Telecom infrastructure install: cameras, conduits, and Wi-Fi-ready hookups
- Additional drainage or trenching required for service lines

Invoice 3 – $48,083.20 (25%)

Focus: Landscape completion, vendor deck setup, and activation of community amenities

Deliverables:

- Construction of:
    - Raised garden beds ($5,000)
    - Sensory gardens ($6,500)
    - Boardwalk hardscape circulation ($25,000)
    - Removable deck platform for vendor access ($8,000)
- Exterior painting of shipping containers ($3,000)
- FlowHive installation:
    - 10 hives + delivery & setup ($9,000)
- Site walk-through for final punch list and commissioning

Phase 3 Work Plan Schedule

Start Date: August 1, 2025
Projected Completion: November 22, 2025
Total Duration: ~16 Weeks (Please note that weeks can be subjugated to change based on unpredicted externalities from permitting and stakeholder engagement completion. Timelines will be adjusted as per request by BYI. Weeks more likely to be changed will have a *** notation)
Phased Payment Schedule:

- **Invoice 1 (50%)**: $96,166.40 – Site Prep & Foundation (Weeks 1–6)
- **Invoice 2 (25%)**: $48,083.20 – Utilities & Infrastructure (Weeks 7–11)
- **Invoice 3 (25%)**: $48,083.20 – Finishing & Activation (Weeks 12–16)

Invoice 1 (50%) – Site Preparation & Foundation (Aug 1 – Sept 13, 2025)

1. **Week 1–2 (Aug 1 – Aug 16)**
    - Final permit filings and clarifications (construction, crane, erosion & sediment control)
    - Mobilization of crew and staging of equipment
    - Concrete demolition and removal (up to 10 workdays)
    - Tree protection fencing, silt fencing, straw mulch installation
2. **Week 3–4 (Aug 19 – Aug 30)**
    - Site grading, backfill, and trenching
    - Subsurface work for footing drains and drainage layers
    - Geotextile and rubber liner placement
3. **Week 5–6 (Sept 2 – Sept 13)**
    - Delivery and installation of foam glass gravel base (118.5 cubic yards)
    - Finalize erosion control, rough grading, and prep for container placement

Invoice 2 (25%) – Utilities & Infrastructure (Sept 16 – Oct 18, 2025)

1. ****Week 7–8 (Sept 16 – Sept 28)**
    - Install electrical service panel and sub-panels
    - Begin telecom trenching and camera conduit runs
2. ***Week 9 (Sept 30 – Oct 5)**
    - Install solar lighting and streetlight relocation from storage
    - Complete camera and Wi-Fi-ready telecom hardware
3. ***Week 10–11 (Oct 7 – Oct 18)**
    - HVAC (mini-split) system installation in containers
    - Final inspection and testing of all utility systems

Invoice 3 (25%) – Finishes, Landscaping & Activation (Oct 21 – Nov 22, 2025)

1. **Week 12–13 (Oct 21 – Nov 1)**
    - Install boardwalk and hardscape decking
    - Construct removable container decks and outdoor walkways
2. **Week 14 (Nov 4 – Nov 9)**
    - Install raised garden beds and sensory gardens
    - Paint containers with weatherproof exterior paint
3. **Week 15 (Nov 11 – Nov 16)**
    - Install FlowHive units and finalize green infrastructure
    - Begin community signage, furniture staging, and safety striping
4. ***Week 16 (Nov 18 – Nov 22)**

- Final walk-through with Black Yield Institute and stakeholders
- Punch list resolution and closeout documentation
- Submission of “as built” photos, final receipts, warranties, and maintenance manual

Payment Terms & Conditions

- Each invoice will be submitted at the beginning of the associated phase.
- Payment is due within 15 business days of invoice receipt.
- Any change orders must be approved in writing before implementation.