

## ADDENDUM NO. 1

**TO: PLANS AND SPECIFICATIONS FOR STATE OF MISSOURI**

**INSTALL SOLAR ARRAY AND  
FMS BATTERY STORAGE  
Camp Crowder Training Site  
Neosho, Missouri  
PROJECT NO.: T1922-01**

**Bid Opening Date: 1:30 PM, Thursday, June 4, 2020 (Not Changed)**

**Bidders are hereby informed that the construction Plans and/or Specifications are modified as follows:**

**Revised Bid Form is attached. Bidders must use the form marked REVISED PER ADDENDUM NO. 1 to bid this project.**

### **SPECIFICATION CHANGES:**

1. REVISE Section 004113 – BID FORM
  - a. Section 004113 – BID FORM has been revised to include Alternate #1.

**Use attached revised Bid Form to bid this project.**

2. ADD attached Section 012300 – ALTERNATES

### **DRAWING CHANGES:**

1. Sheet E-001 – ELECTRICAL SOLAR ARRAY BUILDING LIST LEGEND AND NOTES
  - a. See attached Revised Sheet E-001. Alternate #1 to be included with the bid has been added as indicated in the revision cloud on the Revised Sheet E-001.

### **GENERAL COMMENTS:**

1. The Pre-Bid Meeting will be held on-site May 20, 2020 followed by a walk-through of the facility.
2. Changes to, or clarification of, the bid documents are only made as issued in the addenda.
3. All correspondence with respect to this project must include the State of Missouri project number as indicated above.
4. Current Planholders list available online at:  
<https://www.oafmdcplanroom.com/jobs/477/details/t1922-01-install-solar-array-and-fms-battery-storage>

5. Prospective Bidders contact American Document Solutions, 1400 Forum Blvd Suite 1C, Columbia MO 65201, 573-446-7768 to order official plans and specifications.

**ATTACHMENTS:**

1. Section 004113 – REVISED BID FORM
2. Section 012300 – ALTERNATES
3. Sheet E-001 – ELECTRICAL SOLAR ARRAY BUILDING LIST LEGEND AND NOTES

May 19, 2020

**END ADDENDUM NO. 1**

# STATE OF MISSOURI

Bid Time: 1:30 PM

Bid Date: \_\_\_\_\_

## SECTION 004113 - BID FORM

**REVISED PER ADDENDUM #1**

### 1.0 BID:

A. From: \_\_\_\_\_  
(Bidder's Name)

herein after called the "**Bidder**".

B. To: Director, Division of Facilities Management, Design and Construction  
Room 730, Harry S Truman State Office Building  
301 West High Street  
Jefferson City, Missouri 65102

herein after called the "**Owner**."

C. For: Install Solar Array and FMS Battery Storage  
Camp Crowder Training Site  
Neosho, MO

D. Project Number: T1922-01

hereinafter called the "**Work**."

E. Documents: The undersigned, having examined and being familiar with the local conditions affecting the work and with the complete set of contract documents, including the Drawings, the Invitation For Bid, Instructions To Bidders, Statement of Bidders Qualifications, General Conditions, Supplement to General Conditions, and the technical specifications, including: addenda number \_\_\_\_\_ through \_\_\_\_\_ hereby proposes to perform the Work for the following:

F. Bid Amount: \_\_\_\_\_  
\_\_\_\_\_ Dollars (\$ \_\_\_\_\_)

G. Allowances: See Section 012100 for details.

H. Alternates:

Alternate No 1: As an alternate, an aggregate ground covering shall be provided within the fenced in area of each Solar Array. Refer to Alternate # 1 on revised Sheet E-001 and Section 012300 – Alternates.

\_\_\_\_\_ Dollars (\$ \_\_\_\_\_)

### 2.0 MBE/WBE/SDVE PERCENTAGE OF PARTICIPATION PROJECT GOALS:

A. This project's specific goals are: **MBE 10.00%** **WBE 10.00%**, and **SDVE 3.00%**. NOTE: Only MBE/WBE firms certified by a State of Missouri public entity, and SDVE(s) meeting the requirements of Section 34.074, RSMo, and 1 CSR 30-5.010, as of the date of bid opening, can be used to satisfy the MBE/WBE/SDVE participation goals for this project.

**3.0 BID BOND**

- A. Accompanying the bid is: \_\_\_ 5% Bid Bond or \_\_\_ Cashier's Check/Bank Draft for 5% of base bid that is payable without condition to the Division of Facilities Management, Design and Construction, State of Missouri, as per Article 5 of "Instructions To Bidders".

**4.0 CONTRACT COMPLETION TIME AND LIQUIDATED DAMAGES**

- A. The Bidder agrees to complete the work within 160 working days from the date the Notice of Intent to Award is issued as modified by additional days added by the Owner's acceptance of alternates, if applicable. This includes ten (10) working days for document mailing and processing. The Bidder further agrees to pay to, or allow the State as liquidated damages the sum of \$1,000 for each working day thereafter that the entire work is not substantially complete.

**5.0 ATTACHMENTS TO BID:**

004336	Proposed Subcontractors
004337	MBE/WBE/SDVE Compliance Form
004338	MBE/WBE/SDVE Joint Venture Form
004339	MBE/WBE/SDVE Waiver Form
004340	SDVE Business Form
004541	Affidavit of Work Authorization

**6.0 BIDDER'S CERTIFICATIONS:**

- A. The Bidder agrees to pay not less than the hourly rate of wages as determined by the Department of Labor and Industrial Relations, State of Missouri, in accordance with Sections 290.210 to 290.340, RSMo.
- B. The Bidder hereby certifies that this bid is genuine and is not made in the interest of or on behalf of any undisclosed person, firm, or corporation, and is not submitted in conformity with any agreement or rules of any group, association or corporation;

That he/she has not directly or indirectly induced or solicited any other bidder to put in a false or sham proposal;

That he/she has not solicited or induced any person, firm or corporation to refrain from submitting a bid;

That he/she has not sought by collusion or otherwise to obtain for him/herself any advantage over any other bidder or over the Owner.

That he/she will not discriminate against any employee or applicant for employment because of race, creed, color or national origin in the performance of the work.

That he/she certifies that he/she has based this proposal upon an official /complete set of contract documents, either obtained from the Owner after Bidder placed himself/herself on the bidders' list or from a secondary source known to the Bidder to have provided a complete and accurate set of contract documents, provided that if Bidder received the contract documents from such a secondary source, any errors or omissions in the contract documents shall be interpreted and construed in favor of the Owner and against the Bidder. This proposal is also based upon the conditions within Article 1.2 of the General Conditions.

That he/she certifies that he/she will comply with the provisions of Sections 285.230-234, RSMo, regarding transient employers.

That he/she has enrolled and is and will continue to participate in a federal work authorization program in accordance with Sections 285.525 and 285.530, RSMo for the duration of this contract.

**REVISED PER ADDENDUM #1**

**7.0 CONTACT INFORMATION (mandatory for all bidders):**

Sole Proprietorship/General Partnership  LLC  Limited Partnership  Corporation  Joint Venture

Business Name: \_\_\_\_\_

Address: \_\_\_\_\_  
\_\_\_\_\_

Telephone: \_\_\_\_\_ Fax Number: \_\_\_\_\_

Federal ID Number: \_\_\_\_\_ or Social Security Number: \_\_\_\_\_

Missouri Business Charter Number: \_\_\_\_\_ (or provide the proper certificate from the Secretary of State)

Contact Name: \_\_\_\_\_ Contact email: \_\_\_\_\_

**8.0 SIGNATURES:**

**FOR SOLE PROPRIETORSHIPS/GENERAL PARTNERSHIPS ONLY:**

\_\_\_\_\_  
Sole Proprietor's Name (printed) Name each general partner: \_\_\_\_\_

Today's Date: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

I, \_\_\_\_\_, being the sole proprietor/general partner of (name of business)  
\_\_\_\_\_ (and if the name of said business is other than my legal name, having filed a  
Registration of Fictitious Name with the Missouri Secretary of State in order to allow me to use such name in  
connection with my business, as provided by Section 417.200, RSMo, et seq.), do hereby submit this bid and agree to be  
bound unto the State of Missouri as herein provided (if a general partnership, all partners must sign below).

Signature: \_\_\_\_\_ Signature: \_\_\_\_\_

Signature: \_\_\_\_\_ Signature: \_\_\_\_\_

**FOR LIMITED LIABILITY COMPANIES ONLY:**

\_\_\_\_\_  
Manager's (or Managing Member's) Name (printed) today's date \_\_\_\_\_ State(s) of organization: \_\_\_\_\_

I, \_\_\_\_\_, being the Manager (or Managing Member) of (full legal name of limited  
liability company from Articles of Organization) \_\_\_\_\_, and being duly  
authorized to act as herein provided on behalf of said limited liability company, do hereby submit this bid on behalf of  
said limited liability company and agree that said limited liability company shall be bound unto the State of Missouri as  
herein provided.

Signature: \_\_\_\_\_

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**FOR LIMITED PARTNERSHIPS/LIMITED LIABILITY PARTNERSHIPS/LIMITED LIABILITY LIMITED PARTNERSHIPS ONLY:**

\_\_\_\_\_ today's date: \_\_\_\_\_ State(s) of organization: \_\_\_\_\_  
General/Managing Partner's Name (printed)

I, \_\_\_\_\_, being the General Partner/Managing Partner of (full legal name of limited partnership/limited liability partnership/limited liability limited partnership from partnership agreement or Certificate of Limited Partnership) \_\_\_\_\_, and being duly authorized to act as herein provided on behalf of said limited partnership/limited liability partnership/limited liability limited partnership, do hereby submit this bid on behalf of said limited partnership/limited liability partnership/limited liability limited partnership and agree that said limited partnership/limited liability partnership/limited liability limited partnership shall be bound unto the State of Missouri as herein provided.

Signature: \_\_\_\_\_

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**FOR CORPORATIONS ONLY:**

\_\_\_\_\_  
President's Name (printed)                      Secretary's Name (printed)                      Today's date

State(s) of incorporation: \_\_\_\_\_

I, \_\_\_\_\_, being the (officer or title) \_\_\_\_\_ of (full legal name of corporation, from Articles of Incorporation) \_\_\_\_\_, and being duly authorized by the Board of Directors of said corporation to act as herein provided on behalf of said corporation, do hereby submit this bid on behalf of said corporation and agree that said corporation shall be bound unto the State of Missouri as herein provided.

Signature: \_\_\_\_\_  
President

Attested by: \_\_\_\_\_  
Corporate Secretary

The President should sign as the bidder. If the signator is other than the corporate president, the bidder must provide satisfactory evidence that the signator has the legal authority to bind the corporation.

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**FOR ASSOCIATIONS/JOINT VENTURES:** If multiple business entities/individuals are bidding collectively as an association or joint venture, each business entity/individual bidding as part of the association or joint venture shall sign this bid in the above sections relevant to the form that such business entity or individual does business, and the bidder shall duplicate the necessary number of signature pages so that all members of the association or joint venture shall sign this bid. If a name is adopted for use by the association or joint venture, the association or joint venture shall file a Registration of Fictitious Name with the Missouri Secretary of State in order to use such name in connection with the association or joint venture, as provided by Section 417.200, RSMo, *et seq.*

## **SECTION 012300 - ALTERNATES**

### **PART 1 - GENERAL**

#### **1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions, Bid Form and other Division 1 Specification Sections, apply to this Section.

#### **1.2 SUMMARY**

- A. This Section includes administrative and procedural requirements governing Alternates.

#### **1.3 DEFINITIONS**

- A. Definition: An alternate is an amount proposed by bidders and stated on the Bid Form for certain work defined in the Bidding Requirements that may be added to the Base Bid amount if the Owner decides to accept a corresponding change in either the amount of construction to be completed, or in the products, materials, equipment, systems, or installation methods described in the Contract Documents.
  - 1. The cost for each alternate is the net addition to the Contract Sum to incorporate the Alternate into the Work. No other adjustments are made to the Contract Sum.
- B. No additional time will be allowed for alternate work unless the number of work days is so stated on the bid form.

#### **1.4 PROCEDURES**

- A. Coordination: Modify or adjust affected adjacent Work as necessary to completely and fully integrate the Alternate Work into the Project.
  - 1. Include as part of each alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether or not mentioned as part of the Alternate.
- B. Notification: The award of the Contract will indicate whether alternates have been accepted or rejected.
- C. Execute accepted alternates under the same conditions as other Work of this Contract.
- D. Schedule: A “Schedule of Alternates” is included at the end of this Section. Specification Sections referenced in the Schedule contain requirements for materials necessary to achieve the Work described under each alternate.

### **PART 2 - PRODUCTS (Not Applicable)**

### **PART 3 - EXECUTION**

#### **3.1 SCHEDULE OF ALTERNATES**

Alternate No. 1:

- A. As an alternate, a gravel ground covering shall be provided within the enclosed fenced in area of each Solar Array. This alternate scope of work includes all Solar Arrays (18 Locations).
- B. Prepared Subgrade. Grade, and backfill as required per Specification 312000 Earthmoving.
- C. Fabric Separator Drainage Geotextile: Nonwoven needle-punched geotextile, manufactured for subsurface drainage applications, made from polyolefins or polyesters; with elongation greater than 50 percent; complying with AASHTO M 288.
- D. Aggregate Base. Graded Aggregate for Base Course: Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D2940/D2940M; with at least 95 percent passing a 1-1/2-inch sieve and not more than 8 percent passing a No. 200 sieve.
- E. Top Crushed Graded Aggregate. Gravel Surface. Naturally or artificially graded mixture of natural or crushed gravel, crushed stone, and natural or crushed sand; ASTM D2940/D2940M; with at least 100 percent passing a 3/4" sieve, and not more than 15 percent passing a No. 200 (0.075-mm) sieve.

**END OF SECTION 012300**

# SOLAR ARRAY BUILDING LIST

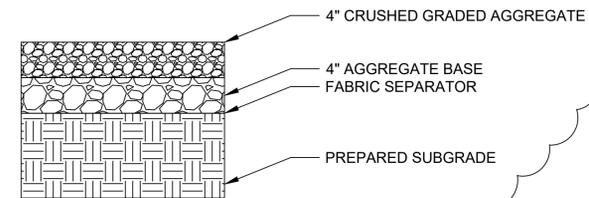
SOLAR ARRAY BUILDING LIST

BLDG NUMBER	BLDG DESCRIPTION	MDP CONN VOLTAGE	BLDG MDP AMP SIZE	SOLAR ARRAY KW SIZE	SOLAR ARRAY LOCATION	ONE LINE DWG	PLAN DWG
1	41 HUGHES ST BLDG 41 AND RANGE	240/ 1 PH	200	12	GROUND NORTH EAST OF BLDG	E-601	E-101
2	106 BLDG 106	240/ 1 PH	225	5	GROUND EAST OF BLDG	E-602	E-102
3	201 BLDG 201	208/3 PH	800	45	GROUND SOUTH OF BLDG (PARKING AREA)	E-603	E-103
4	405 HUGHES AVE RIFLE RANGE AND BLDG 405B	240/1 PH	600	24	GROUND NORTH EAST OF BLDG	E-604	E-104
5	750 BLDG 750	208/3 PH	400	10	GROUND NORTH EAST OF BLDG	E-605	E-105
6	751 BLDG 751 DFAC	480/3 PH	400	48	GROUND NORTH EAST OF BLDG	E-606	E-106
7	752 BLDG 752 RAY CARVER ROAD	240/1 PH	800	24	GROUND NORTH EAST OF BLDG	E-607	E-107
8	753 BLDG 753 BENTON AVE	240/1 PH	600	24	GROUND SOUTH WEST OF BLDG	E-608	E-107
9	801 BLDG 801	240/ 1 PH	200	6	GROUND EAST OF BLDG	E-609	E-108
10	802 BLDG 802	240/ 1 PH	200	6	GROUND EAST OF BLDG	E-610	E-108
11	803 BLDG 803 CARVER ROAD	240/ 1 PH	800	24	GROUND WEST OF BLDG	E-611	E-109
12	820 SW CRNR MARK T AND LEWIS (BLDG 820)	240/1 PH	1250	12	GROUND WEST OF BLDG	E-612	E-110
13	884 BLDG 884	240/ 1 PH	200	12	GROUND EAST OF BLDG	E-613	E-111
14	886 BLDG 885-888	240/ 1 PH	800	18	GROUND WEST OF BLDG	E-614	E-112
15	889 BLDG 889 TMC	240/ 1 PH	400	6	GROUND SOUTH OF BLDG	E-615	E-113
16	890 BLDG 890	240/ 1 PH	400	18	GROUND NORTH OF BUILDING	E-616	E-114
17	893 BLDG 893	208/3 PH	600	6	GROUND EAST OF BLDG	E-617	E-115
18	960 BLDG 960 (OMS 13)	208/3 PH	2225	26	GROUND EAST OF BLDG	E-618	E-116

326.00

## ALTERNATE #1 - GRAVEL COVER FOR SOLAR ARRAYS

1. PROVIDE GRAVEL COVER FOR FENCED IN AREAS OF SOLAR ARRAYS, 18 LOCATIONS.
2. PREPARED SUBGRADE. GRADE AND BACKFILL PER SPECIFICATION 312000 EARTHMOVING.
3. DRAINAGE GEOTEXTILE: NONWOVEN NEEDLE-PUNCHED GEOTEXTILE, MANUFACTURED FOR SUBSURFACE DRAINAGE APPLICATIONS MADE FROM POLYOLEFINS OR POLYESTERS; WITH ELONGATION GREATER THAN 50 PERCENT; COMPLYING WITH AASHTO M 288.
4. AGGREGATE BASE. GRADED AGGREGATE FOR BASE COURSE: NATURALLY OR ARTIFICIALLY GRADED MIXTURE OF NATURAL OR CRUSHED GRAVEL, CRUSHED STONE, AND NATURAL OR CRUSHED SAND; ASTM D2940/D2940M; WITH AT LEAST 95 PERCENT PASSING 1-1/2-INCH SIEVE AND NOT MORE THAN 8 PERCENT PASSING A NO. 200 SIEVE.
5. TOP CRUSHED GRADED AGGREGATE. GRAVEL SURFACE. NATURALLY OR ARTIFICIALLY GRADED MIXTURE OF NATURAL OR CRUSHED GRAVEL, CRUSHED STONE, AND NATURAL OR CRUSHED SAND; ASTM D2940/D2940M; WITH AT LEAST 100 PERCENT PASSING A 3/4" SIEVE, AND NOT MORE THAN 15 PERCENT PASSING A NO. 200 (0.075-MM) SIEVE.



## GENERAL ELECTRICAL NOTES

1. PHOTOVOLTAIC (PV) SYSTEMS SHALL COMPLY WITH THE NATIONAL ELECTRIC CODE (NEC) ARTICLE 690.
2. ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH MANUFACTURERS'S LISTING AND INSTALLATION INSTRUCTIONS, AND THE RELEVANT CODES AS SPECIFIED BY THE AUTHORITY HAVING JURISDICTION'S (AHJ) APPLICABLE CODES.
3. THE UTILITY INTERCONNECTION APPLICATION MUST BE APPROVED AND PV SYSTEM INSPECTED PRIOR TO PARALLEL OPERATION
4. LOAD-SIDE INTERCONNECTION SHALL BE IN ACCORDANCE WITH [NEC 690.64 (B)]
5. ALL PV SYSTEM COMPONENTS, MODULES, UTILITY-INTERACTIVE INVERTERS, AND SOURCE CIRCUIT COMBINER BOXES ARE IDENTIFIED AND LISTED FOR USE IN PHOTOVOLTAIC SYSTEMS AS REQUIRED BY [NEC 690.4] & [NEC 690.60]
6. PV MODULES:UL 1703 CERTIFIED, NFPA 70 CLASS C FIRE INVERTER(S);UL 1741 CERTIFIED, IEEE 1547, 929, 519 COMBINER BOX(S);UL 1703 OR UL 1741 ACCESSORY
7. PV STRING HOME RUNS MUST BE LABELED AT ALL TERMINATIONS. UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, ACCESSORIES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATION AS INDICATED ON THE DRAWINGS
8. SUPPORT CONDUCTORS IN VERTICAL CONDUIT IN ACCORDANCE WITH THE REQUIREMENTS OF NEC 300.19.

## GROUNDING NOTES

1. ONLY ONE CONNECTION TO AC CIRCUITS WILL BE USED FOR SYSTEM GROUNDING (NEC 690.42).
2. RACKING AND STRUCTURAL COMPONENTS MUST BE ELECTRICALLY BONDED TOGETHER BY AN ACCEPTABLE MEANS. RACKING SYSTEM SHALL BE LISTED UL2703.
3. MODULES SHALL BE GROUNDED WITH EQUIPMENT GROUNDING CONDUCTORS BONDED TO A LOCATION MEETING MANUFACTURER REQUIREMENTS WITH A MEANS OF BONDING LISTED FOR THIS PURPOSE.
4. A GROUNDING ELECTRODE SYSTEM IN ACCORDANCE WITH NEC 690.47 AND NEC 250.50 THROUGH NEC 250.166 SHALL BE PROVIDED.
5. PV SYSTEM SHALL BE GROUNDED IN ACCORDANCE WITH NEC 250.21 AND ALL METAL PARTS OR MODULE FRAMES ACCORDING TO NEC 690.43.
6. ALL CONDUIT BETWEEN THE UTILITY AC DISCONNECT AND THE POINT OF CONNECTION IN THE MDP SHALL HAVE GROUNDED BUSHINGS AT BOTH ENDS.

ABBREVIATIONS	SYMBOLS LEGEND	SYSTEM NOTES	CONSTRUCTION GENERAL NOTES
A AMPERE AC ALTERNATING CURRENT AFCI ARC-FAULT CIRCUIT INTERRUPTER AHJ AUTHORITY HAVING JURISDICTION AIC AMERAGE INTERRUPTION CAPACITY ATS AUTOMATIC TRANSFER SWITCH AWG AMERICAN WIRE GAUGE CB-# CIRCUIT BREAKER BLDG BUILDING DC DIRECT CURRENT DWG DRAWING EMT ELECTRICAL METALLIC TUBE GFCI GROUND FAULT CIRCUIT INTERRUPTER GFP GROUND FAULT PROTECTION GND GROUND GEC GROUNDING ELECTRODE CONDUCTOR IBC INTERNATIONAL BUILDING CODE IFC INTERNATIONAL FIRE CODE KW KILOWATT MCB MAIN CIRCUIT BREAKER MDP MAIN DISTRIBUTION PANEL MLO MAIN LUG ONLY MTS MANUAL TRANSFER SWITCH N NEUTRAL NEC NATIONAL ELECTRICAL CODE NTS NOT TO SCALE OC ON CENTER OCPD OVERCURRENT PROTECTION DEVICE P POLE PH PHASE POC POINT OF CONNECTION PV PHOTOVOLTAIC RMC RIGID METALLIC CONDUIT SC SOURCE CIRCUIT TYP TYPICAL UL UNDERWRITERS LABORATORY V VOLT OR VOLTAGE W WATT XFMR TRANSFORMER	<p>ELECTRICAL BREAKER</p> <p>ELECTRICAL DISCONNECT SWITCH</p> <p>ELECTRICAL FUSE</p> <p>ELECTRICAL FUSED DISCONNECT SWITCH</p> <p>METER</p> <p>SYSTEM OR EQUIPMENT GROUND</p> <p>CONDUIT DOWN</p> <p>CONTINUATION OF CONDUIT</p> <p>PHOTOVOLTAIC (PV) MODULE</p> <p>DC/AC INVERTER</p> <p>POWER TRANSFORMER</p> <p>CONNECTED CONDUCTOR</p>	<p>1. SOLAR ARRAY CONSISTS OF PV MODULES, CONNECTED IN SERIES.</p> <p>2. ARRAYS HAVE BEEN PLACED TO MINIMIZE OR ELIMINATE SHADING IMPACT FROM ADJACENT STRUCTURES AND/OR OBSTRUCTIONS.</p> <p>3. INVERTERS SHALL BE TRANSFORMERLESS STRING INVERTERS, LOCATED PER PLAN.</p>	<p>1. ALL ELECTRICAL WORK SHALL BE PERFORMED BY A QUALIFIED LICENSED ELECTRICIAN AND/OR APPRENTICES WORKING UNDER THE DIRECT SUPERVISION OF THE LICENSED CONTRACTOR.</p> <p>2. ALL WORK CARRIED OUT SHALL COMPLY WITH THE SPECIFICATIONS, APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES, AND APPLICABLE REGULATIONS.</p> <p>3. PRIOR TO COMMENCEMENT OF ANY WORK, THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES NOTED AMONG SITE CONDITIONS, MANUFACTURER RECOMMENDATIONS, OR AUTHORITY HAVING JURISDICTION. IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER OF RECORD A WRITTEN "RFI"(REQUEST FOR INFORMATION) PROPOSING AN ALTERNATIVE OR SEEKING CLARIFICATION.</p> <p>4. THE CONTRACTOR SHALL MAINTAIN IN GOOD CONDITION ONE COMPLETE SET OF PLANS WITH ALL REVISIONS, ADDENDA, AND CHANGE ORDERS ON THE PREMISES AT ALL TIMES.</p> <p>5. UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, ACCESSORIES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.</p> <p>6. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. CONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS, AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF WORK.</p> <p>7. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.</p> <p>8. CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF WORK AREA, ADJACENT AREAS AND BUILDING OCCUPANTS THAT ARE LIKELY TO BE AFFECTED BY THE WORK UNDER THIS CONTRACT. WORK SHALL CONFORM TO ALL OSHA REQUIREMENTS AND THE LOCAL JURISDICTION.</p> <p>9. CONTRACTOR SHALL LEAVE PREMISES IN A CLEAN CONDITION. ALL DEBRIS AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF IN A LAWFUL MANNER PER SPECIFICATIONS.</p> <p>10. THE CONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES NOT PART OF THE SCOPE OF WORK AS IDENTIFIED IN THESE PLANS.</p> <p>11. DUE TO THE FACT THAT PV MODULES ARE ENERGIZED WHENEVER THEY ARE EXPOSED TO LIGHT, CONTRACTOR SHALL DISABLE THE ARRAY DURING INSTALLATION AND SERVICE BY SHORT CIRCUITING, OPEN CIRCUITING, OR COVERING ARRAY WITH AN OPAQUE COVER ACCORDING TO MANUFACTURER'S INSTRUCTION.</p>
		<h3>SITE INFORMATION</h3> <p>UTILITY COMPANY: LIBERTY UTILITIES</p>	
	<h3>APPLICABLE CODES</h3> <p>NATIONAL ELECTRIC CODE (NEC), 2017                      INTERNATIONAL BUILDING CODE (IBC), 2018                      INTERNATIONAL FIRE CODE (IFC), 2018                      LIBERTY UTILITY REQUIREMENTS FOR NET METERING</p>		<h3>MONITORING AND CONTROLS</h3> <p>CONTRACTOR SHALL PROVIDE A WIRELESS MONITORING AND CONTROLS NETWORK. THE SOLAR INVERTERS SHALL BE PROVIDED WITH MANUFACTURER STANDARD WIRELESS ACCESS CAPABILITY. CONTRACTOR SHALL PROVIDE WIRELESS REPEATERS AT EACH SOLAR ARRAY. CONTRACTOR SHALL PROVIDE CELLULAR HOTSPOTS THAT WILL UPLOAD AND ALLOW CONTROL FROM A PASSWORD PROTECTED WEB ACCESS SYSTEM. THE NUMBER OF HOT SPOTS SHALL BE AS DETERMINED BY THE INSTALLATION CONTRACTOR. AT A MINIMUM, THREE WILL BE REQUIRED, ONE FOR THE MAIN POST AREA, ONE FOR THE RANGE AREA, ONE FOR BUILDING 201. A CONTROLS/MONITORING STATION SHALL BE SET UP AT POST HEADQUARTERS BUILDING 890. THE CONTRACTOR SHALL INSTALL THE WEB MONITORING SOFTWARE ON AN EXISTING COMPUTER AS DESIGNATED BY THE STATE PROJECT MANAGER. SEE SPECIFICAITON 263100 FOR ADDITIONAL INFORMATION.</p>

STATE OF MISSOURI  
MICHAEL L. PARSON  
GOVERNOR



OFFICE OF THE  
ADJUTANT GENERAL

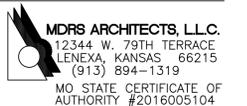
MISSOURI NATIONAL GUARD  
FACILITIES DIVISION

Charles G. Tharp  
Tharp



CROSSED SWORDS ENGINEERING  
1279 W 71st Terr.  
KANSAS CITY MO 64114  
(816) 309-0099 Robert7721@aol.com  
MO STATE CERTIFICATE OF  
AUTHORITY#2016003099

### CONSULTANTS



INSTALL SOLAR  
ARRAY AND FMS  
BATTERY STORAGE

CAMP CROWDER  
TRAINING SITE  
890 RAY A. CARVER AVE.  
NEOSHO MO 64850

PROJECT # T1922-01  
SITE # 6260  
ASSET # 8136260001

REVISION:   
DATE: 5/20/2020  
REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
ISSUE DATE: 3/12/2020

CAD DWG FILE: E-001.DWG  
DRAWN BY: RFS  
CHECKED BY: CT  
DESIGNED BY: RFS

SHEET TITLE:  
ELECTRICAL SOLAR  
ARRAY BUILDING LIST  
LEGEND AND NOTES

SHEET NUMBER:

# E-001

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