

**State of New Jersey**  
**Department of Environmental Protection**



**Project Solicitation**  
**LIONC**



## Jackson Township School District

151 Don Connor Boulevard  
Jackson, New Jersey 08527  
732-833-4607  
[www.jacksonsd.org](http://www.jacksonsd.org)

To Whom It May Concern,

Jackson School District appreciates the opportunity to present our response for the grant funding opportunity with the New Jersey Volkswagen Environmental Mitigation Trust Program. We are looking forward to being selected for eight (8) all-electric Type C school buses. Jackson School District is responding to this Project Solicitation with the hope to accelerate adoption and deployments of zero-emissions vehicles in New Jersey; thus improving the lives of our students, faculty, and citizens in the State of New Jersey.

Jackson School District is a comprehensive community public school district that serves students in kindergarten through twelfth grade from Jackson Township, in Ocean County, New Jersey. The district operates six elementary schools serving grades K-5, two middle schools, and two high schools. The Jackson School District is a partnership of dedicated staff, learners, and community members committed to developing the unique abilities of each student through compelling learning experiences in a safe and nurturing environment. We educate approximately 8500 students in ten schools. Our academic programs prepare students to be successful in future academic challenges and careers. This enables them to compete with high school graduates nationwide for enrollment in the most prestigious colleges and universities. At Jackson School District, we also believe that we have a part to play in protecting our environment. We are proud to be involved with Sustainable Jersey for Schools and have implemented an extremely successful energy conservation program. Our District is continuously looking for different ways that it can become a net-zero institution, and transportation is one of them.

For the deployment of our all-electric school buses, Jackson School District will be partnering with The Lion Electric Co. (Lion), Lion's authorized dealer and Clipper Creek – charging infrastructure vendor, to supply our region with all our fleet electrification needs.

To date, our equipment manufacturing partner, The Lion Electric Co. has over 300 electric school buses deployed in North America, with 6,000,000 proven and driven miles on its current batteries, electric components and heavy-duty chassis'. All associated performance data has been traced and documented. Designing, building, and delivering electric heavy-duty vehicles is Lion's daily mandate. Their experience and success will reflect on Jackson School District, through measurable performance, real-life client references, 100% on-time deliveries, and way beyond the "early adopter" experience.

Jackson School District strongly supports the Volkswagen Project Solicitation and thanks the New Jersey Department of Environmental Protection for its work to date on zero-emission vehicle implementation. We hope that our response will successfully demonstrate that Jackson School District can fulfill New Jersey's goals by delivering and operating quality, zero-emission vehicles in a short amount of time.

We look forward to working with the New Jersey Department of Environmental Protection to implement this project.

Sincerely,

John Blair  
Energy Education Specialist  
Jackson School District



# State of New Jersey

Department of Environmental Protection

PHILIP D. MURPHY  
*Governor*

CATHERINE R. McCABE  
*Commissioner*

SHEILA Y. OLIVER  
*Lt. Governor*

## PROJECT PROPOSAL

### OVERALL GOAL

The State of New Jersey, as a beneficiary of the Trust established pursuant to the national Volkswagen settlement, intends to use its allocation from the mitigation trust to efficiently implement projects that reduce oxides of nitrogen (NOx) emissions in a cost effective and technically feasible manner. The implemented projects must meet the criteria of the Consent Decree. New Jersey is issuing this solicitation for project ideas to ensure a broad range of project ideas are considered.

NJDEP anticipates primarily funding pilot electrification projects, including the replacement of heavy-duty vehicles/engines such as buses, trucks, and non-road equipment in urban areas disproportionately impacted by diesel emissions, as well as electric vehicle charging/fueling infrastructure installation in strategic locations across the state.

Submissions must contain all the information outlined in the “Project Proposals” section of this document.

### ELIGIBLE PROJECTS

A general summary is below. [Click here for comprehensive list and associated definitions.](#)

Source Category	Emission Reduction Strategy	Allowed Expenditure Amount
<b>1. Class 8 local freight trucks &amp; port drayage trucks</b>	Repower and replacement	Up to 40% for repower with diesel or alternative fuel or up to 75% (up to 100% if government owned) for repower with electric. Electric charging infrastructure costs are an eligible expense.  Up to 25% for replacement with diesel or alternative fuel or up to 75% (up to 100% if government owned) for electric replacement. Electric charging infrastructure costs are an eligible expense.
<b>2. Class 4-8 school bus, shuttle bus or transit bus</b>	Repower and replacement	Same as row 1
<b>3. Freight switching locomotives</b>	Repower and replacement	Same as row 1
<b>4. Ferries/Tugs</b>	Repower	Same as row 1
<b>5. Oceangoing vessels</b>	Shorepower	Up to 25% for shore side infrastructure if non-government owned (up to 100% if government owned)

Source Category	Emission Reduction Strategy	Allowed Expenditure Amount
<b>6. Class 4-7 local freight trucks</b>	Repower and replacement	Same as row 1.
<b>7. Airport ground support equipment</b>	Repower and replacement	Up to 75% to repower or replace with electric (100% if government owned). Electric charging infrastructure costs are an eligible expense.
<b>8. Forklifts and Port Cargo Handling Equipment</b>	Repower and replacement	Up to 75% to repower or replace with electric (100% if government owned). Electric charging infrastructure costs are an eligible expense.
<b>9. Electric vehicle charging stations or hydrogen fueling stations for light duty vehicles only</b>		Up to 100% to purchase, install and maintain infrastructure if available to public at <i>government owned</i> property. Up to 80% to purchase, install and maintain infrastructure if available to public at <i>non-government owned</i> property. Up to 60% to purchase, install and maintain infrastructure at a workplace or multi-unit dwelling that is not available to the general public. Up to 33% to purchase, install and maintain infrastructure for publicly available hydrogen dispensing that is high volume or 25% for lower volume.

### PROJECT PROPOSALS (Open with Adobe Reader)

Electronic submittals are preferred and should be sent to [VWComments@dep.nj.gov](mailto:VWComments@dep.nj.gov), however paper submittals will also be accepted and should be sent to:

NJDEP  
Division of Air Quality  
Mail code 401-02E  
Trenton, NJ 08625-0420  
Attn: VW Settlement

All proposals must contain the following information; incomplete applications will not be considered. If your project is selected, you may be contacted for additional detailed information. Send questions to [VWComments@dep.nj.gov](mailto:VWComments@dep.nj.gov)

To enter information electronically, use Adobe Reader

### CONTACT INFORMATION

Applicant Name	Jackson School District
Applicant Address	151 Don Connor Blvd
City, State, Zip Code	Jackson, New Jersey, 08527
Contact Person	John Blair
Title/Position	Energy Education Specialist
Phone	(732) 833-4600 ex 4380
E-mail	jblair@jacksonsd.org
Owner Name	Jackson School District
Owner Address	151 Don Connor Blvd
City, State, Zip Code	Jackson, New Jersey, 08527
Contact Person	John Blair
Title/Position	Energy Education Specialist
Phone	(732) 833-4600 ex 4380
E-mail	jblair@jacksonsd.org

<b>PROJECT NAME</b>	Jackson School District - Electric School Bus Project							
<b>PROJECT CATEGORY OR CATEGORIES</b> (choose from 1-9 in "Eligible Projects" section above)								
1 <input type="checkbox"/>	2 <input checked="" type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	7 <input type="checkbox"/>	8 <input type="checkbox"/>	9 <input type="checkbox"/>

<b>PROJECT PRIORITY</b> Priority # <input type="text" value="1"/> of <input type="text" value="2"/> proposals If submitting more than one proposal, what is the sponsor's priority of this proposal?
---

<b>NOTE FOR CATEGORY 9 PROPOSALS</b>  If your proposal is for Category 9 (Light Duty Zero Emission Vehicle Supply Equipment), follow these instructions:  <u>Electric Vehicle stations:</u> Do not complete this form. Instead, go to <a href="#">It Pay\$ to Plug In – NJDEP's Electric Vehicle Charging Grants Program</a> , and apply for a Charging Grant. Volkswagen funds for charging stations will be administered through <i>It Pay\$ to Plug In</i> .  <u>Hydrogen fuel cell vehicle supply equipment:</u> Complete all of the questions on this form.
--

<b>PROJECT BUDGET</b> Provide total estimated project budget, include source, amount of cost share, and administrative costs if applicable: The amount of grant request is 100%. The total estimated project budget will be \$3,434,416.00 for the purchase of eight (8) all-electric school buses and eight (8) charging stations, and the cost of the charging infrastructure installation.
--

<p><b>PROJECT DESCRIPTION</b> (Briefly describe the project by completing the following questions)</p> <p>The Jackson School District will see eight (8) diesel school buses, from our current fleet, scrapped and rendered inoperable. These school buses will then be replaced with eight (8) all-electric, zero-emission, Type C school buses from The Lion Electric Co. For the purposes of this application, we have included the necessary information for each vehicle that we will be scrapping on a separate PDF page further down in our application. Below you will find the information for 1/8 buses that we will be scrapping.</p>
<p>Geographic area where emissions reductions will occur? Jackson Township, Ocean County</p>
<p>Estimated size of population benefitting from the emission reductions? 607,186</p>
<p>Estimated useful life of the project? Maximum of 15 years</p>
<p>Number of engines/vehicles/vessels/equipment included in the project? Eight (8) all-electric school buses</p>
<p>DEP will be modeling emission benefits for all projects. Please provide the necessary information below:</p> <p>Model Year 2002  Horsepower 195  Annual hours of use 600  Annual amount of fuel used 1,800</p>
<p>Will the project benefit one or more communities that are disproportionately impacted by air pollution? If so, please describe?</p> <p>The project will benefit the Township of Jackson, and Ocean County as a whole. Although the air quality in the State of New Jersey has improved, according to the American Lung Association, it still ranks among the worst in the nation because of high concentrations of ground-level ozone pollution. In 2017, Ocean County was ranked number five out of 11 counties in New Jersey that have the worst air pollution in the State. We were given an "F" grade and had 16 unhealthy "orange alert" days, those in which the air quality is considered unhealthy for children, active adults, and anyone with asthma or other respiratory ailments. To this day, our "F" grade still stands, and we also had a total of 17 "orange alert" days in 2019. Looking at the report card that the American Lung Association published for Ocean County, we have 144,247 children under the age of 18, and of this group, 10,453 of these children suffer from pediatric asthma.</p>
<p>Only shovel ready projects will be considered. Please list project partners.</p> <p>The following project partners will be involved in this project: Jackson School District, The Lion Electric Co. – original equipment manufacturer, Clipper Creek – electric vehicle charging infrastructure vendor, and The Lion. Electric Co. licensed dealer – H.K. Truck Center.</p>
<p>Estimated timeframe for implementation? Include a project timeline that identifies start and end dates, as well as the timeline for key milestones.</p> <p>Project Period // We will take possession of our vehicles 180 days after a purchase order has been emitted to The Lion Electric Co. licensed dealer for the purchase of eight (8) Lion C all-electric school buses. Lion is committed to deliver quality products as quickly as possible based on the grant response.</p>
<p>Demonstrated success in implementing similar projects?</p> <p>One of the main priorities at Jackson School District is sustainability. Over the past few years, we have implemented numerous environmentally friendly programs and have also received many awards and recognitions.</p> <ul style="list-style-type: none"> <li>Historically, our district has always been forward thinking in terms of environmental consciousness. This is evident by our <b>4 schools</b> (Liberty HS, Elms ES, Johnson ES, and Holman ES) that are powered by <b>geothermal energy</b>. All of these systems were installed within the last 15 to 25 years.</li> <li><b>We are one of the few districts in NJ that actually own and maintain our own buses.</b> We have a fleet of 105 large buses and 43 small ones. <b>Each year, we scrap 8</b> of them and</li> </ul>

replace them with newer models at a cost of just over \$100,000 each. (That is why we chose to apply for 8 EV buses in the grant.) All of our current fleet is comprised of diesel-fueled vehicles.

- We are also entering the implementation phase of our Energy Savings Improvement Project (ESIP), which is a **\$26 million energy efficient capital improvement project** created by the NJ Board of Public Utilities. The savings created from this project (along with NJ Clean Energy Program sponsored rebates and incentives), generate a **Net-Zero annual cost to the taxpayer**.
- As part of this project, not only will we be installing new LED lighting throughout the district, but we will also be installing several new boilers. One of which we will convert Goetz Middle School from using oil to natural gas.
- The project also includes a **solar installation** that is over **5.2MW** that will cover every building in our district, including the buildings from which meters will be used to charge our vehicles. This means that **the refuse trucks will be powered by close to 100% renewable energy.**
- Some of our environmental and sustainable practices include, but are not limited to, the following:  
Anti-Idling for School Buses, School Gardens, the Safe Routes to School program, student led campus clean ups, numerous tree plantings, student led single stream recycling in all schools, aquaponics programs in several schools, dry erase marker recycling, and water bottle filling stations(to lower plastic use), just to name a few. There are too many to mention all of them here.
- Each one of our schools has its own “Green Team”. These people all volunteer their time to make our district the best it can be.
- Since 2017, every year, all 10 of our schools are certified with Sustainable Jersey for Schools; currently, **7 schools are Bronze Level Certified** (out of 11 Bronze certified schools in Ocean County) and **3 are Silver Level Certified** (of which there are **only 17 Silver certified schools in the State of NJ**).
- In 2018, **Jackson Liberty HS** received the **Sustainability Champion Award** in the High School category from Sustainable Jersey for Schools for the entire State of NJ.
- In 2019, **Christa McAuliffe Middle School** received **the same award** in the Middle School category.
- In addition to our very successful sustainability actions throughout the district, we are also home to one the most effective Energy Conservation programs in our area. The program was implemented at the end of 2016. Since then, not only have **we saved the taxpayer over \$1.5 million in the first 3 years**, (16% reduction) but we have also reduced our greenhouse gas emissions by over 5600 metric tons of CO<sub>2</sub>. This, according to the EPA Greenhouse Gas Equivalencies Calculator, is the equivalent of removing over 1200 cars from the road for 1 year.
- In addition to the reduction of greenhouse gasses via our Energy Conservation Program, our current **solar arrays at Elms Elementary School** (approximately 950,000 kW) and **Liberty High School** (approximately 1.6 MW) have reduced our carbon footprint by **14 million pounds of CO<sub>2</sub> since their implementation in 2016**.

If your proposed project involves alternative fuels, provide a demonstration of current or future plans to provide adequate refueling infrastructure.

The Jackson School District will be ready to deploy these all-electric school buses. As a part of the District's sustainability efforts and our current ESIP project, we will be installing solar panels on the Board of Education Maintenance and Transport facilities. Since our new all-electric school buses will be stored at these facilities, we plan on using the electricity produced from the solar panels to charge them; thus creating a completely net-zero functionality.

Currently, we operate diesel-fueled school buses, and these vehicles will be our first zero-emission options. At the moment, we do not have the necessary charging stations set up and will therefore request funding support from the Department of Environmental Protection to purchase and install these units.

Per the project requirement, we have selected eight (8) diesel school buses to scrap and replace with all-electric ones. We also have plans to install the same number of charging infrastructure stations so that each bus has the required access to the electricity it needs. To note, the project budget presented in this proposal includes the following estimated costs: charging station unit and infrastructure installation costs. Our project partners have provided us with these estimations for the purposes of this application. However, we are aware that these numbers could vary based on our utility and the connection needed to line up the solar panels to the charging station units. Should the New Jersey Department of Environmental Protection award a grant to us for this project, we would like to include all costs in the funds allocated to us.

Has your organization been approved to receive and expend any other grant funds related to this project? If so, please provide details.

We will solely apply for this funding opportunity to replace our diesel vehicles with all-electric school buses.



Please provide any additional information that supports this project.

Our all-electric school buses will be used for daily route service only. This is to ensure that our transportation providers are comfortable and familiar with the buses before asking them to travel outside of the Township and the County.

Understanding that changes may be coming to the 2020-2021 school year, social distancing being top of mind, we believe that these buses will be welcomed with great appreciation. As one bus travels approximately 120 miles per day during a high school, middle school, and elementary route twice a day, we are confident that the Lion buses we would like to purchase will go above and beyond our needs.

These zero-emission school buses will fit perfectly into our daily routes because they will mimic what our scrapped diesel buses would have accomplished, but without the extra fumes and incurred costs. The bus will charge overnight during non-peak hours and may be charged mid-day if needed, therefore reducing our operational costs.

The utilization of these new school buses will reduce our maintenance costs by about 60% and energy costs up to 80% per vehicle. This is based on our preliminary evaluation since the buses have no fuel, no transmission, and very few moving parts. With the help of the New Jersey Department of Environmental Protection, our return on investment will occur within a minimal amount of time. This will also allow us to significantly reduce greenhouse gas emissions and provide economic and environmental benefits to our community. In fact, one bus will reduce the amount of CO2 in the air by approximately 25 tons per year. It will also significantly reduce the noise pollution in the area.

Two additional pages have been provided as supplemental space to answer any of the questions above.

### Supplemental Page 1

We have chosen to partner with The Lion Electric Co. licensed dealer in the State of New Jersey, to bring eight purpose built all-electric Lion school buses to our community, thus ensuring zero emissions throughout the state. Lion builds their own chassis, body, battery packs and design their own proprietary operating software. The buses are not retrofitted diesel vehicles, they are born to be electric.

Investing in a Lion vehicle will allow us to track our progress by calculating our average consumption through the smart charging system, and collect data through the onboard telematic touchscreen, which is unique to Lion vehicles. The operator will simply select their charging preferences through the screen to maximize charging efficiency. The onboard touch screen will serve many purposes to our operators: it registers power usage, driving efficiency through the driving interface, maintenance interface, battery state, charging interface, parameters, smart charge, and preheat. All information on the onboard touchscreen is recorded and can be extracted as a report on a regular basis to perform multiple analyses and to understand the efficiency and cost of each electric bus.

The vehicles are also equipped with electronic modules that monitor and record data from various systems, including the motor, batteries, braking, and electrical systems. The electronic modules record information about various driving and vehicle conditions, including braking, acceleration, trip distance and other related information regarding the vehicle. These modules record information about the vehicle's features such as charging events and status, the enabling/disabling of various systems, diagnostic trouble codes, VIN, speed, direction, and location.

The success of the project will be enhanced by the number of miles driven per year on the all-electric buses. The more we will use the buses, the more we will save and the better it will be for our environment and community. We will be the grantee of this grant and will operate the buses daily while analyzing the reports generated by the vehicles.

In our case, electric school buses are new to us and we will require the necessary training to help bridge our knowledge gap from diesel to electric. To ensure that our operators are comfortable using the new all-electric school buses, they will take part in the Lion Academy Training Program. The training program will be available to a wide range of stakeholders, and most importantly our transportation professionals. The training curriculum will be extremely detailed and can last up to six hours to ensure that all parties are comfortable working on the buses once they are delivered and operational. The interactive classes cover various topics such as safety, troubleshooting, electric chargers, EV components, maintenance, repairs, warranty work, driver tips, accessories, etc.

## Conclusion//

As leaders in manufacturing and deploying zero-emission school buses and charging infrastructure equipment, The Lion Electric Co., their licensed dealer, and Clipper Creek are poised to immediately support Jackson School District. It is our strong desire to scrap eight high pollutant diesel buses and replace them with zero-emission vehicles and the necessary charging infrastructure.

Having a shared goal of improving air quality and the health of children in all communities is what best aligns us and our project partners. Not only do our partners value focus on safety and reliability, but also the health of the communities we serve. They have invested early and deeply to develop a zero-emission technology that supports the communities in which we serve and live.

With help from the Department of Environmental Protection this program will help us to permanently remove the previously mentioned high pollutant diesel vehicles that are currently operating in our fleet, which our students, faculty and community are presently exposed to. Additionally, it will give us the opportunity to pave the way for other educational institutions to join the electrification movement.

We would like to thank the Department of Environmental Protection in the State of New Jersey for allowing us to submit a project proposal for the Volkswagen settlement funds. We look forward to working with this Department so that we may be able to provide a healthy breathing environment to students, faculty and the communities we serve.

## **Fleet Spreadsheet**

**See attached**

Jackson Public Schools  
 New Jersey Department of Environmental Protection - Volkswagen Mitigation Application  
 Fleet Spreadsheet

Existing Vehicle						Replacement Vehicle				
Vehicle Number	Make/Model	Model Year	Horsepower	Annual Hours	Annual Fuel (gallons)	Replacement Model Year	Replacement Fuel Type	Replacement Cost	Charging Infrastructure	Funding Request
1	International	2002	195	600	1,800	2021	All-electric	\$ 419,302.00	\$ 10,000.00	\$ 429,302.00
2	International	2002	195	600	1,800	2021	All-electric	\$ 419,302.00	\$ 10,000.00	\$ 429,302.00
3	International	2002	195	600	1,800	2021	All-electric	\$ 419,302.00	\$ 10,000.00	\$ 429,302.00
4	International	2002	195	600	1,800	2021	All-electric	\$ 419,302.00	\$ 10,000.00	\$ 429,302.00
5	International	2002	195	600	1,800	2021	All-electric	\$ 419,302.00	\$ 10,000.00	\$ 429,302.00
6	International	2002	195	600	1,800	2021	All-electric	\$ 419,302.00	\$ 10,000.00	\$ 429,302.00
7	International	2002	195	600	1,800	2021	All-electric	\$ 419,302.00	\$ 10,000.00	\$ 429,302.00
8	International	2002	195	600	1,800	2021	All-electric	\$ 419,302.00	\$ 10,000.00	\$ 429,302.00
<b>Totals:</b>								<b>\$ 3,354,416.00</b>	<b>\$ 80,000.00</b>	<b>\$ 3,434,416.00</b>

## **Solar Field Power Source**

**See attached**



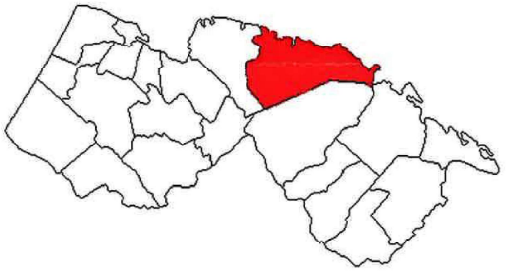
**1 SOLAR PV ARRAY - SITE PLAN**  
 (PLAN VIEW)  
 SCALE: N.T.S.



**2 MECHANICALLY ATTACHED ROOF MOUNT IMAGE**  
 SCALE: N.T.S.



**3 SITE LOCATION MAP**  
 SCALE: N.T.S.



**4 STATE COUNTY MAP**  
 Ocean County, NJ

NO.	DESCRIPTION	BY	DATE

**PROJECT TITLE:**  
 JACKSON TOWNSHIP BOARD OF EDUCATION SOLAR PHOTOVOLTAIC SYSTEM

**SITE:**  
 131 DON CONNOR BOULEVARD  
 JACKSON TOWNSHIP, NJ 08527

**OWNER:**  
 JACKSON TOWNSHIP BOARD OF EDUCATION

**PHONE:**  
 908-731-5818

**FAX:**  
 908-731-5819

**WEB:**  
 www.jacksonnj.org

**ADVANCED SOLAR PRODUCTS**  
 270 SOUTH MAIN STREET  
 JACKSON, NJ 08527  
 908-731-5818 (PHONE)  
 908-731-5819 (FAX)  
 ys@advancedsolarproducts.com

**DATE:**  
 09/26/2019

**CHECKED BY:**  
 AS

**DRAWN BY:**  
 AS

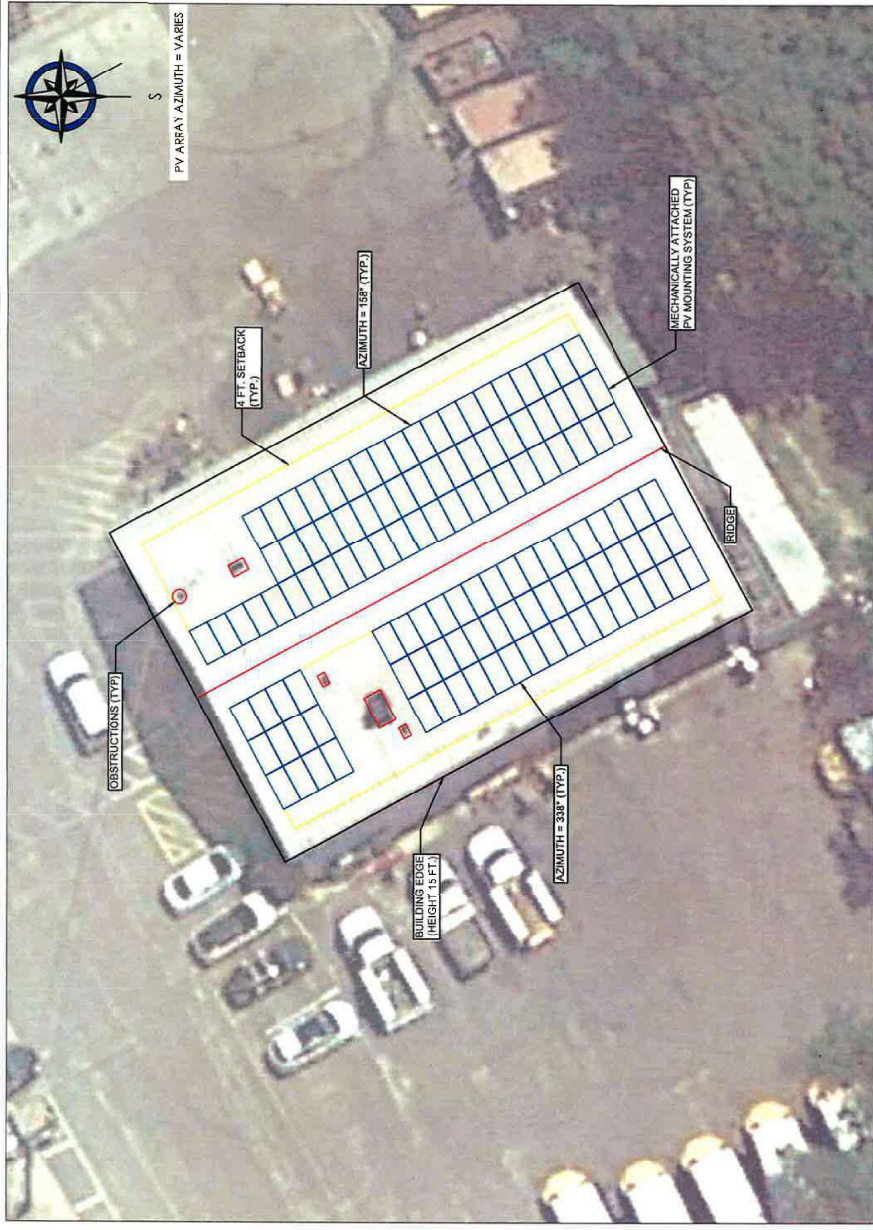
**SCALE:**  
 AS SHOWN

**DWG. NO.:**  
 E-2

**DRAWING TITLE:**  
 PRELIMINARY SITE PLAN



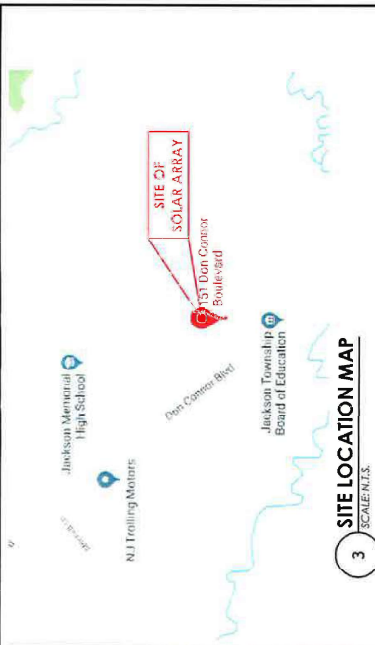
TYLE RAWLINGS, P.E.  
 NJ PROFESSIONAL ENGINEER LIC #2627



**1 SOLAR PV ARRAY - SITE PLAN**  
 (PLAN VIEW)  
 SCALE: N.T.S.



**2 MECHANICALLY ATTACHED ROOF MOUNT IMAGE**  
 SCALE: N.T.S.



**3 SITE LOCATION MAP**  
 SCALE: N.T.S.



**4 STATE COUNTY MAP**  
 Ocean County, NJ

NO.	DESCRIPTION	BY	DATE

**PROJECT TITLE:**  
 JACKSON TOWNSHIP  
 JACKSON TOWNSHIP BUILDING  
 SOLAR PHOTOVOLTAIC SYSTEM

**SITE:**  
 JACKSON BUILDING  
 131 DON CONNOR BLVD  
 JACKSON TOWNSHIP, NJ 08527

**OWNER:**  
 Phone:      Fax:      Web:      **ADVANCED SOLAR PRODUCTS**  
Developing the Next Generation of Solar

270 SOUTH MAIN STREET  
 JACKSON, NJ 08527  
 908-751-8811  
 908-751-8819 (FAX)  
 lyle@advancedsolarproducts.com

**NJ CERTIFICATE OF AUTHORIZATION:**  
 LICENSE NO.: 24GA28102800

**DRAWN:** AS      **DATE:** 09/26/2019  
**CHECKED:** AS      **DATE:**      **DWG. No.:** E-2  
**DRAWING TITLE:** PRELIMINARY SITE PLAN



LYLE RAWLINGS, P.E.  
 NJ PROFESSIONAL ENGINEER LIC #28527