



*Joseph H. Vicari, Director
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John P. Kelly, Commissioner*

*Tristin J. Collins, Director, Management & Budget
Jennifer L. Bowens, Purchasing Agent*

*County of Ocean
Administration Building
101 Hooper Avenue
Toms River, NJ 08754*

BID

***SOLAR POWERED LED SIGNS AND SOLAR POWERED SPEED RADAR
SIGNS***

2023

***ADVERTISEMENT DATE: March 8, 2023
OPENING: March 28, 2023, 11:00 am***

***Bid Category: 04- Automotive Products, Vehicles and Services
13- Highway Road Equipment, Materials, and Related Equipment***

NOTICE TO BIDDERS

NOTICE IS HEREBY GIVEN that sealed bids for the furnishing and delivery of **SOLAR POWERED LED SIGNS AND SOLAR POWERED SPEED RADAR SIGNS** for the County of Ocean, will be received by the Purchasing Agent of the County of Ocean on **Tuesday, March 28, 2023 at 11:00 am**, prevailing time.

Bids will be received electronically via the [County's OpenGov Electronic Bid Portal \(https://procurement.opengov.com/portal/oceancounty/\)](https://procurement.opengov.com/portal/oceancounty/)

Specifications and form of proposal are on the **Procurement Portal (Link Above)** or available for viewing in the Department of Purchase, Room #224, Administration Building, 101 Hooper Avenue, Toms River, New Jersey. Direct all inquiries to Jennifer L. Bowens, Purchasing Agent.

Bidders are required to comply with the requirements of N.J.S.A. 10:5-31 et seq. and P.L. 1975 C. 127 (N.J.A.C. 17:27-1 et seq.) regarding equal employment opportunities and with the requirements of P.L. 1977 C.33 regarding corporate and/or partnership ownership.

The right to reject any and all bids is reserved in accordance with applicable law.

By order of the Board of Commissioners of the County of Ocean.

Signed:

JOSEPH H. VICARI, Director

JENNIFER L. BOWENS, Purchasing Agent

CONTACT INFORMATION AND PROJECT TIMELINE

Summary

The purpose of this bid package is to provide the County of Ocean with a Contractor who will supply the materials or services described and specified herein.

Contact Information

For further information regarding these specifications, contact

Jessica Hannold

Buyer

Email: ocpurchasing@co.ocean.nj.us

Phone: [\(732\) 929-2103](tel:(732)929-2103)

Department:

Engineering

Timeline

Advertising Date	March 8, 2023
Bid Opening Date	March 28, 2023, 11:00am Administration Building, 101 Hooper Ave., Room 119, Toms River, NJ, 08753

IMPORTANT INSTRUCTIONS FOR ELECTRONIC SUBMITTAL

Instructions for Electronic Bid Submission

The County is accepting electronic bid submissions with Open Gov by following these instructions:

Sign up for a FREE account at <https://procurement.opengov.com/portal/oceancounty>

Once you have completed account registration, browse back to this page: [County's OpenGov Electronic Bid Portal \(https://procurement.opengov.com/portal/oceancounty/\)](https://procurement.opengov.com/portal/oceancounty/)

Click on the bid of interest, then click "Draft Response".

Follow the instructions to submit the electronic bid.

It is important to note that this process should be completed well in advance of the bid deadline / bid opening. DO NOT WAIT UNTIL THE LAST MINUTE. The County's electronic submission system will not allow electronic bids to be submitted once the deadline has passed, even if you've already started the process. The deadline is based on the countdown timer found on the ProcureNow bid submission page.

INSTRUCTIONS TO BIDDERS

Bid Opening

All bids will be opened publicly in the Administration Building, Room 119, 101 Hooper Avenue, Toms River, New Jersey, commencing at 11:00 am, prevailing time on Tuesday, March 28, 2023.

Electronic Bid Submissions

Bids must be submitted electronically through Ocean County's Procurement Portal by the date and time stipulated in the Notice to Bidders.

Deadline Instructions

The County will not be responsible for late bids, and no bids will be accepted if received after the time stipulated in the notice to bidders.

Completion of all Documents

Bidders shall complete all documents and acknowledge all terms included with the bid package. All documents should be from this bid package and must not be dated or executed prior to the date of advertising. Failure to follow these instructions is cause for rejection.

NOTE: In order to access any DocuSign forms in this solicitation, you must first click "Draft Response".

Instructions on how to access the forms through DocuSign are available in the Attachments. Please note that in order to view the forms as a .pdf document, you must access DocuSign first. Once you access DocuSign, the option to download, save, print and complete the forms becomes available

Right to Reject

The County reserves the right to reject all bids in accordance with N.J.S.A. 40A:11-13.2, to waive any informalities in the bid and to accept the lowest responsible bid in accordance with applicable law.

Bidder Default

In case of default by the bidder or contractor, the County of Ocean may procure the articles or services from other sources and hold the bidder or contractor responsible for any excess cost occasioned thereby.

Indemnity

The bidder, if awarded a contract, agrees to protect, defend and save harmless the County against any damage for payment for the use of any patented material process, article or device that may enter into the manufacture, construction or form a part of the work covered by either order or contract, and he further agrees to indemnify and save harmless the County from suits or actions of every nature and description brought against it, for, or on account of injuries or damages received or sustained by any party or parties by, or from any of the negligent acts of the contractor, his servants or agents.

Specifications

It is to be understood by the bidder that this bid is submitted on the basis of specifications prepared by the County and the fact that any bidder is not familiar with these specifications or conditions will not be accepted as an excuse.

Bid Security

NO BID SECURITY

Performance Bond

NO PERFORMANCE BOND

Pricing Proposal

Bidders must use the pricing proposal provided in the bid specifications. Failure to use the pricing proposal in the bid specifications shall be cause for rejection of the bid.

Pricing

Insert prices for furnishing all of the material and/or labor described or required. Prices shall be net, including any charges for packing, crating, containers, etc. and all transportation charges fully prepaid by the contractor F.O.B. destination and placement at locations specified by the County. No additional charges will be allowed for any transportation costs resulting from partial shipments made at the vendor's convenience when a single shipment is ordered.

Payment

Payments will be made upon the approval of vouchers submitted by the successful bidders in accordance with the requirements of the Board of Commissioners and subject to the Board of Commissioners customary procedures. The County will not pay interest or late fees regardless of language provided.

Discrepancy in Pricing

In the event that there is a discrepancy between the unit prices and the extended totals, the unit prices shall prevail. In the event there is an error of the summation of the extended totals, the computation by the OWNER of the extended totals shall govern.

Award Timeframe

Award will be made by Ocean County Board of Commissioners within sixty (60) days after receipt of bids.

Equal or Tie Bids

The County of Ocean reserves the right to award at their discretion to any one of the tie bidders where it is most advantageous for the County to do so, pursuant to N.J.S.A. 40A:11-6.1.

Tax Exempt

The County of Ocean is exempt from any State sales tax or Federal excise tax.

Equivalent Product

For purpose of evaluation where an equivalent product is being furnished, bidder must indicate any variation to our specifications no matter how slight. If no variations are indicated, it will be construed that the bid fully complies with our specifications.

Quantities

Quantities shown are approximate and the County reserves the right to decrease or omit quantities. The County will not consider minimums placed on order quantities. The County also reserves the right to increase quantities to twenty (20) percent of the maximum quantities listed at the unit price bid, in accordance with N.J.A.C. 5:30-11.3.

Delivery of Goods and Services

Delivery shall be made upon receipt of a Purchase Order issued by the Ocean County Department of Purchase, upon which delivery locations and needed quantities shall be indicated.

American Goods and Products

All contractors must comply with the provisions of New Jersey Statute Title 40A:11-18, when applicable.

Market Conditions

Due to the fact that goods provided by this solicitation and the current economic conditions are in a volatile state, the County will allow the Contractor to request a price adjustment outside the normal contract renewal process **only if it can be demonstrated and documented that on a national basis the goods solicited and utilized have experienced a significant cost increase since the date of contract award.**

Such events shall be industry wide and cause all related product prices to be effected. **All price adjustment requests must be in writing and submitted to the Ocean County Purchasing Department for approval.** If approved, the Contractor will provide the County with revised pricing. The Contractor may not request an additional increase for a period of three (3) months from the prior request.

Note: A request for price increase does not guarantee approval.

Assignment

This agreement shall not be assigned without the written consent of the County of Ocean.

NJ One Call

By presenting a bid, contractor declares that he is aware of and, if required, will comply with the requirements of the "Underground Facility Protection Act (Public Law 1994, Chapter 118)" prior to commencing any intended excavation. The telephone number to call is 1-800-272-1000.

Public Works Contractor Registration Act, N.J.S.A. 34:11-56.48 et seq

The bidder must comply with the provisions of "The Public Works Contractor Registration Act", if applicable.

- All named contractors must be registered with the Department of Labor and Workforce Development pursuant to the Public Works Contractor Registration Act at the time the proposal is received, or the proposal will be determined to be non-responsive.

- Any non-listed contractor must be registered with the Department of Labor and Workforce Development prior to physically starting work. It is the responsibility of the General Contractor to insure that all non-listed sub-contractors comply.
- Contractors are encouraged to submit their and all named sub-contractors' Public Works Contractor Registration Certificates with the bid.

Prevailing Wage & Labor Laws

The New Jersey Prevailing Wage Act (P.L. 1963, Chapter 150) and provisions of the State Labor Laws must be complied with by the successful bidder, if applicable. The current Prevailing Wage Rates can be found online at <https://www.nj.gov/labor/wageandhour/prevailing-rates/public-works/currentprevailingwage.shtml>

New Jersey Business Registration Requirements

Pursuant to N.J.S.A. 52:32-44, Ocean County ("Contracting Agency") is prohibited from entering into a contract with an entity unless the bidder/proposer/contractor, and each subcontractor that is required by law to be named in a bid/proposal/contract has a valid Business Registration Certificate on file with the Division of Revenue and Enterprise Services within the Department of the Treasury.

Prior to contract award or authorization, the contractor shall provide the Contracting Agency with its proof of business registration and that of any named subcontractor(s).

Subcontractors named in a bid or other proposal shall provide proof of business registration to the bidder, who in turn, shall provide it to the Contracting Agency prior to the time a contract, purchase order, or other contracting document is awarded or authorized.

During the course of contract performance:

(1) the contractor shall not enter into a contract with a subcontractor unless the subcontractor first provides the contractor with a valid proof of business registration.

(2) the contractor shall maintain and submit to the Contracting Agency a list of subcontractors and their addresses that may be updated from time to time.

(3) the contractor and any subcontractor providing goods or performing services under the contract, and each of their affiliates, shall collect and remit to the Director of the Division of Taxation in the Department of the Treasury, the use tax due pursuant to the Sales and Use Tax Act, (N.J.S.A. 54:32B-1 et seq.) on all sales of tangible personal property delivered into the State. Any questions in this regard can be directed to the Division of Taxation at (609)292-6400. Form NJ-REG can be filed online at

<http://www.state.nj.us/treasury/revenue/busregcert.shtml>.

Before final payment is made under the contract, the contractor shall submit to the Contracting Agency a complete and accurate list of all subcontractors used and their addresses.

Pursuant to N.J.S.A. 54:49-4.1, a business organization that fails to provide a copy of a business registration as required, or that provides false business registration information, shall be liable for a penalty of \$25 for each day of violation, not to exceed \$50,000, for each proof of business registration not properly provided under a contract with a contracting agency.

Pay to Play Requirements

Starting in January 2007, all business entities are advised of their responsibility to file an annual disclosure statement of political contributions with the New Jersey Election Law Enforcement Commission (ELEC)

pursuant to N.J.S.A. 19:44A-20.27 if they receive contracts in excess of \$50,000 from public entities in a calendar year. Business entities are responsible for determining if filing is necessary. Additional information on this requirement is available from ELEC at 888-313-3532 or at www.elec.state.nj.us.

Statement of Ownership

The provisions of N.J.S.A. 52:25-24.2 applies to all forms of corporations and partnerships, including, but not limited to, limited partnerships, limited liability corporations, limited liability partnerships, and Subchapter S corporations.

Certification of Non-Involvement in Prohibited Activities in Iran

Certification of Non-Involvement in Prohibited Activities in Iran. Pursuant to N.J.S.A. 52:32-58, the proposer must certify that neither the proposer, nor one of its parents, subsidiaries, and/or affiliates (as defined in N.J.S.A. 52:32-56(e)(3)), is listed on the Department of the Treasury's List of Persons or Entities Engaging in Prohibited Investment Activities in Iran and that neither is involved in any of the investment activities set forth in N.J.S.A. 52:32-56(f). If the proposer is unable to so certify, the proposer shall provide a detailed and precise description of such activities. Prior to contract award or authorization, the contractor shall provide the Contracting Agency with a completed Certification on Non-Involvement in Prohibited Activities in Iran.

Certification of Non-Involvement In Prohibited Activities in Russia or Belarus

Pursuant to N.J.S.A. 52:32-60.1, the “person or entity” (as defined in N.J.S.A. 52:32-60.1, et seq) seeking to enter into or renew a contract for the provision of goods or services or the purchase of bonds or other obligations shall certify that it is not “engaging in prohibited activities in Russia or Belarus” (as such term is defined in as defined in N.J.S.A. 52:32-60.1, et seq. If the person or entity is unable to certify, the person or entity shall provide a detailed and precise description of such activities. The N.J.S.A. 52:32-60.1 certification form must be completed prior to contract award and is provided in the specification documents (DocuSign).

Vendors may view the Precluded Entities List Here:

<https://www.nj.gov/treasury/administration/pdf/RussiaBelarusEntityList.pdf>

Insurance Requirements

The contractor shall maintain primary insurance to protect against all claims under Workmen's Compensation, Comprehensive General Liability and Automobile. Except for Workmen’s Compensation, all coverage shall apply as primary coverage with respect to any other insurance or self-insurance program afforded to the County. There shall be no endorsement or modification of this coverage to make it excess over other available insurance/coverage; alternatively, if the CGL and umbrella, excess of reinsurance states that it is pro rata, it shall be endorsed to be primary with respect to the County. Primary Coverage shall be subject to approval for adequacy of protection as per the following limits:

Worker's Compensation

1. Limits according to Worker's compensation Laws of the State of New Jersey.
2. Contractor's Liability not less than \$100,000.

Comprehensive General Liability

1. Bodily Injury - \$500,000 per person; \$1,000,000 per occurrence.
2. Property Damage - \$1,000,000 per occurrence.

Comprehensive General Liability Details

Comprehensive Automobile Liability shall include the following:

Business auto liability insurance or its equivalent with a minimum limit of \$1,000,000 per accident and including coverage for all of the following:

- A. Liability arising out of the ownership, maintenance or use of any auto;
- B. Auto non-ownership and hired car coverage.
- C. Contractor's Worker's Compensation, Comprehensive General Liability and
- D. Comprehensive Automobile Liability arising out of subcontractor's operations shall be identical as that listed above.

Proof of Insurance

Copies of each insurance certificate shall be furnished to the County when requested.

AWARD METHOD

Contract will be awarded on a lump sum by item basis for items 1-6. Items 7-12 will be awarded on a line item basis. In order to be considered for award of Items 1-6, you must bid on all Options for that item.

VENDOR QUESTIONNAIRE

BID DOCUMENTS TO BE EXECUTED*

Documents include:

- Signature Page
- Non Collusion Certification
- Affirmative Action Questionnaire
- **Statement of Ownership (N.J.S.A. 52:25-24.2) (Mandatory Document)**
- Prohibited Russia-Belarus Activities & Iran Investment Activities

FAILURE TO SUBMIT ANY OF THESE DOCUMENTS MAY BE CAUSE FOR REJECTION OF YOUR PROPOSAL.

All documents should be from this proposal package as forms change frequently and the most updated forms are provided in this specification. The forms must not be dated or executed prior to the date of advertising.

NOTE: For detailed instructions on how to complete the forms via DocuSign, please access the "Instructions for Completing Forms in DocuSign" document available in the Attachments.

Please note: The County's preferred method of submission is DocuSign.

[Click here to go to the form](#)

*Response required

Copy of Bidder's Certificate of Employee Information Report

Within seven (7) days after receipt of the notification of intent to award the contract or receipt of the contract, whichever is sooner, a Contractor should present one of the following to the County of Ocean:

- (a) An existing federally approved or sanctioned affirmative action program.
- (b) A New Jersey Certificate of Employee Information Report Approval.
- (c) If the Contractor cannot present "a" or "b", the Contractor is required to submit a completed Employee Information Report (Form AA302). This form will be made available to the Contractor by the County of Ocean.**

QUESTIONS BELOW MUST BE ANSWERED BY ALL CONTRACTORS ON THE AFFIRMATIVE ACTION DOCUMENT:

1. Do you have a Federally approved or sanctioned Affirmative Action Program?

If yes, please upload a photocopy of such approval.

2. Do you have a State of New Jersey "Certificate of Employee Information Report" approval?

If yes, please upload a photocopy of such certificate.

Please note, the only acceptable file forms are as follows:

Documents (doc, docx, rtf, txt, xls, xlsx, pdf)

Images (jpg, png, bmp, tif)

Copy of Bidder's New Jersey Business Registration Certificate

Please use this area to upload your company's BRC.

Use this link to verify your company's BRC:

https://www1.state.nj.us/TYTR_BRC/jsp/BRCLoginJsp.jsp

Please note that a BRC is not required at the time of bid submission but shall be required prior to the award of a contract.

Please note, the only acceptable file forms are as follows:

Documents (doc, docx, rtf, txt, xls, xlsx, pdf)

Images (jpg, png, bmp, tif)

Mandatory Equal Employment Opportunity Statement*

Does the BIDDER comply with the [#Mandatory Equal Employment Opportunity Statement?](#)

Yes

No

*Response required

Americans with Disabilities Act Provisions*

Does the BIDDER comply with the [#Americans with Disabilities Act Provisions?](#)

Yes

No

*Response required

Descriptive Literature and Warranty Details*

Please supply all descriptive literature and warranty details for all items being bid as well as a list of all diagnostic tools and testing equipment, if applicable.

Please note, the only acceptable file forms are as follows:

Documents (doc, docx, rtf, txt, xls, xlsx, pdf)

Images (jpg, png, bmp, tif)

*Response required

Compliance Pages*

Please download the attached Compliance Pages. Complete each compliance line by placing a check mark in the box for YES or NO. When completed, upload the document here. If you are taking any exceptions to any of the compliance lines, please list and explain each exception in detail on company letterhead. Please upload the exceptions letter with the completed Compliance Pages.

- [COMPLIANCE PAGES - SOLAR_PO...](#)

*Response required

ADDITIONAL VENDOR DOCUMENTATION

Please submit any additional information you wish to be considered as part of your bid package.

Please note, the only acceptable file forms are as follows:

**Documents (doc, docx, rtf, txt, xls, xlsx, pdf)
Images (jpg, png, bmp, tif)**

Acknowledgement of Submission of Forms from Current Bid Package*

Bidders shall complete all documents and acknowledge all terms included with the bid package. All documents should be from this bid package as forms change frequently and the most updated forms are provided in this specification. The forms must not be dated or executed prior to the date of advertising. Failure to follow these instructions is cause for rejection.

Please confirm

*Response required

Submission of Bid Package*

By submitting a response to this solicitation, the Vendor understands and acknowledges that all required documents to this solicitation must be submitted and that failure to do so may be cause for rejection.

Bidder also understands that only one (1) bid submission shall be considered. Please DO NOT Submit a manual bid response. Submitting a manual response in addition to the electronic response is cause for rejection of your bid.

Please confirm

*Response required

MANDATORY EQUAL EMPLOYMENT OPPORTUNITY

N.J.S.A. 10:5-31 et seq. (P.L. 1975, C. 127)

N.J.A.C. 17:27

GOODS, PROFESSIONAL SERVICE AND GENERAL SERVICE CONTRACTS

During the performance of this contract, the contractor agrees as follows:

The contractor or subcontractor, where applicable, will not discriminate against any employee or applicant for employment because of age, race, creed, color, national origin, ancestry, marital status, affectional or sexual orientation, gender identity or expression, disability, nationality or sex. Except with respect to affectional or sexual orientation and gender identity or expression, the contractor will ensure that equal employment opportunity is afforded to such applicants in recruitment and employment, and that employees are treated during employment, without regard to their age, race, creed, color, national origin, ancestry, marital status, affectional or sexual orientation, gender identity or expression, disability, nationality or sex. Such equal employment opportunity shall include, but not be limited to the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the Public Agency Compliance Officer setting forth provisions of this nondiscrimination clause.

The contractor or subcontractor, where applicable will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to age, race, creed, color, national origin, ancestry, marital status, affectional or sexual orientation, gender identity or expression, disability, nationality or sex.

The contractor or subcontractor will send to each labor union, with which it has a collective bargaining agreement, a notice, to be provided by the agency contracting officer, advising the labor union of the contractor's commitments under this chapter and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

The contractor or subcontractor, where applicable, agrees to comply with any regulations promulgated by the Treasurer pursuant to N.J.S.A. 10:5-31 et seq., as amended and supplemented from time to time and the Americans with Disabilities Act.

The contractor or subcontractor agrees to make good faith efforts to meet targeted county employment goals established in accordance with N.J.A.C. 17:27-5.2.

The contractor or subcontractor agrees to inform in writing its appropriate recruitment agencies including, but not limited to, employment agencies, placement bureaus, colleges, universities, and labor unions, that it does not discriminate on the basis of age, race, creed, color, national origin, ancestry, marital status, affectional or sexual orientation, gender identity or expression, disability, nationality or sex, and that it will discontinue the use of any recruitment agency which engages in direct or indirect discriminatory practices.

The contractor or subcontractor agrees to revise any of its testing procedures, if necessary, to assure that all personnel testing conforms with the principles of job-related testing, as established by the statutes and court decisions of the State of New Jersey and as established by applicable Federal law and applicable Federal court decisions.

In conforming with the targeted employment goals, the contractor or subcontractor agrees to review all procedures relating to transfer, upgrading, downgrading and layoff to ensure that all such actions are taken without regard to age, race, creed, color, national origin, ancestry, marital status, affectional or sexual

orientation, gender identity or expression, disability, nationality or sex, consistent with the statutes and court decisions of the State of New Jersey, and applicable Federal law and applicable Federal court decisions.

The contractor shall submit to the public agency, after notification of award but prior to execution of a goods and services contract, one of the following three documents:

- Letter of Federal Affirmative Action Plan Approval
- Certificate of Employee Information Report
- Employee Information Report Form AA302 (electronically provided by the Division and distributed to the public agency through the Division's website at www.state.nj.us/treasury/contract_compliance)

The contractor and its subcontractors shall furnish such reports or other documents to the Division of Purchase & Property, CCAU, EEO Monitoring Program as may be requested by the office from time to time in order to carry out the purposes of these regulations, and public agencies shall furnish such information as may be requested by the Division of Purchase & Property, CCAU, EEO Monitoring Program for conducting a compliance investigation pursuant to **Subchapter 10 of the Administrative Code at N.J.A.C. 17:27.**

AMERICANS WITH DISABILITIES ACT

Equal Opportunity For Individuals With Disabilities

The CONTRACTOR and the COUNTY do hereby agree that the provisions of title II of the Americans with Disabilities Act of 1990 (the "Act") (42 U.S.C. 12101 et seq.), which prohibits discrimination on the basis of disability by public entities in all services, programs and activities provided or made available by public entities, and the rules and regulations promulgated pursuant thereto, are made a part of this contract. In providing any aid, benefit, or service on behalf of the COUNTY pursuant to this contract, the CONTRACTOR agrees that the performance shall be in strict compliance with the Act. In the event that the CONTRACTOR, its agents, servants, employees, or subcontractors violate or are alleged to have violated the Act during the performance of this contract, the CONTRACTOR shall defend the COUNTY in any action or administrative proceeding commenced pursuant to this Act. The CONTRACTOR shall indemnify, protect and save harmless the COUNTY, its agents, servants and employees from and against any and all suits, claims, losses, demands, or damages of whatever kind or nature arising out of or claimed to arise out of the alleged violation. The CONTRACTOR shall, at its own expense, appear, defend and pay any and all charges for legal services and any and all costs and other expenses arising from such action or administrative proceeding or incurred in connection therewith. In any and all complaints brought pursuant to the COUNTY'S grievance procedure, the CONTRACTOR agrees to abide by any decision of the COUNTY which is rendered pursuant to said grievance procedure. If any action or administrative proceeding results in an award of damages against the COUNTY or if the COUNTY incurs any expense to cure a violation of the ADA which has been brought pursuant to its grievance procedure, the CONTRACTOR shall satisfy and discharge the same at its own expense.

The COUNTY shall, as soon as practicable after a claim has been made against it, give written notice thereof to the CONTRACTOR along with full and complete particulars of the claim. If any action or administrative proceeding is brought against the COUNTY or any of its agents, servants and employees, the COUNTY shall expeditiously forward or have forwarded to the CONTRACTOR every demand, complaint, notice, summons, pleading, or other process received by the COUNTY or its representatives.

It is expressly agreed and understood that any approval by the COUNTY of the services provided by the CONTRACTOR pursuant to this contract will not relieve the CONTRACTOR of the obligation to comply with the Act and to defend, indemnify, protect and save harmless the COUNTY pursuant to this paragraph.

It is further agreed and understood that the COUNTY assumes no obligation to indemnify or save harmless the CONTRACTOR, its agents, servants, employees and subcontractors for any claim which may arise out of their performance of this Agreement. Furthermore, the CONTRACTOR expressly understands and agrees that the provision of this indemnification clause shall in no way limit the CONTRACTOR'S obligations assumed in this Agreement, nor shall they be construed to relieve the CONTRACTOR from any liability, nor preclude the COUNTY from taking any other actions available to it under any other provisions of this Agreement or otherwise at law.

INTENT

CONTRACT TERMS

The contract shall be for one (1) year from date of award, or until delivery is complete unless otherwise stated. The County reserves the right to extend the term of the contract pursuant to N.J.S.A. 40A:11-15.

INTENT

The purpose of this bid package is to provide the County of Ocean with a Contractor who will supply the materials described and specified herein.

NO ASSIGNMENT

This agreement shall not be assigned without the written consent of the County of Ocean which consent shall not be unreasonably withheld. Assignee shall promptly prepare and complete such documents as the County shall require.

OWNERSHIP DISCLOSURE

All contractors shall comply with all laws governing the disclosure of all stockholders or partners, as included in N.J.S.A. 52:25-24.2.

BID REVIEW

Bids may be reviewed at the bid opening and results will be made available online through the County's procurement portal once the bid meeting has concluded. Additionally, bid results are available in the Ocean County Purchasing Department on the day following the bid openings for any interested party that may wish to review them.

EVALUATION

The quality of the equipment supplied, their conformity with the specifications, their suitability to requirements, delivery terms, guaranty clauses, price of the materials shall all be taken into consideration. Where equivalent equipment is offered, the County will determine if the proposed item is equal or better than that specified.

AVAILABILITY OF FUNDS

The County's obligation hereunder is contingent upon the availability of appropriated funds from which payment for contract purposes can be made. No legal liability on the part of the County for payment of any money shall arise unless, and until funds are made available each year to the Ocean County Purchasing Agent.

MODIFICATIONS AND WITHDRAWALS

Bids may be withdrawn from the bidder prior to the time fixed for opening. No right for withdrawal exists after the bid has been opened. Written request for withdrawal shall be signed by the bidder or proper corporate officers.

USE OF OTHER NAMES AND REFERENCES

Unless otherwise stated, the use of manufacturers' names and product numbers are for descriptive purposes, and establishing general quality levels only. They are not intended to be restrictive. Bidders are required to state exactly what they intend to furnish, otherwise it is fully understood that they shall furnish all items as stated.

QUALITY

The materials and supplies called for herein, shall be the best of their grade and types, prepared according to the best available standards or accepted formulas, and thoroughly tested and subjected to rigid examinations and standardization. Items not meeting these requirements shall be replaced at no cost to the County upon due notice of deficiency.

WARRANTY

Manufacturer's warranty shall apply.

MODEL INFORMATION REQUIRED

The manufacturer, make or exact models proposed as substitutes shall also be submitted on bidder's letterhead with any proposal contended to be "equivalent."

AVAILABILITY AND DELIVERY

The bidder should indicate the number of days required for the delivery After Receipt of Order (A.R.O.). If not submitted with the bid proposal, the County reserves the right to request this information prior to the award of contract.

TRANSITIONAL PERIOD

In the event services are terminated by contract expiration or by voluntary termination by either the Contractor or the County of Ocean, the Contractor shall continue all terms and conditions of said contract for a period not to exceed one (1) month at the County's request.

COMPLIANCE TO MINIMUM BID REQUIREMENTS / EQUIVALENT PROPOSALS

It is the intent of these specifications to describe and govern the purchase of a new and unused SOLAR POWERED LED SIGNS AND SOLAR POWERED SPEED RADAR SIGNS with any and all accessories as noted herein. The unit shall conform to the highest quality of manufacturing and design standards. Any item or items not specifically mentioned herein, but which would be required to produce a complete working unit, shall be supplied by the vendor.

All bidders must answer compliance questions in full. A general exception cannot be taken for any paragraph or item. If a bidder is basing his proposal on equipment other than what is specified in these bid documents and wishes the equipment he proposes to be considered as an "approved equal", he shall submit on a separate sheet, in the exact format of the technical specifications contained herein, an item by item description of that which he proposes to substitute including any and all variations from or exceptions to the conditions and specifications of this bid. Failure to comply may result in rejection of bid.

CURRENT BID RESULTS

If there is a current contract in place for this bid, those results may be obtained by accessing our legacy portal at the below link:

<http://webhost.co.ocean.nj.us/ocbidportal.nsf>

Once you have clicked the link, click "Formal Bids", "Awarded Formal Bids". There you will be able to see all active contracts.

SPECIFICATIONS AND SCOPE OF WORK

Scope of Work

Please see Question #8 in the Vendor Questionnaire for the Compliance Pages for this bid. Please download, Complete, and Upload the Compliance pages to the appropriate question in the vendor questionnaire.

PRICING PROPOSAL

ITEM #1 - 30" SOLAR POWERED LED SIGN ASSEMBLY

Line Item	Description	Quantity	Unit of Measure	Unit Cost	Total Cost	No Bid	Comments
1	30" Solar Powered LED Sign Assembly, As Specified, or Equal	30	EA				
OPTIONS:							
1A	Steel Sign Post, As Specified	30	EA				
1B	Battery for Solar-Powered LED Sign Assembly, As Specified	30	EA				
1C	Solar Panel for Solar-Powered LED Sign Assembly, As Specified	30	EA				
TOTAL							

ITEM #2 - 36" SOLAR POWERED LED SIGN ASSEMBLY

Line Item	Description	Quantity	Unit of Measure	Unit Cost	Total Cost	No Bid	Comments
2	36" Solar Powered LED Sign Assembly, As Specified, or Equal	30	EA				
OPTIONS:							
2A	Steel Sign Post, As Specified	30	EA				
2B	Battery for Solar-Powered LED Sign Assembly, As Specified	30	EA				
2C	Solar Panel for Solar-Powered LED Sign Assembly, As Specified	30	EA				
TOTAL							

ITEM #3 - 48" SOLAR POWERED LED SIGN ASSEMBLY

Line Item	Description	Quantity	Unit of Measure	Unit Cost	Total Cost	No Bid	Comments
3	48" Solar Powered LED Sign Assembly, As Specified, or Equal	30	EA				
OPTIONS:							
3A	Steel Sign Post, As Specified	30	EA				
3B	Battery for Solar-Powered LED Sign Assembly, As Specified	30	EA				
3C	Solar Panel for Solar-Powered LED Sign Assembly, As Specified	30	EA				
TOTAL							

ITEM #4 - 48" X 24" SOLAR POWERED LED SIGN ASSEMBLY

Line Item	Description	Quantity	Unit of Measure	Unit Cost	Total Cost	No Bid	Comments
4	48" X 24" Solar Powered LED Sign Assembly, As Specified, or Equal	30	EA				
OPTIONS:							
4A	Steel Sign Post, As Specified	30	EA				
4B	Battery for Solar-Powered LED Sign Assembly, As Specified	30	EA				
4C	Solar Panel for Solar-Powered LED Sign Assembly, As Specified	30	EA				
TOTAL							

ITEM #5 - 24" X 30" SOLAR POWERED LED SIGN ASSEMBLY

Line Item	Description	Quantity	Unit of Measure	Unit Cost	Total Cost	No Bid	Comments
5	24" X 30" Solar Powered LED Sign Assembly, As Specified, or Equal	30	EA				
OPTIONS:							
5A	Steel Sign Post, As Specified	30	EA				
5B	Battery for Solar-Powered LED Sign Assembly, As Specified	30	EA				
5C	Solar Panel for Solar-Powered LED Sign Assembly, As Specified	30	EA				
TOTAL							

ITEM #6 - 30" X 36" SOLAR POWERED LED SIGN ASSEMBLY

Line Item	Description	Quantity	Unit of Measure	Unit Cost	Total Cost	No Bid	Comments
6	30" X 36" Solar Powered LED Sign Assembly, As Specified, or Equal	30	EA				
OPTIONS:							
6A	Steel Sign Post, As Specified	30	EA				
6B	Battery for Solar-Powered LED Sign Assembly, As Specified	30	EA				
6C	Solar Panel for Solar-Powered LED Sign Assembly, As Specified	30	EA				
TOTAL							

SOLAR SPEED RADAR SIGNS AND ACCESSORIES, ITEM #'S 7 - 12

Line Item	Description	Quantity	Unit of Measure	Unit Cost	Total Cost	No Bid	Comments
7	Solar Speed Radar Sign, 12", Traffic Logix Safespace Evolution 12, As Specified, or Equal	30	EA				
8	Solar Speed Radar Sign, 15", Traffic Logix Safespace 450 Full Radar Speed Sign, As Specified, or Equal	30	EA				
9	Steel Sign Post, As Specified, or Equal	30	EA				
10	Battery for Solar-Powered LED Sign Assembly, As Specified, or Equal	30	EA				
11	Solar Panel for Solar-Powered LED Sign Assembly, As Specified, or Equal	30	EA				
12	Solar-Powered LED Pedestrian Crossing Warning System with Push Buttons, As Specified, or Equal	30	EA				

ITEM #1 - 30" SOLAR POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL

COMPLIANCE

YES **NO**

DESCRIPTION:

Solar Powered and fully self-contained sign assembly conforming to the U.S. Department of Transportation Federal Highway Administration 2009 revision 2 May 2012 Manual on Uniform Traffic Control Devices section 2A.08 on retro reflectivity and illumination.

MATERIALS

The assembly shall include the following items:

SIGN:

Sign blanks shall be .080" gauge aluminum

Sheeting shall be 3M DG Type IX or approved equal, with anti-graffiti overlay

Sign assembly shall use anti-vandal fastener to mount components to sign and sign for fixture

LED:

Sign assembly shall utilize high-power 1W LEDs that provide a maximum light intensity of up to 600,000 mcd (millicandelas) with a viewing angle of 20 degrees.

The various sign faces shall have a color and minimum number of LEDs as noted below:

	<u>SIGN</u>	<u>LED Color</u>	<u>Minimum Number</u>	<input type="checkbox"/>	<input type="checkbox"/>
Ped Crossing 30" x 30" (Facing) Fluorescent Yellow Green	W11-2	White or Yellow	8	<input type="checkbox"/>	<input type="checkbox"/>
Turn Symbol 30" x 30" (Facing) Yellow	W1-1L	White or Yellow	8	<input type="checkbox"/>	<input type="checkbox"/>
Turn Symbol 30" x 30" (Facing) Yellow	W1-1R	White or Yellow	8	<input type="checkbox"/>	<input type="checkbox"/>
Curve Symbol 30" x 30" (Facing) Yellow	W1-2L	White or Yellow	8	<input type="checkbox"/>	<input type="checkbox"/>
Curve Symbol 30" x 30" (Facing) Yellow	W1-2R	White or Yellow	8	<input type="checkbox"/>	<input type="checkbox"/>
Stop Ahead 30" x 30" Stop Symbol, White on Red, Border & Arrow Black On Yellow (Facing)	W3-1	White or Yellow	8	<input type="checkbox"/>	<input type="checkbox"/>
Yield Ahead 30" x 30" Stop Symbol, White on Red, Border & Arrow Black On Yellow (Facing)	W3-2	White or Yellow	8	<input type="checkbox"/>	<input type="checkbox"/>

ITEM #1 – 30" SOLAR-POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL (CONT'D)

				<u>COMPLIANCE</u>	
				<u>YES</u>	<u>NO</u>
	<u>SIGN</u>	<u>LED Color</u>	<u>Minimum Number</u>		
Signal Ahead 30" x 30" Symbol, Border & Arrow Black on (Facing) Yellow	W3-3	White or Yellow	8	<input type="checkbox"/>	<input type="checkbox"/>
<u>LED: (CONT'D)</u>					
Each LED shall be sealed in a heat-dissipating plastic enclosure to provide resistance to weather and vibration.				<input type="checkbox"/>	<input type="checkbox"/>
Each LED enclosure shall be mounted to the sign in a 1" hole and ultrasonically welded or mechanically fastened to the sign assembly.				<input type="checkbox"/>	<input type="checkbox"/>
All LEDs shall be wired in strings to activate simultaneously (as per MUTCD standard).				<input type="checkbox"/>	<input type="checkbox"/>
All wire used shall conform to military specification MIL-W-16878D, Type D, vinyl nylon jacket.				<input type="checkbox"/>	<input type="checkbox"/>
Wiring shall be covered and secured to the sign assembly in a weather resistant enclosure.				<input type="checkbox"/>	<input type="checkbox"/>
All LED connectors shall conform to Ingress Protection IP-65 rating or better.				<input type="checkbox"/>	<input type="checkbox"/>
<u>SOLAR PANEL:</u>					
Solar panels shall be sized appropriately so as to maintain the battery sufficiently to ensure operation in the Ocean County Region.				<input type="checkbox"/>	<input type="checkbox"/>
All panels shall be mounted to an aluminum plate and bracket at an angle of 45° to 60°.				<input type="checkbox"/>	<input type="checkbox"/>
All fasteners used shall be anti-vandal.				<input type="checkbox"/>	<input type="checkbox"/>
Wire used shall conform to military specification MIL-W-16878D, Type D, vinyl nylon jacket.				<input type="checkbox"/>	<input type="checkbox"/>
The solar panel assembly shall be mounted securely to the sign assembly.				<input type="checkbox"/>	<input type="checkbox"/>
All solar panel connectors shall conform to Ingress Protection IP-65 rating or better.				<input type="checkbox"/>	<input type="checkbox"/>
<u>CONTROL CIRCUIT:</u>					
Control circuit shall have the capability of independently flashing dual outputs.				<input type="checkbox"/>	<input type="checkbox"/>
Flashing output shall be 50 to 60 flashes per minute with 100 ms duration on time. Outputs shall reach the output current as programmed for the duration of the 100 ms pulse.				<input checked="" type="checkbox"/>	<input type="checkbox"/>
Output current shall be individually programmable for daytime and nighttime operation for the purpose of adjusting to ambient lighting conditions. Mode will automatically be determined by solar panel charge input.				<input type="checkbox"/>	<input type="checkbox"/>
Control circuit covering shall be waterproof and anti-vandal.				<input type="checkbox"/>	<input type="checkbox"/>
Control circuit shall remain operational between the temperatures of -40°F and 176°F.				<input type="checkbox"/>	<input type="checkbox"/>

All circuit connectors shall conform to Ingress Protection IP-65 rating or better.

ITEM #1 – 30" SOLAR-POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL (CONT'D)

COMPLIANCE

YES **NO**

BATTERY:

Battery packs shall be 4.8V, 14 Ah nickel metal hydride (NiMH).

Batteries shall be sealed in a plastic film to provide resistance to moisture and corrosion.

Batteries shall remain operational between the temperatures of -40°F and 176°F, and shall utilize overheat protection.

All battery connectors shall conform to Ingress Protection IP-65 rating or better.

Batteries shall not weigh more than 1.8 lbs.

Batteries shall have a waterproof connection

Batteries shall be sealed and spill-proof

Batteries shall have an in-line power connector

Batteries shall be replaceable independently of other components

Batteries shall be fused for short circuit protection

Batteries shall be protected from overheating by means of a thermocouple sensor

Batteries shall have the following dimensions:

 Grouped: 2.66" H X 2.66" W X 2.78" D

 Stacked: 1.34" H X 1.34" W X 10.6" D

 Flatpack: 5.24" H X 2.68" W X 0.67" D

WARRANTY:

Manufacturer shall offer (at minimum) one (1) year of unconditional warranty against all defects in material and workmanship.

ITEM #1 – 30" SOLAR-POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL (CONT'D)

COMPLIANCE
YES **NO**

OPTIONS:

1A – Steel Sign Post, As Specified

Description:

Nucor RIB-BAK U-Channel Sign Support, galvanized, without breakaway (or approved equal).

Measurements:

10' length

3-1/16" width

3/16" holes on 1" centers

3 lbs/ft linear weight

1B - Battery For Solar-Powered LED Sign Assembly, As Specified

Description:

6V, 14 Ah nickel metal hydride (NiMH) battery pack compatible with TAPCO® Blinkersigns®.

Materials

Batteries shall be sealed in a plastic film to provide resistance to moisture and corrosion.

Battery:

Batteries shall not weigh more than 1.8 lbs.

Batteries shall have a waterproof connection

Batteries shall be sealed and spill-proof

Batteries shall have an in-line power connector

Batteries shall be replaceable independently of other components

Batteries shall be fused for short circuit protection

Batteries shall be protected from overheating by means of a thermocouple sensor

Batteries shall have the following dimensions:

Grouped: 2.66" H X 2.66" W X 2.78" D

Stacked: 1.34" H X 1.34" W X 10.6" D

Flatpack: 5.24" H X 2.68" W X 0.67" D

ITEM #1 – 30" SOLAR-POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL (CONT'D)

COMPLIANCE
YES **NO**

OPTIONS: (CONT'D)

1B - Battery For Solar-Powered Led Sign Assembly, As Specified (Cont'd)

Operation:

Batteries shall remain operational between the temperatures of -40°F and 176°F (-40°C and 80°C), and shall utilize overheat protection.

Electrical:

All battery connectors shall conform to Ingress Protection IP-65 rating or better.

1C - Solar Panel For Solar-Powered LED Sign Assembly, As Specified

Description:

Solar panel compatible with TAPCO® Blinkersigns® and of the correct size and parameters as necessary to maintain operation of a solar-powered LED sign assembly in the Ocean County Region.

Mounting:

The solar panel assembly shall be mounted securely to the sign assembly.

All panels shall be mounted to an aluminum plate and bracket at an angle of 45° to 60°.

Hardware:

All fasteners used shall be anti-vandal.

Electrical:

Wire used shall conform to military specification MIL-W-16878D, Type D, vinyl nylon jacket.

All solar panel connectors shall conform to Ingress Protection IP-65 rating or better.

ITEM #2 - 36" SOLAR POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL

COMPLIANCE

YES **NO**

DESCRIPTION:

Solar Powered and fully self-contained sign assembly conforming to the U.S. Department of Transportation Federal Highway Administration 2009 revision 2 May 2012 Manual on Uniform Traffic Control Devices section 2A.08 on retro reflectivity and illumination.

MATERIALS

The assembly shall include the following items:

SIGN:

Sign blanks shall be .080" gauge aluminum

Sheeting shall be 3M DG Type IX or approved equal, with anti-graffiti overlay

Sign assembly shall use anti-vandal fastener to mount components to sign and sign for fixture

36" Signs shall have four (4) holes punched to allow dual post mounting

LED:

Sign assembly shall utilize high-power 1W LEDs that provide a maximum light intensity of up to 600,000 mcd (millicandelas) with a viewing angle of 20 degrees.

The various sign faces shall have a color and minimum number of LEDs as noted below:

	<u>SIGN</u>	<u>LED Color</u>	<u>Minimum Number</u>	<input type="checkbox"/>	<input type="checkbox"/>
Stop 36" x 36" (Facing)(White on Red)	R1-1	White or Red	8	<input type="checkbox"/>	<input type="checkbox"/>
Yield 36" x 36" x 36" (Facing)(White on Red)	R1-2	White or Red	9	<input type="checkbox"/>	<input type="checkbox"/>
School Crossing (Symbol) 36" x 36" (Facing) Fluorescent Yellow Green/ Black/ Red	S1-1	White or Yellow	6	<input type="checkbox"/>	<input type="checkbox"/>
Ped Crossing 36" x 36" (Facing) Fluorescent Yellow Green	W11-2	White or Yellow	8	<input type="checkbox"/>	<input type="checkbox"/>
Turn Symbol 36" x 36" (Facing) Yellow	W1-1L	White or Yellow	8	<input type="checkbox"/>	<input type="checkbox"/>
Turn Symbol 36" x 36" (Facing) Yellow	W1-1R	White or Yellow	8	<input type="checkbox"/>	<input type="checkbox"/>
Turn Symbol L / speed 36" x 36" (MPH) to be noted at time of order (Facing) Yellow	W1-1a	White or Yellow	8	<input type="checkbox"/>	<input type="checkbox"/>

ITEM #2 - 36" SOLAR POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL (CONT'D)

COMPLIANCE
YES **NO**

LED: (CONT'D)

	<u>SIGN</u>	<u>LED Color</u>	<u>Minimum Number</u>		
Turn Symbol R / speed 36" x 36" (MPH) to be noted at time of order (Facing) Yellow	W1-1a	White or Yellow	8	<input type="checkbox"/>	<input type="checkbox"/>
Curve Symbol 36" x 36" (Facing) Yellow	W1-2L	White or Yellow	8	<input type="checkbox"/>	<input type="checkbox"/>
Curve Symbol 36" x 36" (Facing) Yellow	W1-2R	White or Yellow	8	<input type="checkbox"/>	<input type="checkbox"/>
Curve Symbol L / speed 36" x 36"(MPH) to be noted at time of order (Facing) Yellow	W1-2a	White or Yellow	8	<input type="checkbox"/>	<input type="checkbox"/>
Curve Symbol R / speed 36" x 36" (MPH) to be noted at time of order (Facing) Yellow	W1-2a	White or Yellow	8	<input type="checkbox"/>	<input type="checkbox"/>

Each LED shall be sealed in a heat-dissipating plastic enclosure to provide resistance to weather and vibration.

Each LED enclosure shall be mounted to the sign in a 1” hole and ultrasonically welded or mechanically fastened to the sign assembly.

All LEDs shall be wired in strings to activate simultaneously (as per MUTCD standard).

All wire used shall conform to military specification MIL-W-16878D, Type D, vinyl nylon jacket.

Wiring shall be covered and secured to the sign assembly in a weather resistant enclosure.

All LED connectors shall conform to Ingress Protection IP-65 rating or better.

SOLAR PANEL:

Solar panels shall be sized appropriately so as to maintain the battery sufficiently to ensure operation in the Ocean County Region.

All panels shall be mounted to an aluminum plate and bracket at an angle of 45° to 60°.

All fasteners used shall be anti-vandal.

Wire used shall conform to military specification MIL-W-16878D, Type D, vinyl nylon jacket.

The solar panel assembly shall be mounted securely to the sign assembly.

All solar panel connectors shall conform to Ingress Protection IP-65 rating or better.

ITEM #2 - 36" SOLAR POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL (CONT'D)

	<u>COMPLIANCE</u>	
	<u>YES</u>	<u>NO</u>
<u>CONTROL CIRCUIT:</u>		
Control circuit shall have the capability of independently flashing dual outputs.	<input type="checkbox"/>	<input type="checkbox"/>
Flashing output shall be 50 to 60 flashes per minute with 100 ms duration on time.		
Outputs shall reach the output current as programmed for the duration of the 100 ms pulse.	<input type="checkbox"/>	<input type="checkbox"/>
Output current shall be individually programmable for daytime and nighttime operation for the purpose of adjusting to ambient lighting conditions. Mode will automatically be determined by solar panel charge input.	<input type="checkbox"/>	<input type="checkbox"/>
Control circuit covering shall be waterproof and anti-vandal.	<input type="checkbox"/>	<input type="checkbox"/>
Control circuit shall remain operational between the temperatures of -40°F and 176°F.	<input type="checkbox"/>	<input type="checkbox"/>
All circuit connectors shall conform to Ingress Protection IP-65 rating or better.	<input type="checkbox"/>	<input type="checkbox"/>
<u>BATTERY:</u>		
Battery packs shall be 4.8V, 14 Ah nickel metal hydride (NiMH).	<input type="checkbox"/>	<input type="checkbox"/>
Batteries shall be sealed in a plastic film to provide resistance to moisture and corrosion.	<input type="checkbox"/>	<input type="checkbox"/>
Batteries shall remain operational between the temperatures of -40°F and 176°F, and shall utilize overheat protection.	<input type="checkbox"/>	<input type="checkbox"/>
All battery connectors shall conform to Ingress Protection IP-65 rating or better.	<input type="checkbox"/>	<input type="checkbox"/>
Batteries shall not weigh more than 1.8 lbs.	<input type="checkbox"/>	<input type="checkbox"/>
Batteries shall have a waterproof connection	<input type="checkbox"/>	<input type="checkbox"/>
Batteries shall be sealed and spill-proof	<input type="checkbox"/>	<input type="checkbox"/>
Batteries shall have an in-line power connector	<input type="checkbox"/>	<input type="checkbox"/>
Batteries shall be replaceable independently of other components	<input type="checkbox"/>	<input type="checkbox"/>
Batteries shall be fused for short circuit protection	<input type="checkbox"/>	<input type="checkbox"/>
Batteries shall be protected from overheating by means of a thermocouple sensor	<input type="checkbox"/>	<input type="checkbox"/>
Batteries shall have the following dimensions:		
Grouped: 2.66" H X 2.66" W X 2.78" D	<input type="checkbox"/>	<input type="checkbox"/>
Stacked: 1.34" H X 1.34" W X 10.6" D	<input type="checkbox"/>	<input type="checkbox"/>
Flatpack: 5.24" H X 2.68" W X 0.67" D	<input type="checkbox"/>	<input type="checkbox"/>
<u>WARRANTY:</u>		
Manufacturer shall offer (at minimum) one (1) year of unconditional warranty against all defects in material and workmanship.	<input type="checkbox"/>	<input type="checkbox"/>

ITEM #2 - 36" SOLAR POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL (CONT'D)

COMPLIANCE
YES **NO**

OPTIONS:

2A – Steel Sign Post, As Specified

Description:

Nucor RIB-BAK U-Channel Sign Support, galvanized (or approved equal).

Measurements:

10' length

3-1/16" width

3/16" holes on 1" centers

3 lbs/ft linear weight

2B - Battery For Solar-Powered LED Sign Assembly, As Specified

Description:

6V, 14 Ah nickel metal hydride (NiMH) battery pack compatible with TAPCO® Blinkersigns®.

Materials

Batteries shall be sealed in a plastic film to provide resistance to moisture and corrosion.

Battery:

Batteries shall not weigh more than 1.8 lbs.

Batteries shall have a waterproof connection

Batteries shall be sealed and spill-proof

Batteries shall have an in-line power connector

Batteries shall be replaceable independently of other components

Batteries shall be fused for short circuit protection

Batteries shall be protected from overheating by means of a thermocouple sensor

Batteries shall have the following dimensions:

Grouped: 2.66" H X 2.66" W X 2.78" D

Stacked: 1.34" H X 1.34" W X 10.6" D

Flatpack: 5.24" H X 2.68" W X 0.67" D

ITEM #2 - 36" SOLAR POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL (CONT'D)

COMPLIANCE
YES **NO**

OPTIONS: (CONT'D)

2B - Battery For Solar-Powered LED Sign Assembly, As Specified (Cont'd)

Operation:

Batteries shall remain operational between the temperatures of -40°F and 176°F (-40°C and 80°C), and shall utilize overheat protection.

Electrical:

All battery connectors shall conform to Ingress Protection IP-65 rating or better.

2C - Solar Panel For Solar-Powered LED Sign Assembly, As Specified

Description:

Solar panel compatible with TAPCO® Blinkersigns® and of the correct size and parameters as necessary to maintain operation of a solar-powered LED sign assembly in the Ocean County Region.

Mounting:

The solar panel assembly shall be mounted securely to the sign assembly.

All panels shall be mounted to an aluminum plate and bracket at an angle of 45° to 60°.

Hardware:

All fasteners used shall be anti-vandal.

Electrical:

Wire used shall conform to military specification MIL-W-16878D, Type D, vinyl nylon jacket.

All solar panel connectors shall conform to Ingress Protection IP-65 rating or better.

ITEM #3 - 48" SOLAR POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL

COMPLIANCE

YES **NO**

DESCRIPTION:

Solar Powered and fully self-contained sign assembly conforming to the U.S. Department of Transportation Federal Highway Administration 2009 revision 2 May 2012 Manual on Uniform Traffic Control Devices section 2A.08 on retro reflectivity and illumination.

MATERIALS

The assembly shall include the following items:

SIGN:

Sign blanks shall be .080" gauge aluminum

Sheeting shall be 3M DG Type IX or approved equal, with anti-graffiti overlay

Sign assembly shall use anti-vandal fastener to mount components to sign and sign for fixture

48" Signs shall have four (4) holes punched to allow dual post mounting

LED:

Sign assembly shall utilize high-power 1W LEDs that provide a maximum light intensity of up to 600,000 mcd (millicandelas) with a viewing angle of 20 degrees.

The sign faces shall have a color and minimum number of LEDs as noted below:

	<u>SIGN</u>	<u>LED Color</u>	<u>Minimum Number</u>		
Stop 48" x 48" (Facing)(White on Red)	R1-1	White or Red	8	<input type="checkbox"/>	<input type="checkbox"/>
Each LED shall be sealed in a heat-dissipating plastic enclosure to provide resistance to weather and vibration.				<input type="checkbox"/>	<input type="checkbox"/>
Each LED enclosure shall be mounted to the sign in a 1" hole and ultrasonically welded or mechanically fastened to the sign assembly.				<input type="checkbox"/>	<input type="checkbox"/>
All LEDs shall be wired in strings to activate simultaneously (as per MUTCD standard).				<input type="checkbox"/>	<input type="checkbox"/>
All wire used shall conform to military specification MIL-W-16878D, Type D, vinyl nylon jacket.				<input type="checkbox"/>	<input type="checkbox"/>
Wiring shall be covered and secured to the sign assembly in a weather resistant enclosure.				<input type="checkbox"/>	<input type="checkbox"/>
All LED connectors shall conform to Ingress Protection IP-65 rating or better.				<input type="checkbox"/>	<input type="checkbox"/>

ITEM #3 - 48" SOLAR POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL (CONT'D)

	<u>COMPLIANCE</u>	
	<u>YES</u>	<u>NO</u>
<u>SOLAR PANEL:</u>		
Solar panels shall be sized appropriately so as to maintain the battery sufficiently to ensure operation in the Ocean County Region.	<input type="checkbox"/>	<input type="checkbox"/>
All panels shall be mounted to an aluminum plate and bracket at an angle of 45° to 60°.	<input type="checkbox"/>	<input type="checkbox"/>
All fasteners used shall be anti-vandal.	<input type="checkbox"/>	<input type="checkbox"/>
Wire used shall conform to military specification MIL-W-16878D, Type D, vinyl nylon jacket.	<input type="checkbox"/>	<input type="checkbox"/>
The solar panel assembly shall be mounted securely to the sign assembly.	<input type="checkbox"/>	<input type="checkbox"/>
All solar panel connectors shall conform to Ingress Protection IP-65 rating or better.	<input type="checkbox"/>	<input type="checkbox"/>
<u>CONTROL CIRCUIT:</u>		
Control circuit shall have the capability of independently flashing dual outputs.	<input type="checkbox"/>	<input type="checkbox"/>
Flashing output shall be 50 to 60 flashes per minute with 100 ms duration on time. Outputs shall reach the output current as programmed for the duration of the 100 ms pulse.	<input type="checkbox"/>	<input type="checkbox"/>
Output current shall be individually programmable for daytime and nighttime operation for the purpose of adjusting to ambient lighting conditions. Mode will automatically be determined by solar panel charge input.	<input type="checkbox"/>	<input type="checkbox"/>
Control circuit covering shall be waterproof and anti-vandal.	<input type="checkbox"/>	<input type="checkbox"/>
Control circuit shall remain operational between the temperatures of -40°F and 176°F.	<input type="checkbox"/>	<input type="checkbox"/>
All circuit connectors shall conform to Ingress Protection IP-65 rating or better.	<input type="checkbox"/>	<input type="checkbox"/>
<u>BATTERY:</u>		
Battery packs shall be 4.8V, 14 Ah nickel metal hydride (NiMH).	<input type="checkbox"/>	<input type="checkbox"/>
Batteries shall be sealed in a plastic film to provide resistance to moisture and corrosion.	<input type="checkbox"/>	<input type="checkbox"/>
Batteries shall remain operational between the temperatures of -40°F and 176°F, and shall utilize overheat protection.	<input type="checkbox"/>	<input type="checkbox"/>
All battery connectors shall conform to Ingress Protection IP-65 rating or better.	<input type="checkbox"/>	<input type="checkbox"/>
Batteries shall not weigh more than 1.8 lbs.	<input type="checkbox"/>	<input type="checkbox"/>
Batteries shall have a waterproof connection	<input type="checkbox"/>	<input type="checkbox"/>
Batteries shall be sealed and spill-proof	<input type="checkbox"/>	<input type="checkbox"/>
Batteries shall have an in-line power connector	<input type="checkbox"/>	<input type="checkbox"/>
Batteries shall be replaceable independently of other components	<input type="checkbox"/>	<input type="checkbox"/>
Batteries shall be fused for short circuit protection	<input type="checkbox"/>	<input type="checkbox"/>
Batteries shall be protected from overheating by means of a thermocouple sensor	<input type="checkbox"/>	<input type="checkbox"/>

ITEM #3 - 48" SOLAR POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL (CONT'D)

COMPLIANCE
YES **NO**

BATTERY: (CONT'D)

Batteries shall have the following dimensions:

Grouped: 2.66" H X 2.66" W X 2.78" D

Stacked: 1.34" H X 1.34" W X 10.6" D

Flatpack: 5.24" H X 2.68" W X 0.67" D

WARRANTY:

Manufacturer shall offer (at minimum) one (1) year of unconditional warranty against all defects in material and workmanship.

OPTIONS:

3A – Steel Sign Post, As Specified

Description:

Nucor RIB-BAK U-Channel Sign Support, galvanized (or approved equal).

Measurements:

10' length

3-1/16" width

3/16" holes on 1" centers

3 lbs/ft linear weight

3B - Battery For Solar-Powered LED Sign Assembly, As Specified

Description:

6V, 14 Ah nickel metal hydride (NiMH) battery pack compatible with TAPCO® Blinkersigns®.

Materials

Batteries shall be sealed in a plastic film to provide resistance to moisture and corrosion.

Battery:

Batteries shall not weigh more than 1.8 lbs.

Batteries shall have a waterproof connection

Batteries shall be sealed and spill-proof

Batteries shall have an in-line power connector

Batteries shall be replaceable independently of other components

ITEM #3 - 48" SOLAR POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL (CONT'D)

COMPLIANCE
YES **NO**

OPTIONS: (CONT'D)

3B - Battery For Solar-Powered LED Sign Assembly, As Specified (Cont'd)

Battery: (Cont'd)

Batteries shall be fused for short circuit protection	<input type="checkbox"/>	<input type="checkbox"/>
Batteries shall be protected from overheating by means of a thermocouple sensor	<input type="checkbox"/>	<input type="checkbox"/>
Batteries shall have the following dimensions:		
Grouped: 2.66" H X 2.66" W X 2.78" D	<input type="checkbox"/>	<input type="checkbox"/>
Stacked: 1.34" H X 1.34" W X 10.6" D	<input type="checkbox"/>	<input type="checkbox"/>
Flatpack: 5.24" H X 2.68" W X 0.67" D	<input type="checkbox"/>	<input type="checkbox"/>

Operation:

Batteries shall remain operational between the temperatures of -40°F and 176°F (-40°C and 80°C), and shall utilize overheat protection.	<input type="checkbox"/>	<input type="checkbox"/>
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Electrical:

All battery connectors shall conform to Ingress Protection IP-65 rating or better.	<input type="checkbox"/>	<input type="checkbox"/>
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3C - Solar Panel For Solar-Powered LED Sign Assembly, As Specified

Description:

Solar panel compatible with TAPCO® Blinkersigns® and of the correct size and parameters as necessary to maintain operation of a solar-powered LED sign assembly in the Ocean County Region.	<input type="checkbox"/>	<input type="checkbox"/>
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Mounting:

The solar panel assembly shall be mounted securely to the sign assembly.	<input type="checkbox"/>	<input type="checkbox"/>
All panels shall be mounted to an aluminum plate and bracket at an angle of 45° to 60°.	<input type="checkbox"/>	<input type="checkbox"/>

Hardware:

All fasteners used shall be anti-vandal.	<input type="checkbox"/>	<input type="checkbox"/>
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Electrical:

Wire used shall conform to military specification MIL-W-16878D, Type D, vinyl nylon jacket.	<input type="checkbox"/>	<input type="checkbox"/>
All solar panel connectors shall conform to Ingress Protection IP-65 rating or better.	<input type="checkbox"/>	<input type="checkbox"/>

ITEM #4 - 48" x 24" SOLAR POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL

DESCRIPTION:

Solar Powered and fully self-contained sign assembly conforming to the U.S. Department of Transportation Federal Highway Administration 2009 revision 2 May 2012 Manual on Uniform Traffic Control Devices section 2A.08 on retro reflectivity and illumination.

MATERIALS

The assembly shall include the following items:

SIGN:

- Sign blanks shall be .080" gauge aluminum
- Sheeting shall be 3M DG Type IX or approved equal, with anti-graffiti overlay
- Sign assembly shall use anti-vandal fastener to mount components to sign and sign for fixture
- 48" Signs shall have four (4) holes punched to allow dual post mounting

LED:

Sign assembly shall utilize high-power 1W LEDs that provide a maximum light intensity of up to 600,000 mcd (millicandelas) with a viewing angle of 20 degrees.

The sign faces shall have a color and minimum number of LEDs as noted below:

	<u>SIGN</u>	<u>LED Color</u>	<u>Minimum Number</u>		
Large Arrow Left 48" x 24" (Facing) Black on Yellow	W1-6L	White or Yellow	8	<input type="checkbox"/>	<input type="checkbox"/>
Large Arrow Right 48" x 24" (Facing) Black on Yellow	W1-6R	White or Yellow	8	<input type="checkbox"/>	<input type="checkbox"/>

Each LED shall be sealed in a heat-dissipating plastic enclosure to provide resistance to weather and vibration.

Each LED enclosure shall be mounted to the sign in a 1" hole and ultrasonically welded or mechanically fastened to the sign assembly.

All LEDs shall be wired in strings to activate simultaneously (as per MUTCD standard).

All wire used shall conform to military specification MIL-W-16878D, Type D, vinyl nylon jacket.

Wiring shall be covered and secured to the sign assembly in a weather resistant enclosure.

All LED connectors shall conform to Ingress Protection IP-65 rating or better.

ITEM #4 - 48" x 24" SOLAR POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL (CONT'D)

COMPLIANCE

YES **YES**

SOLAR PANEL:

Solar panels shall be sized appropriately so as to maintain the battery sufficiently to ensure operation in the Ocean County Region.

All panels shall be mounted to an aluminum plate and bracket at an angle of 45° to 60°.

All fasteners used shall be anti-vandal.

Wire used shall conform to military specification MIL-W-16878D, Type D, vinyl nylon jacket.

The solar panel assembly shall be mounted securely to the sign assembly.

All solar panel connectors shall conform to Ingress Protection IP-65 rating or better.

CONTROL CIRCUIT:

Control circuit shall have the capability of independently flashing dual outputs.

Flashing output shall be 50 to 60 flashes per minute with 100 ms duration on time. Outputs shall reach the output current as programmed for the duration of the 100 ms pulse.

Output current shall be individually programmable for daytime and nighttime operation for the purpose of adjusting to ambient lighting conditions. Mode will automatically be determined by solar panel charge input.

Control circuit covering shall be waterproof and anti-vandal.

Control circuit shall remain operational between the temperatures of -40°F and 176°F.

All circuit connectors shall conform to Ingress Protection IP-65 rating or better.

BATTERY:

Battery packs shall be 4.8V, 14 Ah nickel metal hydride (NiMH).

Batteries shall be sealed in a plastic film to provide resistance to moisture and corrosion.

Batteries shall remain operational between the temperatures of -40°F and 176°F, and shall utilize overheat protection.

All battery connectors shall conform to Ingress Protection IP-65 rating or better.

Batteries shall not weigh more than 1.8 lbs.

Batteries shall have a waterproof connection

Batteries shall be sealed and spill-proof

Batteries shall have an in-line power connector

Batteries shall be replaceable independently of other components

Batteries shall be fused for short circuit protection

Batteries shall be protected from overheating by means of a thermocouple sensor

ITEM #4 - 48" x 24" SOLAR POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL (CONT'D)

COMPLIANCE
YES **NO**

BATTERY: (Cont'd)

Batteries shall have the following dimensions:

Grouped: 2.66" H X 2.66" W X 2.78" D

Stacked: 1.34" H X 1.34" W X 10.6" D

Flatpack: 5.24" H X 2.68" W X 0.67" D

WARRANTY:

Manufacturer shall offer (at minimum) one (1) year of unconditional warranty against all defects in material and workmanship.

OPTIONS:

4A – Steel Sign Post, As Specified

Description:

Nucor RIB-BAK U-Channel Sign Support, galvanized (or approved equal).

Measurements:

10' length

3-1/16" width

3/16" holes on 1" centers

3 lbs/ft linear weight

4B - Battery For Solar-Powered LED Sign Assembly, As Specified

Description:

6V, 14 Ah nickel metal hydride (NiMH) battery pack compatible with TAPCO® Blinkersigns®.

Materials:

Batteries shall be sealed in a plastic film to provide resistance to moisture and corrosion.

Battery:

Batteries shall not weigh more than 1.8 lbs.

Batteries shall have a waterproof connection

Batteries shall be sealed and spill-proof

Batteries shall have an in-line power connector

Batteries shall be replaceable independently of other components

Batteries shall be fused for short circuit protection

Batteries shall be protected from overheating by means of a thermocouple sensor

ITEM #4 - 48" x 24" SOLAR POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL (CONT'D)

COMPLIANCE
YES **NO**

OPTIONS: (CONT'D)

4B - Battery For Solar-Powered LED Sign Assembly, As Specified (CONT'D)

Battery: (Cont'd)

Batteries shall have the following dimensions:

Grouped: 2.66" H X 2.66" W X 2.78" D

Stacked: 1.34" H X 1.34" W X 10.6" D

Flatpack: 5.24" H X 2.68" W X 0.67" D

Operation:

Batteries shall remain operational between the temperatures of -40°F and 176°F (-40°C and 80°C), and shall utilize overheat protection.

Electrical:

All battery connectors shall conform to Ingress Protection IP-65 rating or better.

4C - Solar Panel For Solar-Powered LED Sign Assembly, As Specified

Description:

Solar panel compatible with TAPCO® Blinkersigns® and of the correct size and parameters as necessary to maintain operation of a solar-powered LED sign assembly in the Ocean County Region.

Mounting:

The solar panel assembly shall be mounted securely to the sign assembly.

All panels shall be mounted to an aluminum plate and bracket at an angle of 45° to 60°.

Hardware:

All fasteners used shall be anti-vandal.

Electrical:

Wire used shall conform to military specification MIL-W-16878D, Type D, vinyl nylon jacket.

All solar panel connectors shall conform to Ingress Protection IP-65 rating or better.

ITEM #5 - 24" x 30" SOLAR POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL

COMPLIANCE

YES **NO**

DESCRIPTION:

Solar Powered and fully self-contained sign assembly conforming to the U.S. Department of Transportation Federal Highway Administration 2009 revision 2 May 2012 Manual on Uniform Traffic Control Devices section 2A.08 on retro reflectivity and illumination.

MATERIALS

The assembly shall include the following items:

SIGN:

Sign blanks shall be .080" gauge aluminum

Sheeting shall be 3M DG Type IX or approved equal, with anti-graffiti overlay

Sign assembly shall use anti-vandal fastener to mount components to sign and sign for fixture

48" Signs shall have four (4) holes punched to allow dual post mounting and horizontal install

LED:

Sign assembly shall utilize high-power 1W LEDs that provide a maximum light intensity of up to 600,000 mcd (millicandelas) with a viewing angle of 20 degrees.

The sign faces shall have a color and minimum number of LEDs as noted below:

	<u>SIGN</u>	<u>LED Color</u>	<u>Minimum Number</u>	<input type="checkbox"/>	<input type="checkbox"/>
Speed Limit (blank) 24" x 30" (Facing) Black on White	R2-1	White	8	<input type="checkbox"/>	<input type="checkbox"/>
Each LED shall be sealed in a heat-dissipating plastic enclosure to provide resistance to weather and vibration.				<input type="checkbox"/>	<input type="checkbox"/>
Each LED enclosure shall be mounted to the sign in a 1" hole and ultrasonically welded or mechanically fastened to the sign assembly.				<input type="checkbox"/>	<input type="checkbox"/>
All LEDs shall be wired in strings to activate simultaneously (as per MUTCD standard).				<input type="checkbox"/>	<input type="checkbox"/>
All wire used shall conform to military specification MIL-W-16878D, Type D, vinyl nylon jacket.				<input type="checkbox"/>	<input type="checkbox"/>
Wiring shall be covered and secured to the sign assembly in a weather resistant enclosure.				<input type="checkbox"/>	<input type="checkbox"/>
All LED connectors shall conform to Ingress Protection IP-65 rating or better.				<input type="checkbox"/>	<input type="checkbox"/>

ITEM #5 - 24" x 30" SOLAR POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL (CONT'D)

	<u>COMPLIANCE</u>	
	<u>YES</u>	<u>NO</u>
<u>SOLAR PANEL:</u>		
Solar panels shall be sized appropriately so as to maintain the battery sufficiently to ensure operation in the Ocean County Region.	<input type="checkbox"/>	<input type="checkbox"/>
All panels shall be mounted to an aluminum plate and bracket at an angle of 45° to 60°.	<input type="checkbox"/>	<input type="checkbox"/>
All fasteners used shall be anti-vandal.	<input type="checkbox"/>	<input type="checkbox"/>
Wire used shall conform to military specification MIL-W-16878D, Type D, vinyl nylon jacket.	<input type="checkbox"/>	<input type="checkbox"/>
The solar panel assembly shall be mounted securely to the sign assembly.	<input type="checkbox"/>	<input type="checkbox"/>
All solar panel connectors shall conform to Ingress Protection IP-65 rating or better.	<input type="checkbox"/>	<input type="checkbox"/>
<u>CONTROL CIRCUIT:</u>		
Control circuit shall have the capability of independently flashing dual outputs.	<input type="checkbox"/>	<input type="checkbox"/>
Flashing output shall be 50 to 60 flashes per minute with 100 ms duration on time. Outputs shall reach the output current as programmed for the duration of the 100 ms pulse.	<input type="checkbox"/>	<input type="checkbox"/>
Output current shall be individually programmable for daytime and nighttime operation for the purpose of adjusting to ambient lighting conditions. Mode will automatically be determined by solar panel charge input.	<input type="checkbox"/>	<input type="checkbox"/>
Control circuit covering shall be waterproof and anti-vandal.	<input type="checkbox"/>	<input type="checkbox"/>
Control circuit shall remain operational between the temperatures of -40°F and 176°F.	<input type="checkbox"/>	<input type="checkbox"/>
All circuit connectors shall conform to Ingress Protection IP-65 rating or better.	<input type="checkbox"/>	<input type="checkbox"/>
<u>BATTERY:</u>		
Battery packs shall be 4.8V, 14 Ah nickel metal hydride (NiMH).	<input type="checkbox"/>	<input type="checkbox"/>
Batteries shall be sealed in a plastic film to provide resistance to moisture and corrosion.	<input type="checkbox"/>	<input type="checkbox"/>
Batteries shall remain operational between the temperatures of -40°F and 176°F, and shall utilize overheat protection.	<input type="checkbox"/>	<input type="checkbox"/>
All battery connectors shall conform to Ingress Protection IP-65 rating or better.	<input type="checkbox"/>	<input type="checkbox"/>
Batteries shall not weigh more than 1.8 lbs.	<input type="checkbox"/>	<input type="checkbox"/>
Batteries shall have a waterproof connection	<input type="checkbox"/>	<input type="checkbox"/>
Batteries shall be sealed and spill-proof	<input type="checkbox"/>	<input type="checkbox"/>
Batteries shall have an in-line power connector	<input type="checkbox"/>	<input type="checkbox"/>
Batteries shall be replaceable independently of other components	<input type="checkbox"/>	<input type="checkbox"/>
Batteries shall be fused for short circuit protection	<input type="checkbox"/>	<input type="checkbox"/>
Batteries shall be protected from overheating by means of a thermocouple sensor	<input type="checkbox"/>	<input type="checkbox"/>

ITEM #5 - 24" x 30" SOLAR POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL (CONT'D)

COMPLIANCE
YES **NO**

BATTERY: (Cont'd)

Batteries shall have the following dimensions:

Grouped: 2.66" H X 2.66" W X 2.78" D

Stacked: 1.34" H X 1.34" W X 10.6" D

Flatpack: 5.24" H X 2.68" W X 0.67" D

WARRANTY:

Manufacturer shall offer (at minimum) one (1) year of unconditional warranty against all defects in material and workmanship.

OPTIONS:

5A – Steel Sign Post, As Specified

Description:

Nucor RIB-BAK U-Channel Sign Support, galvanized (or approved equal).

Measurements:

10' length

3-1/16" width

3/16" holes on 1" centers

3 lbs/ft linear weight

5B - Battery For Solar-Powered LED Sign Assembly, As Specified

Description:

6V, 14 Ah nickel metal hydride (NiMH) battery pack compatible with TAPCO® Blinkersigns®.

Materials:

Batteries shall be sealed in a plastic film to provide resistance to moisture and corrosion.

Battery:

Batteries shall not weigh more than 1.8 lbs.

Batteries shall have a waterproof connection

Batteries shall be sealed and spill-proof

Batteries shall have an in-line power connector

Batteries shall be replaceable independently of other components

Batteries shall be fused for short circuit protection

ITEM #5 - 24" x 30" SOLAR POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL (CONT'D)

COMPLIANCE

YES **NO**

OPTIONS (Cont'd)

5B - Battery For Solar-Powered LED Sign Assembly, As Specified (Cont'd)

Batteries shall be protected from overheating by means of a thermocouple sensor

Batteries shall have the following dimensions:

 Grouped: 2.66" H X 2.66" W X 2.78" D

 Stacked: 1.34" H X 1.34" W X 10.6" D

 Flatpack: 5.24" H X 2.68" W X 0.67" D

Operation:

Batteries shall remain operational between the temperatures of -40°F and 176°F (-40°C and 80°C), and shall utilize overheat protection.

Electrical:

All battery connectors shall conform to Ingress Protection IP-65 rating or better.

5C - Solar Panel For Solar-Powered LED Sign Assembly, As Specified

Description:

Solar panel compatible with TAPCO® Blinkersigns® and of the correct size and parameters as necessary to maintain operation of a solar-powered LED sign assembly in the Ocean County Region.

Mounting:

The solar panel assembly shall be mounted securely to the sign assembly.

All panels shall be mounted to an aluminum plate and bracket at an angle of 45° to 60°.

Hardware:

All fasteners used shall be anti-vandal.

Electrical:

Wire used shall conform to military specification MIL-W-16878D, Type D, vinyl nylon jacket.

All solar panel connectors shall conform to Ingress Protection IP-65 rating or better.

ITEM #6 - 30" x 36" SOLAR POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL

DESCRIPTION:

Solar Powered and fully self-contained sign assembly conforming to the U.S. Department of Transportation Federal Highway Administration 2009 revision 2 May 2012 Manual on Uniform Traffic Control Devices section 2A.08 on retro reflectivity and illumination.

MATERIALS

The assembly shall include the following items:

Sign blanks shall be .080" gauge aluminum

Sheeting shall be 3M DG Type IX or approved equal, with anti-graffiti overlay

Sign assembly shall use anti-vandal fastener to mount components to sign and sign for fixture

LED:

Sign assembly shall utilize high-power 1W LEDs that provide a maximum light intensity of up to 600,000 mcd (millicandelas) with a viewing angle of 20 degrees.

The sign faces shall have a color and minimum number of LEDs as noted below:

	<u>SIGN</u>	<u>LED Color</u>	<u>Minimum Number</u>		
Speed Limit (blank) 30" x 36" (Facing) Black on White	R2-1	White	8	<input type="checkbox"/>	<input type="checkbox"/>

Each LED shall be sealed in a heat-dissipating plastic enclosure to provide resistance to weather and vibration.

Each LED enclosure shall be mounted to the sign in a 1" hole and ultrasonically welded or mechanically fastened to the sign assembly.

All LEDs shall be wired in strings to activate simultaneously (as per MUTCD standard).

All wire used shall conform to military specification MIL-W-16878D, Type D, vinyl nylon jacket.

Wiring shall be covered and secured to the sign assembly in a weather resistant enclosure.

All LED connectors shall conform to Ingress Protection IP-65 rating or better.

SOLAR PANEL:

Solar panels shall be sized appropriately so as to maintain the battery sufficiently to ensure operation in the Ocean County Region.

All panels shall be mounted to an aluminum plate and bracket at an angle of 45° to 60°.

All fasteners used shall be anti-vandal.

ITEM #6 - 30" x 36" SOLAR POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL (CONT'D)

COMPLIANCE
YES **NO**

SOLAR PANEL: (CONT'D)

Wire used shall conform to military specification MIL-W-16878D, Type D, vinyl nylon jacket.

The solar panel assembly shall be mounted securely to the sign assembly.

All solar panel connectors shall conform to Ingress Protection IP-65 rating or better.

CONTROL CIRCUIT:

Control circuit shall have the capability of independently flashing dual outputs.

Flashing output shall be 50 to 60 flashes per minute with 100 ms duration on time. Outputs shall reach the output current as programmed for the duration of the 100 ms pulse.

Output current shall be individually programmable for daytime and nighttime operation for the purpose of adjusting to ambient lighting conditions. Mode will automatically be determined by solar panel charge input.

Control circuit covering shall be waterproof and anti-vandal.

Control circuit shall remain operational between the temperatures of -40°F and 176°F.

All circuit connectors shall conform to Ingress Protection IP-65 rating or better.

BATTERY:

Battery packs shall be 4.8V, 14 Ah nickel metal hydride (NiMH).

Batteries shall be sealed in a plastic film to provide resistance to moisture and corrosion.

Batteries shall remain operational between the temperatures of -40°F and 176°F, and shall utilize overheat protection.

All battery connectors shall conform to Ingress Protection IP-65 rating or better.

Batteries shall not weigh more than 1.8 lbs.

Batteries shall have a waterproof connection

Batteries shall be sealed and spill-proof

Batteries shall have an in-line power connector

Batteries shall be replaceable independently of other components

Batteries shall be fused for short circuit protection

Batteries shall be protected from overheating by means of a thermocouple sensor

Batteries shall have the following dimensions:

 Grouped: 2.66" H X 2.66" W X 2.78" D

 Stacked: 1.34" H X 1.34" W X 10.6" D

 Flatpack: 5.24" H X 2.68" W X 0.67" D

WARRANTY:

Manufacturer shall offer (at minimum) one (1) year of unconditional warranty against all defects in material and workmanship.

ITEM #6 - 30" x 36" SOLAR POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL (CONT'D)

COMPLIANCE
YES **NO**

OPTIONS:

6A – Steel Sign Post, As Specified

Description:

Nucor RIB-BAK U-Channel Sign Support, galvanized (or approved equal).

Measurements:

10' length

3-1/16" width

3/16" holes on 1" centers

3 lbs/ft linear weight

6B - Battery For Solar-Powered LED Sign Assembly, As Specified

Description:

6V, 14 Ah nickel metal hydride (NiMH) battery pack compatible with TAPCO® Blinkersigns®.

Materials:

Batteries shall be sealed in a plastic film to provide resistance to moisture and corrosion.

Battery:

Batteries shall not weigh more than 1.8 lbs.

Batteries shall have a waterproof connection

Batteries shall be sealed and spill-proof

Batteries shall have an in-line power connector

Batteries shall be replaceable independently of other components

Batteries shall be fused for short circuit protection

Batteries shall be protected from overheating by means of a thermocouple sensor

Batteries shall have the following dimensions:

Grouped: 2.66" H X 2.66" W X 2.78" D

Stacked: 1.34" H X 1.34" W X 10.6" D

Flatpack: 5.24" H X 2.68" W X 0.67" D

Operation:

Batteries shall remain operational between the temperatures of -40°F and 176°F (-40°C and 80°C), and shall utilize overheat protection.

Electrical:

All battery connectors shall conform to Ingress Protection IP-65 rating or better.

ITEM #6 - 30" x 36" SOLAR POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL (CONT'D)

COMPLIANCE
YES **NO**

OPTIONS: (CONT'D)

6C - Solar Panel For Solar-Powered LED Sign Assembly, As Specified

Description:

Solar panel compatible with TAPCO® Blinkersigns® and of the correct size and parameters as necessary to maintain operation of a solar-powered LED sign assembly in the Ocean County Region.

Mounting:

The solar panel assembly shall be mounted securely to the sign assembly.

All panels shall be mounted to an aluminum plate and bracket at an angle of 45° to 60°.

Hardware:

All fasteners used shall be anti-vandal.

Electrical:

Wire used shall conform to military specification MIL-W-16878D, Type D, vinyl nylon jacket.

All solar panel connectors shall conform to Ingress Protection IP-65 rating or better.

ITEM #7 - SOLAR SPEED RADAR SIGN, 12”, TRAFFIC LOGIX SAFEPLACE EVOLUTION 12, AS SPECIFIED, OR EQUAL

<u>DESCRIPTION:</u>	<u>COMPLIANCE</u>	
	<u>YES</u>	<u>NO</u>
Changeable message sign which displays speed of oncoming vehicles. Includes MUTCD-compliant “YOUR SPEED” sign (black legend on yellow background). Sign shall warn drivers who exceed designated threshold speed.	<input type="checkbox"/>	<input type="checkbox"/>
<u>SPEED DISPLAY:</u> Individual digits within display shall be 12” h x 6.4” w, and each digit shall be comprised of a matrix of no fewer than 196 yellow LEDs per digit; total 936 yellow LEDs.	<input type="checkbox"/>	<input type="checkbox"/>
The LEDs shall be displayed on a black background.	<input type="checkbox"/>	<input type="checkbox"/>
The yellow digits shall have a viewing angle at 50% IV of 30° and a partial flux (brightness) of 9000-22400 Ev, [lux]/LED.	<input type="checkbox"/>	<input type="checkbox"/>
Display face shall be constructed of non-glare UV stabilized polycarbonate.	<input type="checkbox"/>	<input type="checkbox"/>
Display shall have an operating temperature range of -40°F to 185°F with 95% humidity non-condensing. (-20°F for Bluetooth communication)	<input type="checkbox"/>	<input type="checkbox"/>
Speed display size shall be maximum 17.25” (h) x 23” (w) x 5.625” (d).	<input type="checkbox"/>	<input type="checkbox"/>
The speed display shall be capable of displaying speeds in miles per hour and ranging from 3 – 99.	<input type="checkbox"/>	<input type="checkbox"/>
There shall be a conformal coating on all circuit boards	<input type="checkbox"/>	<input type="checkbox"/>
There shall be a built in ambient light sensing and automatic brightness control.	<input type="checkbox"/>	<input type="checkbox"/>
<u>SIGN:</u> Sign shall conform to the 2009 Federal Highway MUTCD section 2A.08 on retroreflectivity and illumination.	<input type="checkbox"/>	<input type="checkbox"/>
Sign shall measure at least 29” h x 23” w.	<input type="checkbox"/>	<input type="checkbox"/>
Sign blanks shall be aluminum.	<input type="checkbox"/>	<input type="checkbox"/>
Sheeting used shall be 3M DG3 diamond grade, or approved equal, with anti-graffiti overlay.	<input type="checkbox"/>	<input type="checkbox"/>
The sign shall measure 29.0” (h) x 23.0” (w) x 5.625” (d) and display the message “YOUR SPEED” on two (2) lines.	<input type="checkbox"/>	<input type="checkbox"/>
Sign weight with speed radar shall be a maximum of 20 pounds.	<input type="checkbox"/>	<input type="checkbox"/>

ITEM #7 - SOLAR SPEED RADAR SIGN, 12”, TRAFFIC LOGIX SAFEPLACE EVOLUTION 12, AS SPECIFIED, OR EQUAL (CONT’D)

	<u>COMPLIANCE</u>	
	<u>YES</u>	<u>NO</u>
<u>PROGRAMMING:</u>		
There shall be 24/7 365 day programming and scheduling.	<input type="checkbox"/>	<input type="checkbox"/>
The unit shall be capable of display On/Stealth Modes.	<input type="checkbox"/>	<input type="checkbox"/>
The unit shall display the closest/fastest vehicle speed.	<input type="checkbox"/>	<input type="checkbox"/>
The unit shall have a digit flashing speed threshold.	<input type="checkbox"/>	<input type="checkbox"/>
The following are the flashing speeds for the LEDs: Fast 1.5 Hz, Medium 1 Hz, and Slow 0.75 Hz.	<input type="checkbox"/>	<input type="checkbox"/>
The unit shall be capable of collecting and storing traffic data by location.	<input type="checkbox"/>	<input type="checkbox"/>
The unit shall capture traffic data when in Stealth Mode.	<input type="checkbox"/>	<input type="checkbox"/>
The data shall be downloaded via a wireless connection.	<input type="checkbox"/>	<input type="checkbox"/>
The program shall be capable of statistical reporting and charts.	<input type="checkbox"/>	<input type="checkbox"/>
The program shall be capable of compiling the reports as summaries, weekly reports, period comparison reports, or full custom reports and charts.	<input type="checkbox"/>	<input type="checkbox"/>
The program shall be capable of reporting the following parameters: average vehicle count, total vehicle count, average speed, average number of speed violations, total number of speed violations, minimum/maximum speed, 85th percentile speed.	<input type="checkbox"/>	<input type="checkbox"/>
The reports shall print directly and exported into CSV, MS Excel, Adobe Acrobat PDF and HTML formats.	<input type="checkbox"/>	<input type="checkbox"/>
<u>SOLAR PANEL:</u>		
Solar panels shall be sized appropriately so as to maintain the battery sufficiently.	<input type="checkbox"/>	<input type="checkbox"/>
All panels shall be mounted to an aluminum plate and bracket at an angle of 45° to 60°.	<input type="checkbox"/>	<input type="checkbox"/>
All fasteners used shall be anti-vandal.	<input type="checkbox"/>	<input type="checkbox"/>
Wire used shall conform to military specification MIL-W-16878D, Type D, vinyl nylon jacket.	<input type="checkbox"/>	<input type="checkbox"/>
The solar panel assembly shall be mounted securely to the sign assembly.	<input type="checkbox"/>	<input type="checkbox"/>
All solar panel connectors shall conform to Ingress Protection IP-65 rating or better.	<input type="checkbox"/>	<input type="checkbox"/>
The solar panel shall be a 50W or 90W solar panel.	<input type="checkbox"/>	<input type="checkbox"/>

ITEM #7 - SOLAR SPEED RADAR SIGN, 12”, TRAFFIC LOGIX SAFEFACE EVOLUTION 12,AS SPECIFIED, OR EQUAL (CONT’D)

	<u>COMPLIANCE</u>	
	<u>YES</u>	<u>NO</u>
<u>ENCLOSURE:</u>		
The enclosure shall be vandal resistant and have a lightweight polymer.	<input type="checkbox"/>	<input type="checkbox"/>
The enclosure shall have a matte black front.	<input type="checkbox"/>	<input type="checkbox"/>
The enclosure shall have a light gray body.	<input type="checkbox"/>	<input type="checkbox"/>
The enclosure shall be weatherproof and be NEMA 4X-12 and IP65 compliant.	<input type="checkbox"/>	<input type="checkbox"/>
The enclosure shall be non-sealed and ventilated.	<input type="checkbox"/>	<input type="checkbox"/>
<u>RADAR:</u>		
The unit shall use an internal radar that is Doppler and FCC approved.	<input type="checkbox"/>	<input type="checkbox"/>
The radar RF out shall be 5 mW maximum.	<input type="checkbox"/>	<input type="checkbox"/>
The radar f-center shall be 24.125 GHz or 24.200 GHz.	<input type="checkbox"/>	<input type="checkbox"/>
The radar shall have a maximum pickup distance of 400 feet.	<input type="checkbox"/>	<input type="checkbox"/>
The beam angle shall be 24° (vertical) x 12° (horizontal).	<input type="checkbox"/>	<input type="checkbox"/>
The radar beam polarization shall be linear.	<input type="checkbox"/>	<input type="checkbox"/>
The radar shall have CE Mark.	<input type="checkbox"/>	<input type="checkbox"/>
<u>BATTERY:</u>		
The sign shall have Lithium-ion batteries with a weight of 4 pounds.	<input type="checkbox"/>	<input type="checkbox"/>
The universal mounting bracket system shall come with a sign bracket (2 pounds) and a pole bracket (5 pounds).	<input type="checkbox"/>	<input type="checkbox"/>
The power input shall be 100~240V AC @ 150 mA, 12V DC (11-14.5V @ 1A).	<input type="checkbox"/>	<input type="checkbox"/>
The power input shall be capable of wireless battery charge monitoring via software interface.	<input type="checkbox"/>	<input type="checkbox"/>
<u>COMMUNICATIONS:</u>		
The device shall be Bluetooth Capable.	<input type="checkbox"/>	<input type="checkbox"/>
<u>ASSEMBLY:</u>		
Assembly shall be capable of mounting to pole, timber post, or u-channel.	<input type="checkbox"/>	<input type="checkbox"/>
Mounting hardware shall be tamper-resistant.	<input type="checkbox"/>	<input type="checkbox"/>

ITEM #7 - SOLAR SPEED RADAR SIGN, 12”, TRAFFIC LOGIX SAFEPACE EVOLUTION 12, AS SPECIFIED, OR EQUAL (CONT'D)

COMPLIANCE
YES **NO**

WARRANTY:

- Manufacturer shall offer (at minimum) one (1) year of unconditional warranty against all defects in material and workmanship.
- Manufacturer shall offer (at minimum) ten (10) years warranty on LEDs.
- Manufacturer shall offer (at minimum) two (2) year warranty on the sign.
- Manufacturer shall offer (at minimum) one (1) year warranty on the batteries.

ITEM # 8 - SOLAR SPEED RADAR SIGN, 15”, TRAFFIC LOGIX SAFEPACE 450 FULL RADAR SPEED SIGN, AS SPECIFIED, OR EQUAL

DESCRIPTION:

- Changeable message sign which displays speed of oncoming vehicles. Includes MUTCD – compliant “YOUR SPEED” sign (black legend on yellow background). Sign shall warn drivers who exceed designated threshold speed.

SPEED RADAR SIGN:

- The assembly shall include the following items:
 The Speed Radar Sign Digits shall be 15.0”(h)x8.0”(w) with 112 yellow LEDs per digit.
- The “YOUR SPEED” text on the speed radar sign shall be 6” H and on two (2) lines.
- The full Speed Radar Sign size shall be 40.0” H x 30.0” W x 3.5” D.
- The sign weight without the “YOUR SPEED” sign and with the solar power panel and bracket shall be 20 pounds *maximum*.
- The sign shall come with 4 cell lithium ion battery (4 lbs max).
- The sign shall come with a universal mounting bracket system including the sign bracket (2 lbs) and pole bracket (5 lbs).
- The speed radar sign shall measure the speed in miles per hour (MPH).
- The speed radar sign shall have an aluminum protective cover 0.1875” D.
- The sign shall have yellow high-intensity prismatic reflective sheeting on the sign face with black colored text in MUTCD approved colors and format.
- The operating temperature shall be -40°F to 185°F *minimum*.
- The sign shall have a built in ambient light sensor.
- The sign shall have a wireless battery charge monitor.

POWER SOURCE:

- The sign shall have be solar powered.

ITEM #8 - SOLAR SPEED RADAR SIGN, 15”, TRAFFIC LOGIX SAFE PACE 450 FULL RADAR SPEED SIGN, AS SPECIFIED, OR EQUAL (CONT'D)

	<u>COMPLIANCE</u>	
	<u>YES</u>	<u>NO</u>
<u>RADAR:</u>		
The radar sign shall have a ten (10) year warranty on the LEDs.	<input type="checkbox"/>	<input type="checkbox"/>
The internal radar shall be Doppler (FCC approved).	<input type="checkbox"/>	<input type="checkbox"/>
The radar RF out shall be 5mW maximum.	<input type="checkbox"/>	<input type="checkbox"/>
The radar f-center shall be 24.125 GHz center ±25 MHz.	<input type="checkbox"/>	<input type="checkbox"/>
The radar pick-up distance shall go up to 1,200 feet <i>minimum</i> .	<input type="checkbox"/>	<input type="checkbox"/>
The radar beam angle shall be 11°x11°.	<input type="checkbox"/>	<input type="checkbox"/>
The radar beam polarization shall be linear.	<input type="checkbox"/>	<input type="checkbox"/>
The FCC ID for the radar shall be TIADR1500.	<input type="checkbox"/>	<input type="checkbox"/>
<u>DISPLAY:</u>		
LED Digits shall have 224 yellow LED, 23°, 5mm, luminous intensity (5,680-8,200 mcd/LED).	<input type="checkbox"/>	<input type="checkbox"/>
The display shall have an ambient light sensor and automatic brightness adjuster.	<input type="checkbox"/>	<input type="checkbox"/>
<u>ENCLOSURE:</u>		
The enclosure shall be 12 gauge aluminum with flat black powder coated front.	<input type="checkbox"/>	<input type="checkbox"/>
The body of the enclosure shall be light gray powder coated.	<input type="checkbox"/>	<input type="checkbox"/>
The enclosure shall be weather proof, non-sealed, and ventilated.	<input type="checkbox"/>	<input type="checkbox"/>
The enclosure shall be NEMA 4X-12 and IP65 level compliant.	<input type="checkbox"/>	<input type="checkbox"/>
<u>MOUNTING:</u>		
The brackets shall be theft resistant.	<input type="checkbox"/>	<input type="checkbox"/>
The sign shall lock into the bracket with a key.	<input type="checkbox"/>	<input type="checkbox"/>
The universal mounting bracket system shall have the following options: circular, square, and telspar poles.	<input type="checkbox"/>	<input type="checkbox"/>
The mounting system shall come with banding brackets.	<input type="checkbox"/>	<input type="checkbox"/>
<u>COMMUNICATIONS:</u>		
The system shall be both WiFi and Bluetooth 4.0 compatible.	<input type="checkbox"/>	<input type="checkbox"/>
<u>PROGRAMMING:</u>		
Safe Pace Pro management software or approved equal shall be utilized.	<input type="checkbox"/>	<input type="checkbox"/>
There shall be 24 hours a day, 7 days a week, 365 days a year unlimited programming and scheduling.	<input type="checkbox"/>	<input type="checkbox"/>

ITEM #8 - SOLAR SPEED RADAR SIGN, 15”, TRAFFIC LOGIX SAFE PACE 450 FULL RADAR SPEED SIGN, AS SPECIFIED, OR EQUAL (CONT'D)

	<u>COMPLIANCE</u>	
	<u>YES</u>	<u>NO</u>
<u>DISPLAY SETTINGS:</u>		
The display shall have both ‘ON’ and ‘Stealth Mode’ settings.	<input type="checkbox"/>	<input type="checkbox"/>
In stealth mode, the speed will not be displayed and the data will be collected.	<input type="checkbox"/>	<input type="checkbox"/>
The display will be capable of a minimum speed and maximum speed.	<input type="checkbox"/>	<input type="checkbox"/>
The display will be capable of flashing the digits when the speed is measured above the selected speed.	<input type="checkbox"/>	<input type="checkbox"/>
<u>DATA COLLECTION:</u>		
Traffic data shall be collected and stored by location.	<input type="checkbox"/>	<input type="checkbox"/>
Traffic data shall be downloaded through a wireless connection.	<input type="checkbox"/>	<input type="checkbox"/>
The program shall be capable of statistical reports and charts.	<input type="checkbox"/>	<input type="checkbox"/>
The following reports shall be compiled: summary reports, weekly reports, period comparison reports, and customizable reports.	<input type="checkbox"/>	<input type="checkbox"/>
The following shall be the reporting parameters:	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> • average vehicle count • total vehicle count • average speed • average number of speed violations • total number of speed violations • minimum and maximum speed • 85th percentile speed 		
The reports shall be capable of printing directly from the program and exported into CSV format, MS Excel, Adobe Acrobat PDF, and HTML.	<input type="checkbox"/>	<input type="checkbox"/>
The charts shall be capable of printing directly from the program and Adobe Acrobat PDF format.	<input type="checkbox"/>	<input type="checkbox"/>
<u>SOLAR PANEL:</u>		
The solar panel power output shall be 20 W.	<input type="checkbox"/>	<input type="checkbox"/>
The solar panel operation temperature range shall be -40°C to 85°C <i>minimum</i> .	<input type="checkbox"/>	<input type="checkbox"/>
The solar panel shall be composed of laminate: glass, EVA, TPT (tedlar/pet/tedlar), or TPE.	<input type="checkbox"/>	<input type="checkbox"/>
The front side of the solar panel shall have high-transmission 3.2mm tempered glass.	<input type="checkbox"/>	<input type="checkbox"/>
The back side of the solar panel shall be made of wither TPT or TPE.	<input type="checkbox"/>	<input type="checkbox"/>
The solar panel frame shall be clear anodized aluminum.	<input type="checkbox"/>	<input type="checkbox"/>
The solar panel shall be output to a junction box.	<input type="checkbox"/>	<input type="checkbox"/>

ITEM #9 – STEEL SIGN POST, AS SPECIFIED, OR EQUAL

COMPLIANCE
YES **NO**

DESCRIPTION:

Nucor RIB-BAK U-Channel Sign Support, galvanized, without breakaways (or approved equal).

MEASUREMENTS:

10’ length

3-1/16” width

3/16” holes on 1” centers

3 lbs/ft linear weight

ITEM #10 - BATTERY FOR SOLAR-POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL

DESCRIPTION:

6V, 14 Ah nickel metal hydride (NiMH) battery pack compatible with TAPCO® Blinkersigns®.

MATERIALS:

Batteries shall be sealed in a plastic film to provide resistance to moisture and corrosion.

BATTERY:

Batteries shall not weigh more than 1.8 lbs.

Batteries shall have a waterproof connection

Batteries shall be sealed and spill-proof

Batteries shall have an in-line power connector

Batteries shall be replaceable independently of other components

Batteries shall be fused for short circuit protection

Batteries shall be protected from overheating by means of a thermocouple sensor

Batteries shall have the following dimensions:

- Grouped: 2.66” H X 2.66” W X 2.78” D

- Stacked: 1.34” H X 1.34” W X 10.6” D

- Flatpack: 5.24” H X 2.68” W X 0.67” D

OPERATION:

Batteries shall remain operational between the temperatures of -40°F and 176°F (-40°C and 80°C), and shall utilize overheat protection.

ELECTRICAL:

All battery connectors shall conform to Ingress Protection IP-65 rating or better.

ITEM #11 - SOLAR PANEL FOR SOLAR-POWERED LED SIGN ASSEMBLY, AS SPECIFIED, OR EQUAL

COMPLIANCE
YES **NO**

DESCRIPTION:

Solar panel compatible with TAPCO® Blinkersigns® and of the correct size and parameters as necessary to maintain operation of a solar-powered LED sign assembly in the Ocean County Region.

MOUNTING:

The solar panel assembly shall be mounted securely to the sign assembly.
 All panels shall be mounted to an aluminum plate and bracket at an angle of 45° to 60°.

HARDWARE:

All fasteners used shall be anti-vandal.

ELECTRICAL:

Wire used shall conform to military specification MIL-W-16878D, Type D, vinyl nylon jacket.

All solar panel connectors shall conform to Ingress Protection IP-65 rating or better.

ITEM #12 - SOLAR-POWERED LED PEDESTRIAN CROSSING WARNING SYSTEM WITH PUSH BUTTONS, AS SPECIFIED OR EQUAL

DESCRIPTION:

Fully self-contained Solar-Powered LED Pedestrian Crossing Warning System, including an LED-enhanced pedestrian crossing sign assembly (conforming to the 2009 Federal Highway MUTCD section 2A.08 on retroreflectivity and illumination). Each system shall consist of two (2) solar-powered LED pedestrian crossing signs, two (2) cabinets, two (2) pedestrian push button assemblies, two (2) sign mounting kits, two (2) wireless controller kits, and all appurtenances incidental to the Solar-Powered LED Pedestrian Crossing Warning System.

MATERIALS

The system shall include the following items:

SIGN:

MUTCD compliant Pedestrian warning sign type W11-2. 36" x 36"

Sign blanks shall be .080" gauge aluminum.

Sheeting used shall be 3M DG3 diamond grade, or approved equal, with anti-graffiti overlay.

Sign assembly shall use anti-vandal fasteners to mount components to sign and sign to fixture.

ITEM #12 - SOLAR-POWERED LED PEDESTRIAN CROSSING WARNING SYSTEM WITH PUSH BUTTONS, AS SPECIFIED OR EQUAL (CONT'D)

COMPLIANCE

YES **NO**

LEDS:

Sign assembly shall utilize a minimum of eight (8) high-power 1W LEDs that provide a maximum light intensity of up to 600,000 mcd (millicandelas) with a viewing angle of 20°.

LEDs shall be amber in color.

Each LED shall be sealed in a heat-dissipating plastic enclosure to provide resistance to weather and vibration.

Each LED enclosure shall be mounted to the sign in a 1” hole and ultrasonically welded or mechanically fastened to the sign assembly.

All LEDs shall be wired in strings to activate simultaneously (as per MUTCD standard).

All wire used shall conform to military specification MIL-W-16878D, Type D, vinyl nylon jacket.

Wiring shall be covered and secured to the sign assembly in a weather resistant enclosure.

All LED connectors shall conform to Ingress Protection IP-65 rating or better.

SOLAR PANEL:

Solar panels shall be sized appropriately so as to maintain the battery sufficiently to ensure operation in the Ocean County Region.

All panels shall be mounted to an aluminum plate and bracket at an angle of 45° to 60°.

All fasteners used shall be anti-vandal.

Wire used shall conform to military specification MIL-W-1687D, Type D, vinyl nylon jacket.

The solar panel assembly shall be mounted securely to the sign assembly.

All solar panel connectors shall conform to Ingress Protection IP-65 rating or better.

PUSH BUTTON:

Sign assembly shall include a Polara Bulldog Push Button (or approved Equal), yellow in color and with an LED for visual confirmation of activation.

Push button connectors shall conform to Ingress Protection, IP-65 rating or better.

CONTROL CIRCUIT:

Control circuit shall have the capability of independently flashing dual outputs.

Flashing output shall be 50 to 60 flashes per minute with 100 ms duration on time.

Outputs shall reach the output current as programmed for the duration of the 100 ms pulse.

Output current shall be individually programmable for daytime and nighttime operation for the purpose of adjusting to ambient lighting conditions. Mode will automatically be determined by solar panel charge input.

Control circuit covering shall be waterproof and anti-vandal.

ITEM #12 - SOLAR-POWERED LED PEDESTRIAN CROSSING WARNING SYSTEM WITH PUSH BUTTONS, AS SPECIFIED OR EQUAL (CONT'D)

COMPLIANCE

YES **NO**

CONTROL CIRCUIT: (CONT'D)

Control circuit shall remain operational between the temperatures of -40°F and 176°F (-40°C and 80°C).

All circuit connectors shall conform to Ingress Protection IP-65 rating or better.

BATTERY:

Battery packs shall be 4.8V, 14000 mAh nickel metal hydride (NiMH).

Batteries shall be sealed in a plastic film to provide resistance to moisture and corrosion. Dimensions shall be 10.5" x 1.5" to be house in a 2-3/8" aluminum tube.

Batteries shall remain operational between the temperatures of -40°F and 176°F (-40°C and 80°C), and shall utilize heat protection.

All battery connectors shall conform to Ingress Protection IP-65 rating or better.

WIRELESS COMMUNICATION:

Each system shall include a radio-control cabinet for communication with and synchronization within the system.

Each sign assembly shall include a self-powered wireless transmitter / receiver for communication with the control cabinet.

Transmitter units shall have a minimum operating range of 1000 ft (line of sight).

WARRANTY:

Manufacturer shall offer (at minimum) one (1) year of unconditional warranty against all defects in material and workmanship.