

Brevard County Board of County Commissioners / City of Palm Bay Coalition for  
Implementation of Photocatalytic Pavement Treatments

## Budget Narrative Attachment Form

### FY 24 Climate Pollution Reduction Grant – Implementation Grants

April 1, 2024

**Personnel:**

- o \$0 – The BOCC / Palm Bay Coalition is not seeking reimbursement for staff time spent administering this grant project.

**Fringe:**

- o \$0 – The BOCC / Palm Bay Coalition is not seeking reimbursement for staff fringe benefits on this grant project.

**Travel:**

- o \$0 – The BOCC / Palm Bay Coalition is not seeking reimbursement for staff travel on this grant project.

**Supplies:**

- o \$0 – The BOCC / Palm Bay Coalition is not seeking reimbursement for supplies purchased while administering this grant project. All supplies purchased will be procured by the subcontracted entity.

**Equipment:**

- o \$0 – The BOCC / Palm Bay Coalition is not seeking reimbursement for equipment purchased to assist with administering this grant project. All equipment purchased will be procured by the subcontracted entity.

**Contractual:**

- The BOCC / Palm Bay Coalition is looking to subcontract with Pavement Technologies Incorporated. This company is currently under contract with both the Brevard County Board of County Commissioners and the City of Palm Bay. They are the only licensed contractor in the State of Florida that can provide the A.R.A.-1Ti and Ti Intro CME Application that is the backbone of this grant application.

- o The proposed project aims to implement a comprehensive climate pollution reduction strategy over a five-year period from 2025 to 2030. The cornerstone of this strategy is the deployment of innovative pavement treatment technology utilizing photocatalysis to capture and sequester CO2 emissions from vehicular traffic. Through this approach, the

Coalition aims to significantly mitigate greenhouse gas emissions, contributing to local and global climate change mitigation efforts while providing numerous co-benefits to bring significant additional impact to LIDAC designated areas and beyond across Brevard County.

O \$44,751,163 - Treatment of Pavement with Photocatalytic Additive

- Allocation for contractual costs associated with the procurement of the application of photocatalytic pavement treatments annually across Brevard County.
- This includes the contracting services required for the application of photocatalytic pavement treatment technology each year as laid out in the Budget Spreadsheet Appendix # and described in detail in the Workplan.
- Year 1 – Brevard County will treat 100 centerline miles. City of Palm Bay will treat 264 centerline miles. Cost for year 1 is \$12,074,244.
- Year 2 – Brevard County will treat 100 centerline miles. City of Palm Bay will treat 141 centerline miles. Cost for year 2 is \$8,243,164.
- Year 3 – Brevard County will treat 100 centerline miles. City of Palm Bay will treat 159 centerline miles. Cost for year 3 is \$9,092,713.
- Year 4 – Brevard County will treat 100 centerline miles. City of Palm Bay will treat 116 centerline miles. Cost for year 4 is \$7,806,240.
- Year 5 – Brevard County will treat 100 centerline miles. City of Palm Bay will treat 102 centerline miles. Cost for year 5 is \$7,534,802.

O \$1,000,000 – Testing, Measuring, and Reporting

- Provision for comprehensive testing, measurement, and reporting activities to assess the performance and impact of the pavement treatment over the grant period.
- Includes data collection, analysis, and reporting mechanisms to track CO2 capture rates, air quality improvements, and other relevant metrics, ensuring accountability and transparency.
- The primary team includes Purdue University and the Texas Transportation Institute at Texas A&M.
- Field core samples collected from all streets cumulatively completed since inception and evaluated for titanium dioxide (TiO2) load in the upper six (6) millimeters of the pavement using Xray florescence (XRF).
- Data collected will be annually reported to the EPA.
- The six different testing methods will cost \$200,000 per year.

**Other:**

- o \$0 – The BOCC / Palm Bay Coalition is not seeking reimbursement for expenses that do not fall into the above categories while administering this grant project.

**Indirect Costs:**

- \$0 – The BOCC / Palm Bay Coalition is not seeking reimbursement for Indirect Costs incurred while administering this grant project.