



## Continuation Page

1. Reference: RFP Section L.5.2 Pricing Sheet, Paragraph 3, Page 132

(d) Offerors shall propose on all contract line items, either by price or "NSP" (Not Separately Priced). A zero dollar figure in a proposal means the Offeror will provide the line item at no charge to the Government. A line item price left blank will be considered nonresponsive to this request and the proposal will not be considered for award.

Based on the above quoted paragraph, if a vendor cannot provide pricing for any one of the CLIN's then they are disqualified from being considered for award.

Rotary Hot Foil Machines cannot change position of the foil placement throughout a given sheet sheet, thus "Flare Compensation System (CLIN 0008)" is not an option we can provide pricing for.

Reference: RFP Section C.4.2 Flare Compensation, Paragraph 1, page 70:

The statement is posed that "the contractor shall include in their offer if the system can compensate for the positioning of patches and/or stripes."

Ultimately, this is a feature that appears in the "Options" section that appears to be a "Mandatory Minimum Element." Therefore we request clarification if the vendor being unable to price machine option "Flare Compensation System" would result in the entire proposal being rejected.

**Government Response:** See updated solicitation Section B.2 Pricing Schedule and Section C - Statement of Work, C.4.2 Flare Compensation System.

<b>SOLICITATION, OFFER AND AWARD</b>			1. THIS CONTRACT IS A RATED ORDER UNDER DPAS (15 CFR 700)		RATING	PAGE 1	OF 138	PAGES
2. CONTRACT NUMBER	3. SOLICITATION NUMBER 2031ZA23R00005	4. TYPE OF SOLICITATION <input type="checkbox"/> SEALED BID (IFB) <input checked="" type="checkbox"/> NEGOTIATED (RFP)		5. DATE ISSUED 4/11/2023	6. REQUISITION/PURCHASE NUMBER			
7. ISSUED BY Bureau of Engraving and Printing 9000 Blue Mound Rd, Fort Worth, TX 76131		CODE 2031ZA	8. ADDRESS OFFER TO (If other than item 7) See Box 7					

NOTE: In sealed bid solicitations "offer" and "offeror" mean "bid" and "bidder".

**SOLICITATION**

9. Sealed offers in original and 1 copies for furnishings the supplies or services in the Schedule will be received at the place specified in item 8, or if hand carried, in the depository located in via email until 12:00 PM local time 5/12/2023  
(Hour) (Date)

CAUTION - LATE Submissions, Modifications, and Withdrawals: See Section L, Provision No. 52.214-7 or 52.215-1. All offers are subject to all terms and conditions contained in this solicitation.

10. FOR INFORMATION CALL:	A. NAME Claudette Barbee	B. TELEPHONE (NO COLLECT CALLS)			C. E-MAIL ADDRESS <a href="mailto:claudette.barbee@bep.gov">claudette.barbee@bep.gov</a>
		AREA CODE	NUMBER	EXTENSION	

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**OFFER (Must be fully completed by offeror)**

NOTE: Item 12 does not apply if the solicitation includes the provisions at 52.214-16, Minimum Bid Acceptance Period.

12. In compliance with the above, the undersigned agrees, if this offer is accepted within \_\_\_\_\_ calendar days (180 calendar days unless a different period is inserted by the offeror) from the date for receipt of offers specified above, to furnish any or all items upon which prices are offered at the set opposite each item, delivered at the designated point(s), within the time specified in the schedule.

13. DISCOUNT FOR PROMPT PAYMENT (See Section I, Clause No. 52.232-8)	<input type="checkbox"/> 10 CALENDAR DAYS (%)	<input type="checkbox"/> 20 CALENDAR DAYS (%)	<input type="checkbox"/> 30 CALENDAR DAYS (%)	CALENDAR DAYS(%)
14. ACKNOWLEDGMENT OF AMENDMENTS (The offeror acknowledges receipt of amendments to the SOLICITATION for offerors and related documents numbered and dated):	AMENDMENT NO.	DATE	AMENDMENT NO.	DATE

15A. NAME AND ADDRESS OF OFFEROR	CODE	FACILITY	16. NAME AND THE TITLE OF PERSON AUTHORIZED TO SIGN OFFER (Type or print)	
15B. TELEPHONE NUMBER		<input type="checkbox"/> 15C. CHECK IF REMITTANCE ADDRESS IS DIFFERENT FROM ABOVE - ENTER SUCH ADDRESS IN SCHEDULE.	17. SIGNATURE	18. OFFER DATE
AREA CODE	NUMBER			

**AWARD (To be completed by Government)**

19. ACCEPTED AS TO ITEMS NUMBERED	20. AMOUNT	21. ACCOUNTING AND APPROPRIATION	
22. AUTHORITY FOR USING OTHER THAN FULL OPEN COMPETITION: <input type="checkbox"/> 10 U.S.C. 2304 (c) <input type="checkbox"/> 41 U.S.C. 3304(a) ( )		23. SUBMIT INVOICES TO ADDRESS SHOWN IN (4 copies unless otherwise specified)	ITEM
24. ADMINISTERED BY (If other than item 7)		25. PAYMENT WILL BE MADE BY	CODE
26. NAME OF CONTRACTING OFFICER (Type or print)		27. UNITED STATES OF AMERICA  (Signature of Contracting Officer)	28. AWARD DATE

IMPORTANT - Award will be made on this Form, or on Standard Form 26, or by other authorized official written notice.

## SECTION B – SUPPLIES OR SERVICES AND PRICES/COSTS

### B.1 SCHEDULE OF ITEMS AND PRICES

The Bureau of Engraving and Printing (BEP) District Currency Facility (DCF) located in Washington, DC, and Western Currency Facility (WCF) located in Fort Worth, require a Hot Foil Machine (HFM) that will apply an advanced counterfeit deterrent feature(s) onto future currency designs.

The Contractor shall be responsible for the design elements, fabrication, assembly, integration, delivery, installation, set-up, testing, and training to place into operation one (1) Hot Foil Machine. Options for eleven (11) additional HFMs, Spare Parts, and for the Contractor to provide testing and demonstration materials are included.

*NOTE: Please indicate volume discount pricing for additional purchases of optional Hot Foil Machine(s) from date of contract award to a specified period of time.*

### B.2 PRICING SCHEDULE

#### HFM#1

CLIN	SUPPLIES	QTY	UNIT	UNIT PRICE	TOTAL
0001	Hot Foil Machine #1 WCF: - Pre-stacker; Feeder; Spool Feeding Unit; Hot Stamping Unit; Spool Rewind; Control Stations; Central Operation Station; Counters; Warranty; Deliveries (3) Pile; LED UV Curing System; Inspection System; Data Collection System	1	EA	\$	\$
0002	Factory Inspection Test (FIT)	1	EA	\$	\$
0003	Shipping, Installation and Commissioning	1	EA	\$	\$
0004	Bureau Acceptance Test (BAT)	1	EA	\$	\$
0005	Training	1	EA	\$	\$
0006	Die Cutter	1	EA	\$	\$
0007	Shredder/Briquetter	1	EA	\$	\$
0008	Flare Compensation System - <b>(Optional)</b>	1	EA	\$	\$
0009	Spare Parts	1	EA	\$	\$
0010	FIT and Demonstration Materials	1	EA	\$	\$
0011	Product Testing On-Site Support	1	EA	\$	\$
<b>TOTAL HFM #1</b>				\$	\$
<b>Period of Performance: Base Year 2024 - 2026</b>					

**HFM #2**

CLIN	SUPPLIES	QTY	UNIT	UNIT PRICE	TOTAL
1001	Hot Foil Machine #2 WCF: - Pre-stacker; Feeder; Spool Feeding Unit; Hot Stamping Unit; Spool Rewind; Control Stations; Central Operation Station; Counters; Warranty; Deliveries (3) Pile; LED UV Curing System; Inspection System; Data Collection System	1	EA	\$	\$
1002	Factory Inspection Test (FIT)	1	EA	\$	\$
1003	Shipping, Installation and Commissioning	1	EA	\$	\$
1004	Bureau Acceptance Test (BAT)	1	EA	\$	\$
1005	Training	1	EA	\$	\$
1006	Die Cutter	1	EA	\$	\$
1007	Shredder/Briquetter	1	EA	\$	\$
1008	Flare Compensation System - <b>(Optional)</b>	1	EA	\$	\$
1009	FIT and Demonstration Materials	1	EA	\$	\$
<b>TOTAL HFM #2</b>				\$	\$
<b>Period of Performance: Option Year 2025 - 2027</b>					

**HFM #3**

CLIN	SUPPLIES	QTY	UNIT	UNIT PRICE	TOTAL
2001	Hot Foil Machine #3 WCF: - Pre-stacker; Feeder; Spool Feeding Unit; Hot Stamping Unit; Spool Rewind; Control Stations; Central Operation Station; Counters; Warranty; Deliveries (3) Pile; LED UV Curing System; Inspection System; Data Collection System	1	EA	\$	\$
2002	Factory Inspection Test (FIT)	1	EA	\$	\$
2003	Shipping, Installation and Commissioning	1	EA	\$	\$
2004	Bureau Acceptance Test (BAT)	1	EA	\$	\$

2005	Training	1	EA	\$	\$
2006	Die Cutter	1	EA	\$	\$
2007	Shredder/Briquetter	1	EA	\$	\$
2008	Flare Compensation System - <b>(Optional)</b>	1	EA	\$	\$
2009	FIT and Demonstration Materials	1	EA	\$	\$
<b>TOTAL HFM #3</b>				\$	\$
<b>Period of Performance: Option Year 2025 - 2027</b>					

**HFM #4**

CLIN	SUPPLIES	QTY	UNIT	UNIT PRICE	TOTAL
3001	Hot Foil Machine #4 nDCF: - Pre-stacker; Feeder; Spool Feeding Unit; Hot Stamping Unit; Spool Rewind; Control Stations; Central Operation Station; Counters; Warranty; Deliveries (3) Pile; LED UV Curing System; Inspection System; Data Collection System	1	EA	\$	\$
3002	Factory Inspection Test (FIT)	1	EA	\$	\$
3003	Shipping, Installation and Commissioning	1	EA	\$	\$
3004	Bureau Acceptance Test (BAT)	1	EA	\$	\$
3005	Training	1	EA	\$	\$
3006	Die Cutter	1	EA	\$	\$
3007	Shredder/Briquetter	1	EA	\$	\$
3008	Flare Compensation System - <b>(Optional)</b>	1	EA	\$	\$
3009	Spare Parts	1	EA	\$	\$
3010	FIT and Demonstration Materials	1	EA	\$	\$
<b>TOTAL HFM #4</b>				\$	\$
<b>Period of Performance: Option Year 2026 - 2028</b>					

**HFM #5**

CLIN	SUPPLIES	QTY	UNIT	UNIT PRICE	TOTAL
4001	Hot Foil Machine #5 nDCF: - Pre-stacker; Feeder; Spool Feeding Unit; Hot Stamping Unit; Spool Rewind; Control Stations; Central Operation Station; Counters; Warranty; Deliveries (3) Pile; LED UV Curing System; Inspection System; Data Collection System	1	EA	\$	\$
4002	Factory Inspection Test (FIT)	1	EA	\$	\$
4003	Shipping, Installation and Commissioning	1	EA	\$	\$
4004	Bureau Acceptance Test (BAT)	1	EA	\$	\$
4005	Training	1	EA	\$	\$
4006	Die Cutter	1	EA	\$	\$
4007	Shredder/Briquetter	1	EA	\$	\$
4008	Flare Compensation System - <b>(Optional)</b>	1	EA	\$	\$
4009	FIT and Demonstration Materials	1	EA	\$	\$
<b>TOTAL HFM #5</b>				\$	\$
<b>Period of Performance: Option Year 2026 - 2028</b>					

**HFM #6**

CLIN	SUPPLIES	QTY	UNIT	UNIT PRICE	TOTAL
5001	Hot Foil Machine #6 nDCF: - Pre-stacker; Feeder; Spool Feeding Unit; Hot Stamping Unit; Spool Rewind; Control Stations; Central Operation Station; Counters; Warranty; Deliveries (3) Pile; LED UV Curing System; Inspection System; Data Collection System	1	EA	\$	\$
5002	Factory Inspection Test (FIT)	1	EA	\$	\$
5003	Shipping, Installation and Commissioning	1	EA	\$	\$
5004	Bureau Acceptance Test (BAT)	1	EA	\$	\$

5005	Training	1	EA	\$	\$
5006	Die Cutter	1	EA	\$	\$
5007	Shredder/Briquetter	1	EA	\$	\$
5008	Flare Compensation System - <b>(Optional)</b>	1	EA	\$	\$
5009	FIT and Demonstration Materials	1	EA	\$	\$
<b>TOTAL HFM #6</b>				\$	\$
<b>Period of Performance: Option Year 2027 - 2029</b>					

**HFM #7**

CLIN	SUPPLIES	QTY	UNIT	UNIT PRICE	TOTAL
6001	Hot Foil Machine #7 WCF: - Pre-stacker; Feeder; Spool Feeding Unit; Hot Stamping Unit; Spool Rewind; Control Stations; Central Operation Station; Counters; Warranty; Deliveries (3) Pile; LED UV Curing System; Inspection System; Data Collection System	1	EA	\$	\$
6002	Factory Inspection Test (FIT)	1	EA	\$	\$
6003	Shipping, Installation and Commissioning	1	EA	\$	\$
6004	Bureau Acceptance Test (BAT)	1	EA	\$	\$
6005	Training	1	EA	\$	\$
6006	Die Cutter	1	EA	\$	\$
6007	Shredder/Briquetter	1	EA	\$	\$
6008	Flare Compensation System - <b>(Optional)</b>	1	EA	\$	\$
6009	FIT and Demonstration Materials	1	EA	\$	\$
<b>TOTAL HFM #7</b>				\$	\$
<b>Period of Performance: Option Year 2027 - 2029</b>					

**HFM #8**

CLIN	SUPPLIES	QTY	UNIT	UNIT PRICE	TOTAL
7001	Hot Foil Machine #8 nDCF: - Pre-stacker; Feeder; Spool Feeding Unit; Hot Stamping Unit; Spool Rewind; Control Stations; Central Operation Station; Counters; Warranty; Deliveries (3) Pile; LED UV Curing System; Inspection System; Data Collection System	1	EA	\$	\$
7002	Factory Inspection Test (FIT)	1	EA	\$	\$
7003	Shipping, Installation and Commissioning	1	EA	\$	\$
7004	Bureau Acceptance Test (BAT)	1	EA	\$	\$
7005	Training	1	EA	\$	\$
7006	Die Cutter	1	EA	\$	\$
7007	Shredder/Briquetter	1	EA	\$	\$
7008	Flare Compensation System - <b>(Optional)</b>	1	EA	\$	\$
7009	FIT and Demonstration Materials	1	EA	\$	\$
<b>TOTAL HFM #8</b>				\$	\$
<b>Period of Performance: Option Year 2028 - 2030</b>					

**HFM #9**

CLIN	SUPPLIES	QTY	UNIT	UNIT PRICE	TOTAL
8001	Hot Foil Machine #9 WCF: - Pre-stacker; Feeder; Spool Feeding Unit; Hot Stamping Unit; Spool Rewind; Control Stations; Central Operation Station; Counters; Warranty; Deliveries (3) Pile; LED UV Curing System; Inspection System; Data Collection System	1	EA	\$	\$
8002	Factory Inspection Test (FIT)	1	EA	\$	\$
8003	Shipping, Installation and Commissioning	1	EA	\$	\$
8004	Bureau Acceptance Test (BAT)	1	EA	\$	\$

8005	Training	1	EA	\$	\$
8006	Die Cutter	1	EA	\$	\$
8007	Shredder/Briquetter	1	EA	\$	\$
8008	Flare Compensation System - <b>(Optional)</b>	1	EA	\$	\$
8009	FIT and Demonstration Materials	1	EA	\$	\$
<b>TOTAL HFM #9</b>				\$	\$
<b>Period of Performance: Option Year 2028 - 2030</b>					

**HFM #10**

CLIN	SUPPLIES	QTY	UNIT	UNIT PRICE	TOTAL
9001	Hot Foil Machine #10 nDCF: - Pre-stacker; Feeder; Spool Feeding Unit; Hot Stamping Unit; Spool Rewind; Control Stations; Central Operation Station; Counters; Warranty; Deliveries (3) Pile; LED UV Curing System; Inspection System; Data Collection System	1	EA	\$	\$
9002	Factory Inspection Test (FIT)	1	EA	\$	\$
9003	Shipping, Installation and Commissioning	1	EA	\$	\$
9004	Bureau Acceptance Test (BAT)	1	EA	\$	\$
9005	Training	1	EA	\$	\$
9006	Die Cutter	1	EA	\$	\$
9007	Shredder/Briquetter	1	EA	\$	\$
9008	Flare Compensation System - <b>(Optional)</b>	1	EA	\$	\$
9009	FIT and Demonstration Materials	1	EA	\$	\$
<b>TOTAL HFM #10</b>				\$	\$
<b>Period of Performance: Option Year 2029 - 2031</b>					

**HFM #11**

CLIN	SUPPLIES	QTY	UNIT	UNIT PRICE	TOTAL
10001	Hot Foil Machine #11 WCF: - Pre-stacker; Feeder; Spool Feeding Unit; Hot Stamping Unit; Spool Rewind; Control Stations; Central Operation Station; Counters; Warranty; Deliveries (3) Pile; LED UV Curing System; Inspection System; Data Collection System	1	EA	\$	\$
10002	Factory Inspection Test (FIT)	1	EA	\$	\$
10003	Shipping, Installation and Commissioning	1	EA	\$	\$
10004	Bureau Acceptance Test (BAT)	1	EA	\$	\$
10005	Training	1	EA	\$	\$
10006	Die Cutter	1	EA	\$	\$
10007	Shredder/Briquetter	1	EA	\$	\$
10008	Flare Compensation System - <b>(Optional)</b>	1	EA	\$	\$
10009	FIT and Demonstration Materials	1	EA	\$	\$
<b>TOTAL HFM #11</b>				\$	\$
<b>Period of Performance: Option Year 2029 - 2031</b>					

**HFM #12**

CLIN	SUPPLIES	QTY	UNIT	UNIT PRICE	TOTAL
11001	Hot Foil Machine #12 nDCF: - Pre-stacker; Feeder; Spool Feeding Unit; Hot Stamping Unit; Spool Rewind; Control Stations; Central Operation Station; Counters; Warranty; Deliveries (3) Pile; LED UV Curing System; Inspection System; Data Collection System	1	EA	\$	\$
11002	Factory Inspection Test (FIT)	1	EA	\$	\$
11003	Shipping, Installation and Commissioning	1	EA	\$	\$
11004	Bureau Acceptance Test (BAT)	1	EA	\$	\$

11005	Training	1	EA	\$	\$
11006	Die Cutter	1	EA	\$	\$
11007	Shredder/Briquetter	1	EA	\$	\$
11008	Flare Compensation System - <b>(Optional)</b>	1	EA	\$	\$
11009	FIT and Demonstration Materials	1	EA	\$	\$
<b>TOTAL HFM #12</b>				\$	\$
<b>Period of Performance: Option Year 2030 - 2032</b>					

[END OF SECTION]

## **SECTION C - STATEMENT OF WORK HOT FOIL MACHINE**

### **C.1.0 BACKGROUND**

The Bureau of Engraving and Printing's (BEP) mission is to develop and produce United States currency notes, trusted worldwide. BEP's vision is to be the world standard securities printer providing its customers and the public with superior products through excellence in manufacturing and innovation. As its primary function, the BEP prints billions of dollars, referred to as Federal Reserve notes, each year for delivery to the Federal Reserve System.

### **C.1.1 SCOPE**

The Contractor shall provide the BEP with one (1) Hot Foil Machine (HFM). The HFM shall provide the ability to apply an advanced counterfeit deterrent feature(s) onto future currency designs.

Under this requirement, the Contractor shall perform the design elements, fabrication, assembly, integration, delivery, installation, set-up, testing and training to place into operation one (1) Hot Foil Machine with the option(s) for eleven (11) additional HFM, Spare Parts and supporting hardware, if exercised, and for the Contractor to provide testing and demonstration materials.

The HFM shall use Hot Stamp application methodology and have the ability to:

- 1) Feed sheets from a pile in register
- 2) Feed films from spools in register for placement onto the sheets
- 3) Apply a patch, stripe, or optionally laminate onto the sheets in registration onto each note location using heat and pressure
- 4) Respooler for backing material and any foils not applied with all necessary connections for a shred/briquette system
- 5) Shall have an ability to LED UV cure adhesive on applied patches, stripes, or laminates. LED UV Curing system shall have the capability of curing in multiple wavelengths and should be integrated directly into the press system.
- 6) Inspect and sort sheets for presence and registration of applied foils
- 7) Deliver sheets into one of three (3) deliveries, sorting sheets into two acceptable piles, and a non-reclaimable pile
- 8) Provide a console with User Interface (UI) for press operation and monitoring
- 9) Capture data from the press of various file formats (database, structured and unstructured files)

The BEP is presently working with several material Contractors, so the specific material to be applied and the future currency designs are unknown at this time. The HFM shall offer the maximum flexibility and capability to the BEP to apply unique counterfeit deterrent features onto future currency designs.

The first HFM will be installed in the Western Currency Facility (WCF) located in Fort Worth, Texas. The additional HFM will be installed in WCF and/or the new DC Facility (DCF) being

constructed in Beltsville, MD, if exercised.

## **C.2 DOCUMENTS**

### **C.2.1 NON-DISCLOSURE AGREEMENT**

During the course of this contract, the Contractor will require sensitive but unclassified information that is proprietary to the United States Government. A Non-Disclosure Agreement (NDA) shall be signed and notarized as part of the submission package for consideration, **Attachment A**.

The notarized agreement shall be returned to Claudette Barbee, Contracting Officer at:

Bureau of Engraving and Printing  
Office of Chief Procurement Officer  
WCF Contracting Division, Room 291  
9000 Blue Mound Rd  
Fort Worth, TX 76131

The notarized agreement shall also be emailed to Claudette Barbee at [claudette.barbee@bep.gov](mailto:claudette.barbee@bep.gov).

### **C.2.2 REFERENCED DOCUMENTS**

Equipment to be delivered under this contract shall meet all current U.S. commercial codes and industrial standards, or equally stringent international standards, for manufacturing of high-quality industrial equipment, commercial printing presses and finishing equipment to be utilized within an industry environment. At a minimum, all equipment shall conform to National Electric Code, NEC, standards.

The following is a listing of specific standards that the press shall meet:

- All applicable sections of American Conference of Government Industrial Hygienists (ACGIH) ([www.acgih.org](http://www.acgih.org))
- All applicable documents related to Energy Policy Act of 1992 with specific reference to Executive Order 13123 ([www.omb.gov](http://www.omb.gov))
- All applicable Occupational Safety and Health Administration (OSHA) standards with specific references to OSHA standards 29 CFR 1910 ([www.osha.gov](http://www.osha.gov))
- All applicable codes and standards and environmental permitting of U.S. Environmental Protection Agency (EPA) ([www.epa.gov](http://www.epa.gov)) and District of Columbia (DC) government ([www.doe.dc.gov](http://www.doe.dc.gov)) and State of Texas (TX) government ([www.tceq.texas.gov](http://www.tceq.texas.gov)).

### **C.2.3 ATTACHED DOCUMENTS**

The following lists the documents attached to this SOW.

*NOTE – Attachments identified with an asterisk (\*) require a Non-Disclosure Agreement (NDA). All NDA documents provided under this contract shall be considered proprietary and sensitive to the government. NDA documents shall not be copied, scanned, or*

reproduced without written approval by the Contracting Officer (CO). All NDA documents shall be returned to the BEP when no longer required or upon request by the CO.

NOTE – Attachments identified with double asterisk (\*\*) require a Non-Disclosure Agreement (NDA) and will be provided after project award.

NOTE – Some documents will only be made available in redacted versions. Request to have copies of the original versions must be made to the Contracting Officer (CO) with information on why the information is required.

<b><u>Identifier</u></b>	<b><u>Title/Description</u></b>
A	Non-Disclosure Agreement
B	Paper Specifications* P CDT1-1B Type I Currency Paper – 12Aug2015_abridged P CDT4-1B Type IV Currency Paper – 12Aug2015_abridged P CDT5-1C Type V Currency Paper – 12Aug2015_abridged P NDBT1A NBP Type I – 12Aug2015_abridged P NDBT4A NBP Type IV – 12Aug2015_abridged P NDBT5A NBP Type V – 12Aug2015_abridged
C	Foil Specifications**
D	Stack-N-Rack Cart Drawings
E	BEP CalCheck Sheet
F	IT Computer Attachments Federal Information Processing Standards NIST Special Publication 800-53 US Government Security Baseline (USGCB) Department of Justice Reference
G	75.00-ENV-005-FW: EH&S Boilerplate Requirements for Construction and Service Contractors
H	Preliminary Test Plan

### **C.3 REQUIREMENTS**

The HFM shall meet the following requirements.

#### **C.3.1 MATERIALS (MANDATORY MINIMUM REQUIREMENT)**

The items listed in this section will be supplied by the government for utilization with the HFM. The system shall utilize the materials, meeting the functionality, performance, and design requirements. Any other materials required for the operation of the system shall be provided by the Contractor, **refer to C.3.6.1. - Contractor Furnished Materials.**

##### **C.3.1.1 CURRENCY SHEETS**

The BEP will supply currency sheets for processing on the machine. The specification for the paper is **Attachment B**. During the term of this contract, the substrate, the size, and format of currency sheets may change. The HFM shall accept BEP previously printed currency sheets that may include Offset and/or Intaglio printing.

The operation of the HFM within the manufacturing process has not been defined at this time.

Therefore, the HFM may be applying foils to blank sheets, or after offset, screen, or intaglio printing operation. Due to the intaglio printing forces, the sheets are not to be considered square or flat after intaglio printing. The sheet thickness and dimensions provided are for blank, un-calendared paper.

Federal Reserve currency sheets are presently processed in multiple sheet sizes and formats. The format and sheet size for the denominations is expected to change over time as the BEP migrates denominations to the larger format production.

**32-subject \$2s** –  $561 \pm 1$  mm long by  $631 \pm 1$  mm wide (22.09 inches  $\pm$  0.04” by 24.84 inches  $\pm$  0.04”). The sheets are printed with thirty-two (32) images; four notes across the sheets by eight down the sheet. The sheets are face and back Intaglio printed.

**32-subject \$10s, \$20s, \$50s and \$100s** –  $582 \pm 1$  mm long by  $657 \pm 1$  mm wide (22.913 inches  $\pm$  0.039 inches by 25.866 inches  $\pm$  0.039 inches). The sheets are printed with thirty-two (32) images; four notes across the sheet by eight notes down the sheet and have color bars and other non-note printing within trim margins. The sheets are face and back Offset and Intaglio printed.

**50-subject \$1s & \$5s** –  $700 \pm 1$  mm long by  $818 \pm 1$  mm wide (27.559 inches  $\pm$  0.039 inches by 32.205 inches  $\pm$  0.039 inches). The sheets are printed with fifty (50) images; five notes across the sheets by ten down the sheet. The sheets are face and back Intaglio printed.

Sheets will be provided in a “Load” of 16,000 or 20,000 sheets; load size for \$1s - \$50 is 20,000, \$100 are 16,000. Sheets may be delivered on skids for direct loading into the feeder or on Stack-N-Rack carts that must be stacked at the pre-stacker prior to processing. Due to previous processing and removal of unacceptable sheets the total number of sheets within a load may be less than the initial quantity. The sheets will be divided into sheets verified to be of acceptable print quality and sheets identified to contain defective notes.

A Raised Tactile Feature (RTF) and/or other features may be added to future currency designs that may impact the heights of stacks of sheets. The placement, height and nesting characteristic of the feature(s) are unknown at this time. The press shall allow for variations in the implementation of RTF on the sheets.

To accommodate future changes to United States currency, the HFM shall have the capability of accommodating currency printed on a wide range of substrate materials, sheet sizes and formats.

#### **(1) Substrates**

The HFM shall have the capability of accommodating currency printed on a wide range of substrates, including polymers in addition to the existing substrate. The system shall be able to process sheets from 70 to 120 grams/meter<sup>2</sup>. The specification for the substrate is available after signature of the NDA with the government. The manufacturer shall specify the range of materials, including thicknesses, allowable on the press.

#### **(2) Sheet Sizes**

The HFM shall have the capability of processing sheets ranging from a minimum of 450 mm wide by 475 mm long (17.717 x 18.701 inch) to a maximum of 820 mm wide by 700 mm long (32.28 x 27.56 inch) with an image area at least 800 mm wide by 666 mm long (31.49 x 25.98

inch). All sheet dimensions are for blank paper prior to printing.

### **(3) Sheet Formats**

The HFM shall allow for variations in the format of the sheets. The HFM shall accommodate between three (3) and five (5) notes across the sheet (columns) and between five (5) and ten (10) notes down the sheet (rows); minimum of fifteen (15) subject up to fifty (50) subject. The size of individual notes shall have the capability of ranging from a minimum of 100 mm wide by 50 mm tall (3.937 inches by 1.969 inches) up to a maximum of 180 mm wide by 90 mm tall (7.087 inches by 3.543 inches).

#### **C.3.1.2 FOILS**

The BEP will provide unique counterfeit deterrent foils to be applied to the sheets on spools. The specification for foil material is currently under development and Attachment C – Foil Specifications will be provided to the contractor after award of the contract. Under the NDA, the BEP will provide specific information on the foils and curing requirements. Attachment C – Foil Specification requires a Non-Disclosure Agreement (NDA).

Spools will have the following:

- Core Diameter – 3” (76.2mm)
- Maximum Diameter – 300mm (11.81 inches)
- Maximum Width – 285mm (11.22 inches)

#### **C.3.1.3 STACK-N-RACK CARTS**

The HFM shall use BEP provided Work In Progress (WIP) carts for the stacking of sheets in the deliveries. **Attachment D** is the drawings of the carts.

### **C.3.2 SAFETY AND ENVIRONMENTAL REQUIREMENTS (MANDATORY MINIMUM REQUIREMENT)**

#### **C.3.2.1 SAFETY REQUIREMENTS**

All equipment delivered to the BEP shall be designed to minimize all risks of injury to BEP employees. All equipment shall be in full compliance with government and commercial safety and health regulations and requirements. The following are specific safety and environmental requirements for major production machinery for the BEP.

#### **(1) General safety**

Equipment shall be designed to prevent injury to operation and maintenance personnel at all times. It shall be equipped with service access equipment, such as catwalks, access platforms, access ladders, lifts, and other equipment for operation and maintenance. All catwalks, access platforms, access ladders, lifts, hoists, and any other equipment that are furnished, shall be built, and tested to comply with the applicable American National Standards Institute (ANSI) and/or Occupational Safety and Health Administration (OSHA) standards including OSHA 29 CFR Subpart D.

**(2) Noise Level**

The maximum noise produced by the operation of the equipment at full production rate shall not exceed 85 decibels A-weighted sound pressure level (85 dBA) when measured at 914 mm (3 feet) distance along the plan view of the equipment and at an elevation of 1,524 mm (5 feet). If the requirement cannot be met, the Contractor shall meet with the CO, an EHS representative, and the CO's team to discuss all alternatives including required PPE to operate the machine safely. Exceptions may be granted if the equipment does not require an operator to be present for continuous operation.

**(3) Machine Guarding**

All hazardous mechanical motions and actions shall be guarded as specified by OSHA 29 CFR Subpart O and all furnished safeguards shall be designed, built, and tested in accordance with ANSI B.11 or ANSI B.65 standards. Machine safeguards must prevent hands, arms, or any other part of a worker's body from making contact with dangerous moving parts. All covers and safety guards shall be firmly affixed to the machine or otherwise interlocked with the equipment's function controls to prevent its operation while any cover or guard is open or absent. Covers and guards shall be easy to remove by BEP authorized maintenance personnel to facilitate the removal of mechanical and electrical parts for repair.

**(4) Mechanical Entrapment Response Procedures**

The manufacturer shall provide written mechanical entrapment response procedures for the emergency release of persons trapped in machinery. Training on the procedures shall also be provided. This requirement applies to equipment that has any potential entrapment point(s) where hands, fingers or any other body parts could become caught between moving parts.

**(5) Sharp Edges**

All sharp edges and corners, which present personnel hazards, shall be guarded or padded.

**(6) Heated Surfaces**

Equipment shall be designed to prevent heated surfaces from causing burns to personnel during operation.

**(7) Prohibited Materials**

Restricted materials shall not be used in the equipment. These materials are noted in 75D-07.0-07 Restricted Materials at DCF and 75W-08.0-04 Restricted Materials at WCF.

**(8) Hazardous Emissions**

Operation of the equipment shall not result in worker exposure to airborne contaminants exceeding current maximum allowable concentrations established by (OSHA), the American Conference of Governmental Industrial Hygienists (ACGIH) or National Institute of Occupational Safety and Health (NIOSH) standards. When the standards differ between organizations, the most stringent shall apply.

**(9) Interlocks**

All furnished interlocks shall shut off or disengage power, stop the moving parts, and prevent the automatic restart of the machine when the guard is open and/or the device is activated. An

interlocked guard may use electrical, mechanical, hydraulic, or pneumatic power or any combination of these. However, an electrical interlock shall be provided to prevent accidental starting with the mechanical lock engage.

#### **(10) Hazard Communication**

Safety Data Sheets (SDS) for all supplied and specified chemicals that are part of the process shall be supplied by the Contractor to the COR. The COR shall forward all SDSs to OEHS or WCF EHS for review. The SDS and product labeling shall comply with OSHA, as listed in standard 29 CFR 1910.1200, with particular emphasis on paragraphs (g) and (i). All SDS must be the most current version available and package labeling must be in English.

#### **(11) Overload Protection**

Equipment shall be provided with overload protection and power factor correction devices to prevent damage to components and operating personnel.

#### **(12) Safe Ready**

All control stations shall include a "safe-ready" collar. Upon turning the collar to the safe position, it shall be impossible to start the system from any other station. Console shall indicate that the particular interlock including emergency stop buttons causes the system to start or not.

#### **(13) Emergency Stop**

Emergency stop buttons shall be designed in accordance with ISO 13850: Safety Of Machinery - Emergency Stop Function. Such buttons shall be provided at multiple strategic locations to minimize the time required to reach them. Emergency stop buttons shall be of the pronounced mushroom type, red in color. Emergency stop buttons shall remain activated with a blinking red light once depressed until manually reset.

SON 5.1.3.11 - Whenever an Emergency Stop is activated, the machine shall stop within one (1) second to reduce damage to the machinery and injury to personnel. An Emergency Stop may be initiated due to the machine's internal control logic detecting an emergency situation, activation of personnel safety devices (i.e. safety curtains, cover interlocks or other devices designed to protect personnel), or by personnel manually activating an Emergency Stop Button.

Emergency Stop Buttons shall be provided at strategic locations, including the drive side of the machinery in the areas of the drive motors and delivery, to minimize the time required to reach them. Emergency Stop Buttons shall be of the pronounced mushroom type, red in color, with no raised guards to prevent accidental depression. Emergency stop buttons shall remain activated once depressed until manually reset.

#### **(14) Inching Interlock**

Whenever an inching of the equipment occurs, only the control station from where the inch was performed shall be able to cause the equipment to move until the safe-ready is activated and deactivated. The equipment shall be designed such that the use of "cheaters" to override the interlock function is not necessary.

#### **(15) Energy Isolation**

Disconnect or lockout devices shall be provided and identified with signage for all sources of energy on the equipment; this includes electrical, hydraulic, pneumatic, and kinetic sources of

energy. All isolating devices (levers, breakers, valves, etc.) for all associated energy sources (electrical, hydraulics, pneumatics, gravity, etc.) shall be identified by a color-coded tag which indicates the type of energy source, the magnitude of the energy and an ID number. All isolating devices shall be capable of being locked out with a standard locking device and/or padlock. Stored sources of energy such as, pneumatic, and hydraulic forces shall be automatically bled and returned to a zero-energy state when an interlocked device (i.e., a guard or a door) is opened.

#### **(16) UV Curing/Exposing Equipment**

All equipment with ultraviolet radiation systems shall be designed such that no operator is exposed at, or above permissible threshold levels established by the ACGIH. Lighting type, output energy (watts) and wavelength (nm) must be provided in writing for all UV curing equipment. LEDs used in the UV curing process must meet the requirements of ANSI/IESNA RP-27.3-07 Photobiological Safety for Lamps - Risk Group Classification and Labeling.

#### **(17) Hydraulic & Pneumatic Systems**

All hydraulic and/or pneumatic systems shall have functional isolation, i.e., when part of a system is operating, no other part of the system shall be adversely affected by pressure drop, flow transients, etc. All hydraulic and pneumatic equipment employed in the system shall conform to ISO 4413:2010/ISO 4414:2010 standards. Hydraulic and pneumatic pumps shall be energy efficient.

#### **(18) Laser Systems**

All equipment with laser systems shall comply with the latest version of the Laser Institute of America's ANSI-Z136.1 standard, American National Standard for Safe Use of Lasers, and 21 CFR 1040 and shall be designed such that no operator is exposed at, or above permissible threshold levels established by the ACGIH.

#### **(19) Illumination**

Large equipment (such as printing presses) with covered workstations such as impression cylinder, wiping roller, inking-in areas, etc., shall be illuminated to 20 foot-candles of luminance by the equipment manufacturer, in accordance with the latest version of ANSI RP-7.

#### **(20) Industrial Ventilation**

Equipment which emits airborne contaminants which exceed permissible exposure concentrations as established by OSHA, ACGIH and National Institute of Occupational Safety and Health (NIOSH) shall be equipped with local exhaust ventilation (LEV). LEV shall be designed in accordance with the ACGIH Industrial Ventilation: A Manual of Recommended Practice for Design, (latest edition). All industrial ventilation system parameters and design shall comply with the OSHA Ventilation Standard, 29 CFR 1910.94.

#### **(21) Material Handling Assistance**

The equipment shall include ergonomic lifting aids for any lifting of more than 32 pounds by the operators.

### **C.3.2.2 ENVIRONMENTAL PROTECTION REQUIREMENTS**

All equipment, materials, and processes must meet or exceed standards in the regulations and executive orders listed below. Other environmental regulations, executive orders and guidance may also be applicable. The environmental protection requirements focus on emissions, discharges, and waste products impacting air, water, and land.

#### **(1) References**

- Federal Regulation: Environmental Protection Agency, EPA Clean Air Act, as Amended
- 40 CFR 403 - General Pretreatment Regulations for Existing and New Sources of Pollution
- 40 CFR 433 – Metal Finishing Point Source Category
- 40 CFR 261 – Identification and Listing of Hazardous Waste
- District of Columbia Municipal Regulations (DCMR), Title 20, Subtitle A, Air Quality Regulations
- District of Columbia Municipal Regulations (DCMR), Title 20, Subtitle E, Hazardous Waste Regulations
- District of Columbia Municipal Regulations (DCMR), Title 21, Water and Sanitation, Chapter 15, Discharges to Wastewater System Regulations
- P.L. 102-486, Energy Policy Act of 1992, October 24, 1992
- 40 CFR Part 247, Comprehensive Guideline for Procurement of Products Containing Recovered Materials, May 1, 1996
- Texas Commission on Environmental Quality (TCEQ) regulations in Texas Administrative Code Title 30 Chapters 101 through 335 as applicable
- City of Fort Worth Code of Ordinances, Part II City Code; Chapter 12.5 Environmental Protection and Chapter 16: Health and Sanitation, Chapter 13 Fire Prevention and Protection.

#### **(2) Air Pollution Control**

The DCF is in a non-attainment area for Volatile Organic Compounds (VOCs) and 2.5 Particulate Matter (PM 2.5). The WCF is in a nonattainment area for VOCs. Any equipment to be installed in either the DCF or the WCF must meet Lowest Achievable Emissions Rate (LAER) standards in accordance with EPA, TCEQ, and District of Columbia regulations. Maximum Achievable Control Technology (MACT) standards may also be applicable to control the emissions of any Hazardous Air Pollutants that result due to the installation of new equipment or change in the method of operations of existing equipment.

The Contractor shall identify potential source locations of air pollutant emissions from the equipment. Equipment must be designed so that pollutants can be captured and ventilated to air pollution control devices. If emission capture and control are required, the Contractor may be

required to propose and provide a design and equipment for capture and control of the pollutant in question.

**a) Third Party Performance Test**

Third Party Performance Test— A compliance test which demonstrates that the equipment and/or air pollution control device (APCD) meets the applicable EPA or DC performance requirements, may be required. If required, the compliance test must be performed according to a test plan that uses approved EPA methods and be submitted to the Office of Environment, Health and Safety (OEHS) or WCF EHS for approval prior to the test.

**b) Construction Permits**

The BEP is required to submit and receive approval from regional environmental regulatory agencies prior to beginning construction to support the installation of equipment that is expected to emit pollutants. The Contractor shall provide sufficient information to the BEP to facilitate the preparation of the air permitting applications for the equipment and control devices so that the permit is in place prior to construction. The air permitting process may take from 6 to 18 months to complete. The Contractor shall furnish drawings of all equipment to be delivered to the BEP identifying pollutant emitting locations and furnish information on the types and quantities of pollutants from the operation and cleaning of the equipment. Contractor shall furnish the information to the BEP during the first design review meeting or within 30 days after contract award if no design review is to occur.

Interlocks and Standby Mode— All air pollution control devices (APCDs) shall be interlocked with the equipment to prevent operation without emission capture. The Contractor is responsible for coordinating with Bureau representatives, including OEHS or WCF EHS, to establish the parameters that warrant a shutdown of equipment. Standby Modes shall be established for periods when equipment is not operating. The Contractor shall document the parameters established and include this information in the operation and maintenance manuals.

**(3) Wastewater**

Information shall be provided to the OEHS or WCF EHS through the COR on the characteristics of all effluents (liquids which can be pumped or gravity flow liquids) that will come from the equipment, either regularly or intermittently, including routine or scheduled maintenance work. This information will be used to determine the feasibility and method of treating the effluents either in the Wastewater Pre-Treatment Plant or requiring that the materials be handled through the Solid/Hazardous Waste Program.

**(4) Energy, water, and materials usage programs**

The Contractor shall make every effort to provide the most energy and water efficient equipment to the Bureau. The Contractor shall furnish all information to document the energy and water usages for the system, including all calculations. The Contractor shall comply with:

- P.L. 102-486, Energy Policy Act of 1992, October 24, 1992

- 40 CFR Part 247, Comprehensive Guideline for Procurement of Products Containing Recovered Materials, May 1, 1996

**(5) Fluorescent Bulbs**

All lamping shall be LED.

**(6) Solid Hazardous Waste**

Equipment that generates non-liquid waste (waste which cannot be pumped, or which do not flow by gravity) either continuously or intermittently, including scheduled or routine maintenance work, in addition to normal operation, must be designed to allow for removal of the waste in an ergonomic manner and to allow the operator to transfer the waste into a 55-gallon drum – 1A1, 1A2, or another appropriate container, as needed. Information shall be provided as to the specific quantity, nature and characteristics of the non-liquid waste generated so that a waste determination may be performed by OEHS in accordance with 40 CFR 261 – Identification and Listing of Hazardous Waste.

**C.3.3 FUNCTIONAL REQUIREMENTS – MACHINE STAGES**

The HFM shall have the following functional capabilities:

- 1 – Feeder
- 2 – Spool Unwind Units
- 3 – Hot Stamping Unit (both foil and laminate)
  - A – Foil Patch Application
  - B – Foil Stripe Application
  - C – Laminate Patch Application
  - D- Laminate Stripe Application
- 4 - Spool Take-up/Shredding System
- 5 – LED UV Curing System
- 6 – In-line Inspection System
- 7 – Delivery (3 piles)
- 8 – Central Operator Station (COS)
- 9 – Data Collection System

The following specifies the specific requirements for each machine stage.

**C.3.3.1 PRE-STACKER**

The HFM shall be supplied with a pre-stacker unit for personnel to stack sheets for feeding into the machine. Pre-stacker shall allow an operator to assemble stacks of sheets up to 1500 mm (4 ft – 11 inches), approximately 10,000 sheets, from Stack-n-Rack carts for loading into the machine. Pre-stacker shall have guides on both sides for back or face application of the feature.

At least three (3) carts shall be supplied by the Contractor for the stacking of the sheets and transportation of the stacks from the pre-stacker to the feeder with each machine. A means to

maintain alignment of the carts from the pre-stacker into the feeder shall be included. The use of guides secured to the floor to maintain alignment is acceptable, but the guides shall be positioned to prevent being a trip hazard.

The pre-stacker shall not obstruct or prevent loading of sheets supplied to the press on skids that do not require manual stacking.

### **C.3.3.2 FEEDER**

The HFM shall have a continuous sheet feeder with the ability to accept stacks of currency sheets from the pre-stacker and skids manually loading into the feeder by an operator with a hand-truck. Feeder shall accept sheet stacks up to 1500 mm (4 feet – 11 inches) tall. The feeder shall have provisions to maintain the stack alignment during processing.

*NOTE: Currency sheets, especially those containing threads, watermarks, and RTF, tend to lean and must be supported by side guides.*

The feeder shall automatically feed the sheets in registration utilizing the front and side edges of the sheets. The feeder shall have the capability to remove any static charge present in the sheet load during feeding. The foil feature may be applied to either the back or face of the sheets, so the press shall have side guides to registering both face and back printing.

The feeder shall have provisions to detect the following faults:

- Two or more sheets fed together, press shall have redundant electronic and mechanical sensors
- Sheet is incorrectly fed; skewed sheet, side lay, etc.
- Sheet is missing or late
- Sheet is in the incorrect orientation; side (face/back) and end (head/tail)
- Sheet has folded corners

When a feeding fault is detected, the machine shall stop feeding the sheet, if possible, without producing additional spoilage to allow the operator to manually remove the sheet. If stopping the feeder and manual removal of the sheet is not possible, then the machine shall not apply a foil and divert the sheet to pile 4 as a waste sheet. The feeder design shall facilitate removal of sheets when a feeder fault occurs to minimize lost production time.

The detecting and tripping mechanisms shall operate at speeds designated to prevent jams, damage to the press or screens, and the printing of images on rigging boards, draw sheets or other non-substrate materials. All fault detecting devices shall indicate operational status of the fault detectors. All sensors shall have provisions for recalibration. A graphic panel with indicators to display fault detector status shall be provided. Error codes shall flash on the console and remote displays when errors are detected.

Feeder shall be provided with a static elimination device to remove static from the sheets prior to processing.

### **C.3.3.3 SPOOL FEEDING UNIT**

The HFM shall have a Spool Feeding unit for the feeding of material for application onto the

sheets. Graphics and images on the foils shall be registered within  $\pm 0.5$  mm (0.020 inches) of the specified location.

The system shall accommodate spools of film material (patches, stripes, or laminates) on 76.2 mm (3 inch) cores. Maximum diameter allowed shall be at least 300 mm (11.81 inches). The system shall accommodate spools with carrier (backing) foils from 8 to 30 mm in width.

System shall have six (6) individual spool feeding units. The indexing or foil saving system shall be independently programmable for each foil. The spool unwind units shall automatically tension the foils and register the foils for placement on the sheets.

System shall be able to index the foils to maximize the number of sheets processed with each spool. The spool feeding unit shall have the capability to remove any static charge present in the foil spools during feeding.

#### **C.3.3.4 HOT STAMPING UNIT**

The HFM shall have the capability to effectively apply foil patches, foil stripes, laminate patches, and laminate stripes via Hot Stamping Process. The system shall have the ability to apply stripe, patch, and laminated foils.

The HFM shall have a means to ensure even, and uniform drive of the sheets being processed. Since the features may be applied off-centered to the note locations, means to provide uniformly drive on both exterior edges of the sheets shall be provided. The HFM shall have the ability to feed sheets through the press without “dog-ear” or folded corners/sheets.

The HFM shall have means for the operator to remotely set on the Central Operator Console (COS) the pressure, temperature, and dwell time for the application of the foils onto the sheets.

- System shall have a temperature set point range for patches, stripes, or laminates from 50 to 170°C (122 to 338°F) and shall maintain the temperature within  $\pm 3^\circ\text{C}$  ( $\pm 5^\circ\text{F}$ ).
- System shall maintain uniform pressure across the entire sheet within  $\pm 5\%$  of the set point.

The HFM shall register the foils being applied laterally (across sheet for patches, stripes, and laminates) and circumferentially (down sheet for patches) for positioning of the feature onto the sheet, as well as register the positioning of graphics or images on the foils to the sheet, refer to **C.3.3.3**.

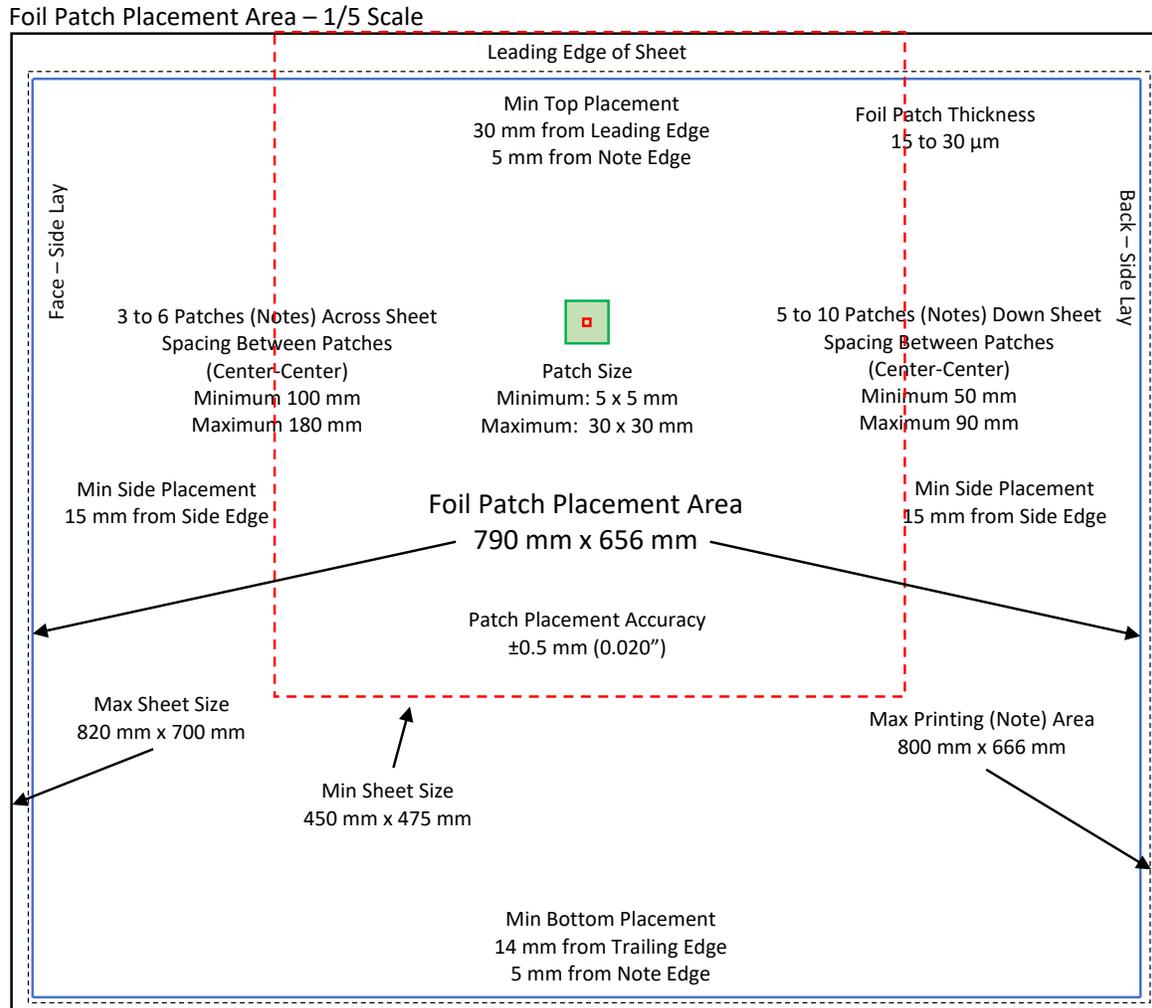
The HFM shall achieve the following registration tolerances:

- Lateral =  $\pm 0.5$  mm (across sheet)
- Circumferential =  $\pm 0.5$  mm (down sheet)

All registration tolerances are in respect to the registration edges of the sheets, front and side-lays. Measurements will be taken at the respective lay locations for printing accuracy. Registration will be validated by measuring sheets, measurements to occur at the registration positions on the sheets, and all measurements having a three-standard deviation ( $3\sigma$ ) less than or equal to the registration tolerance (i.e.,  $3\sigma \leq 0.5$  mm).

## (1) Patch Application

The HFM shall have the ability to apply in register foil patches onto each sheet processed as shown on the following graphic.

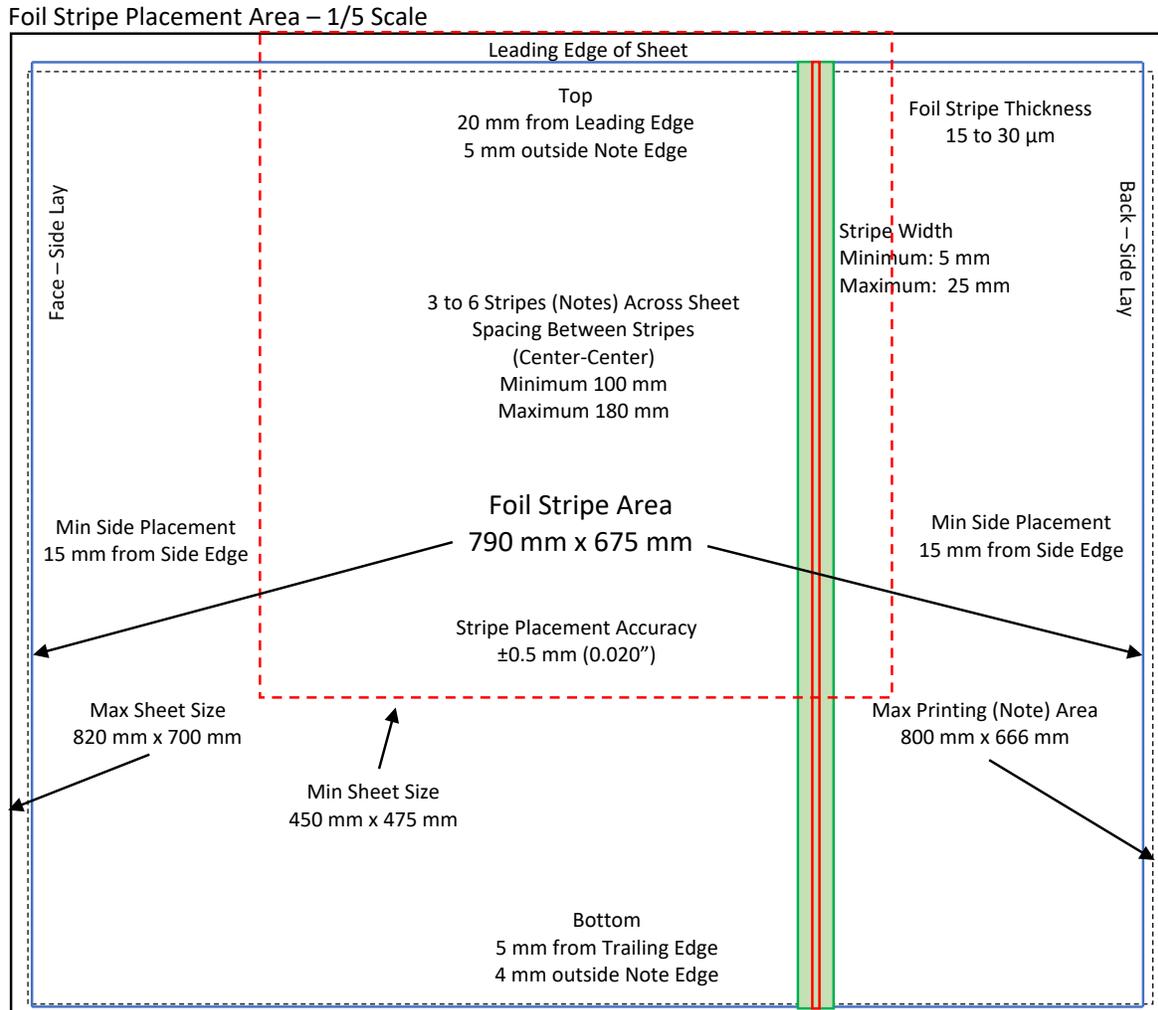


The system shall:

- Apply patches ranging from 5 x 5 mm up to 30 x 30 mm
- Apply patches ranging from 10 to 35  $\mu$ m thickness
- Apply patches within 30 mm from the leading edge of the sheet
- Apply patches within 15 mm from each side of the maximum sheet size
- Apply patches within 14 mm from the tail edge of the maximum sheet size
- Patches shall be positioned within  $\pm 0.5$  mm (0.020 inches) of the specified location
- Apply 3 to 6 patches across the sheet, between 100 mm to 180 mm apart
- Apply 5 to 10 patches down the sheet, between 50 mm to 90 mm apart

## (2) Stripe Application

The HFM shall have the ability to apply in register foil stripes onto each sheet processed as shown on the following graphic.



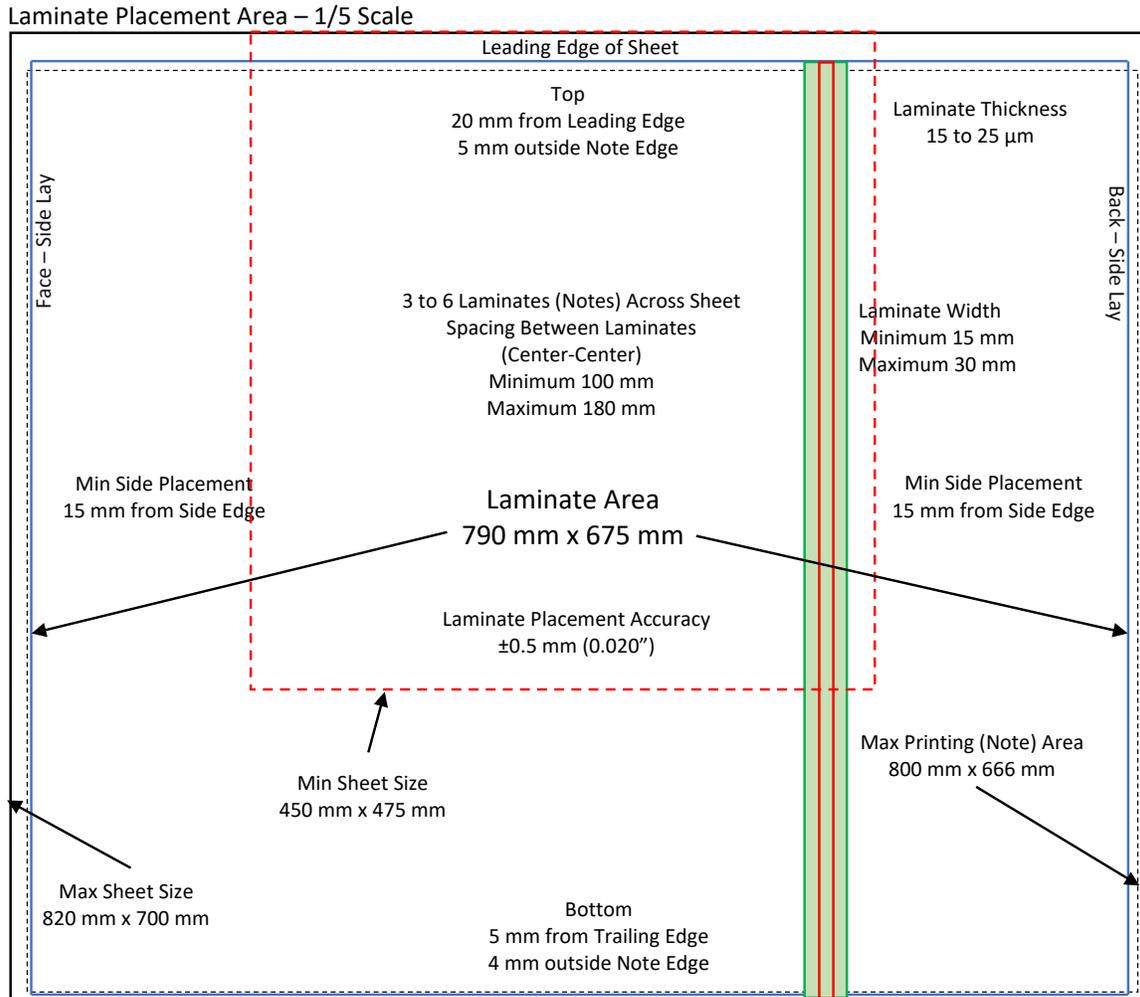
The system shall:

- Apply stripes ranging from 5 to 30 mm wide
- Apply stripes ranging from 15 to 35  $\mu\text{m}$  thickness
- Apply stripe within 20 mm from the leading edge of the maximum sheet size
- Apply stripe within 15 mm from each side of the maximum sheet size
- Apply stripe within 5 mm from the tail edge of the maximum sheet size
- Stripes shall be positioned within  $\pm 0.5$  mm (0.020 inches) of the specified location
- Apply 3 to 6 stripes across the sheet, between 100 mm to 180 mm apart

### (3) Laminate Application

The HFM shall have a position for the optional Laminating operation, refer to **C.4.2**. The system shall be designed to allow retrofitting of the system with the optional laminating operation without repositioning of the press.

If exercised, the HFM shall have the ability to apply in register foil laminates on full sheets-as shown on the following graphic.



The system shall:

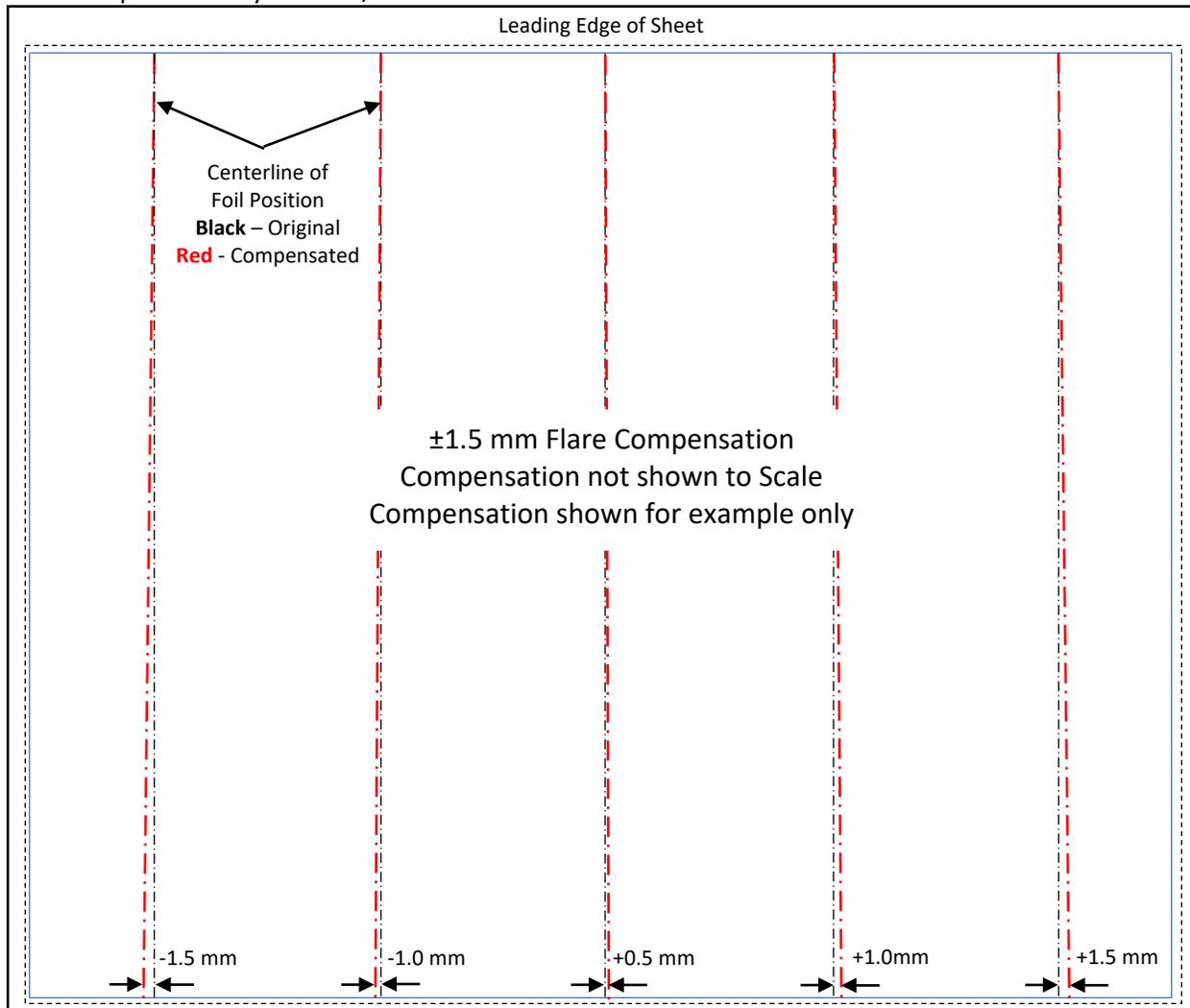
- Apply laminates ranging from 15 to 35 mm wide
- Apply laminates ranging from 15 to 25 µm thickness
- Apply laminates within 20 mm from the leading edge of the maximum sheet size
- Apply laminates within 15 mm from each side of the maximum sheet size
- Apply laminates within 5 mm from the tail edge of the maximum sheet size
- Laminates shall be positioned within ± 0.5 mm (0.020 inches) of the specified location

- Apply 3 to 6 laminates across the sheet, between 100 mm to 180 mm apart

**(4) Optional Flare Compensation**

- a) **PATCH** – As an option, it is desired by the BEP to include a Flare Compensation System for the placement of the patches onto the sheets, refer to **C.4.3**. Sheets are distorted due to intaglio printing and processing. It is desired for the operator to be able to compensate for the flare in the sheets being processed to adjust the position laterally across the sheet for the placement of the patches onto the sheet. The ability to adjust the position across the sheet for the positioning of patches down a column within  $\pm 1.5$  mm in 0.1 mm increments. Compensation shall be by each column individually. See the following sketch for example of Flare Compensation.

Flare Compensation System – 1/5 Scale



- b) **STRIPES** – As an option, it is desired by the BEP to include a Flare Compensation System for the placement of the stripes onto the sheets, refer to **C.4.3**. Sheet Flare is the

widening and distortion of the sheets due to intaglio printing and processing. It is desired for the operator to be able to compensate for flare in the sheets by adjusting the position across the sheet (laterally) for the placement of the stripes down a column (skewing of the stripe from perpendicular with the sheet leading edge). The ability to adjust the position up to  $\pm 1.5$  mm in 0.1 mm increments. Compensation shall be controlled individually for each column.

- c) LAMINATES – It is desired by the BEP to include a Flare Compensation System for the placement of the laminates onto the sheets. Sheet Flare is the widening of the sheets due to intaglio printing and processing. It is desired for the operator to be able to compensate for flare in the sheets being processed to adjust the position laterally across the sheet for the placement of the laminates onto the sheet. The ability to adjust the position across the sheet for the positioning of the laminate down a column within  $\pm 1.5$  mm in 0.1 mm increments. Compensation shall be by each column individually.

### **C.3.3.6 SPOOL REWIND AND SHREDDER/BRIQUETTER**

The HFM shall be supplied with capability to both rewind spools of the backing material and to shred and briquette the backing materials and any foils not applied.

#### **(1) Spool Rewinder**

The HFM shall have a Spool Rewinder unit(s) to accumulate the backing material (carrier film) and any unapplied foils. System shall have the ability to run with up to six (6) individual spool rewind units. The Spool Rewinder shall use the same 76.2 mm (3 inch) cores used on spools supplied to the system. System shall produce spools up to 300 mm (11.81 inches) diameter. Maximum width allowed shall be at least 285 mm (11.22 inches). Rewound material on the spool shall be evenly tensioned and positioned within 0.8 mm (1/32 inches).

#### **(2) Optional Shredder/Briquette System**

The HFM shall be capable of shredding and briquetting foil/laminate waste, or the ability to connect to a central warehouse disposal system.

If a machine includes the optional shredder/briquette disposal system, the system shall shred, accumulate, and briquette both the backing material with any foil (stripes or patches) not applied to sheets. One (1) shredder/briquette system may support one or more HFMs.

If the HFM includes the optional shall also have all connections and interlocks necessary to connect to a central warehouse disposal system. The

The system shall shred the materials to a maximum size of 2.1 mm x 19 mm. Shredded material shall then be accumulated and briquetted. Wheeled bins or totes for the transport of the briquetted material to dumpsters shall be provided.

Shredding of the material is desired to not occur in the immediately vicinity of the HFM but be located remotely to minimize dust and noise on the production floor. The Contractor shall specify the duct sizes and flow rates for transport of the backing material to the shredder/briquette. The duct shall be designed so that the shredder/briquette may be up to 35 linear meters (115ft) away from the HFM(s).

The shredder/briquette shall be isolated from the surrounding area to minimize noise and dust.

The isolated area of the shredder/briquette shall be exhausted to the exterior after filtering. Noise levels outside the enclosure shall not exceed 85 dBA.

The shredder/briquette system shall be interlocked with the machine to prevent operation of the HFM in the event that the shredder/briquette is selected but not operational.

The Contractor shall provide information on the particle size and amount of dust being exhausted to the exterior.

### **C.3.3.7 LED UV CURING SYSTEM**

The HFM shall integrate a LED UV Curing System onto the press. The system shall cure the adhesives on patches, stripes or laminates applied with a LED Ultra-Violet (UV) curing system. LED UV Curing system shall have the capability of curing in multiple wavelengths and should be integrated directly into the press system.

The LED UV curing systems shall be configurable on the COS to operate together or separately for a foil application.

### **C.3.3.8 INSPECTION SYSTEM**

The HFM shall include an Inspection System to verify the correct placement and location of the foils applied to each note location on every sheet. Inspection shall include patch, stripe, and laminate capability and should include flare related register tolerance compensation. The HFM shall verify that the foil has been properly applied, are complete without defects or imperfections, and that the foil has been applied within the allowable registration. Verification of any visual effects of the foils or laminates is not required, however, fluorescence verification of any UV activated feature is optional and preferred.

The inspection system shall examine the entire sheet, including areas outside the areas of the notes. The system shall have a resolution of 0.2 mm X 0.2 mm, or finer, with reflective and/or transmitted lighting that shall uniformly illuminate the total area being inspected. The lighting wavelength shall have the capability to meet these inspection requirements and shall be at the discretion of the Contractor.

#### **(1) Press Interface**

The inspection system shall be integrated within the press controls to divert sheets based on the inspection results into the 3 deliveries with the capability of sorting acceptable and non-reclaimable work. The selection of the specific delivery for the diversion of the sheets based on their inspection results shall be configurable on the Central Operator Console (COS).

- Acceptable Sheets – sheets containing no defects outside the quality limits
- Non-Reclaimable Sheets – sheets that contains all defective notes or greater than the limit selected by the operator for defective notes

The operator shall be able to set the number of repeated, consecutive or by segment, defective sheets for stopping operation. When repeated failures are detected, the HFM shall stop feeding sheets and alert the operator.

## **(2) User Interface (UI)**

The print inspection system shall include a user interface (UI) to display errors detected and allow operator interface. The display and interface station shall include computer keyboard and mouse. The system shall allow for both the reference image and image of the current sheet to be displayed. The UI shall display and allow operator tuning of both the RGB and IR images.

The inspection system UI shall include multiple large displays to graphically display to the operator the inspection results and allow the operator to configure, tune, monitor and respond to the results from each inspection occurring. Separate displays shall be provided for the RGB, IR, and main inspection system GUI.

The inspection UI shall display where all warnings and defects are located and allow for viewing of overall quality of the printing. The inspection UI shall display trending information to the operator on the inspection results and overall quality of the product being produced. The trending information shall enable the operator to easily identify repeating defects or decreasing quality levels to be addressed prior to the production of unacceptable product. The operator shall be able to display the current sheet being inspection, zoom into notes and regions, toggle between the master/model and the current sheet being inspected, and view inspection and measurement results.

Flaws shall display their region or group that was defined within the note. When a mouse is over any area of the image displayed, a readout shall show the RGB values for the pixel and the RGB values for Master Image. The display shall show the X and Y coordinates from 0,0 in the Field of View.

The operator shall make all adjustments to tuning parameters on the system via the UI. The operator shall have means to create, save, amend, and recall jobs (reference images, adaptation/golden and all tuning parameters). A total of up to 200 jobs shall be able to be stored on the system.

## **(3) Adaptation/Model**

The system shall use an adaptation/model for comparison of to the sheets inspected for determination if the sheet meets quality levels. The adaptation/model shall define the reference sheet(s), regions, and tuning parameters for the inspection system.

A trained operator shall be able to create a new adaptation/model in less than 1 hour for a new job, including scanning sheet for reference, establishing reference points on each note, creating regions for inspection, and setting tuning parameters.

A trained operator shall be able to reload an existing job within 10 minutes to begin production.

The system shall allow the operator to define reference points within the printing for the locating of each note location. Since the BEP produces notes by individual printing operations, the system shall accommodate at least three (3) reference points per note to identify and reference individual printing phases or features.

The operator shall be able to divide the note image into up to 15 regions for individual inspection and tuning. Individual regions shall not be continuous but may be several distinct parts of the overall image. Defining of regions may be either by coordinate positions or by the operator drawing geometric shapes (rectangles, ellipses, or polygons). Each region shall have individual

tolerance or tuning parameters for allowable quality. Any areas not defined on a note to be in an operator defined special region shall be combined into one base region. Individual regions may be set as regions to ignore to high quality inspection regions.

The operator shall be able to define up to five (5) regions on the overall sheet. Sheet regions shall include areas outside the individual note areas.

Tuning for warnings and errors shall be set for each region for both over and under inking (too dark and too light), including the base region. The system shall allow the operator to adjust the priority of individual regions that overlap.

Special algorithms shall be provided for window threads, streaks, and spots.

#### **(4) System Stability**

The transport, camera and lighting components shall provide uniform and stable image capture over time to perform reliable and consistent inspection of the sheets. Variations across and down a sheet shall not vary by more than 5% ( $\pm 6/256$  gray levels) from the target lighting level and RGB readings. Variations over time (drift) shall not exceed more than 5% ( $\pm 6/256$  gray levels) from target lighting and RGB readings over 90 calendar days of continuous 5 days per week, 3 shifts per day operation. System shall detect and notify the operator if variations are exceeding allowable levels.

A detailed Preventative Maintenance (PM) program to ensure system stability shall be included in the manuals for the system and covered during training.

*NOTE: due to the forces exerted onto the sheets during the printing operations, currency sheets have a tendency to not consistently align in the same position (X, Y & Z) and therefore introduce variations in the appearance of the sheet increasing the difficulty to inspect the sheets. Diffuse lighting is suggested to minimize sheet appearance variations.*

#### **(5) Calibration**

The Contractor shall provide a process to calibrate the vision and inspection system, along with a monthly calibration procedure. The Contractor may use the BEP CalCheck Sheet (Attachment E) in its calibration process and procedure, but it is not required as long the contractor provides their own calibrated and certified target sheet. The target sheet will be used to set lighting levels, camera focus and bias/gain for the system. The system shall capture and save the image and data for comparison over time to determine if any drifting or degrading of lighting or camera system is occurring.

#### **(6) Registration/Measurements**

The system shall be capable of performing up to 15 measurements per note location and up to 50 measurements on the sheet. Measurements may be absolute or relative to the reference image(s). If the system performs relative measurements, the system shall have means to measure and record the absolute dimensional measurement of the reference image(s).

Measurement accuracy shall be less than one pixel for the system.

## **(7) Data Capture**

The system shall capture the inspection and measurement results for each sheet. Inspection data shall be captured and recorded for each region for each note on each sheet. Measurements results for each measurement performed, per note, for each sheet shall be captured and recorded.

The inspection results shall be displayable on the UI and shall be recorded in files for offline analysis by the BEP. The UI shall display summary results for the sheets processed, identifying regions of high failure rates.

Inspection data shall be transmitted to a BEP provided GateWay PC at the end of each lot. Data files shall be saved with a contractor proposed Directory/Naming convention that allows easy access to the data. The Directory/Naming Convention shall separate data by a data/time index, machine identifier, inspection system identifier, lot number, and type of data.

Data files may be compressed for transmission. If compressed for transmission, a means (program) to de-compress the file shall be provided. The system shall retain data of up to the last 10 lots on the inspection system for recall by the operators.

## **(8) Image Capture**

The system shall have the ability to save images.

- **Manual Saved Images:** The system shall have a means to capture one (1) to one hundred (100) sheets, save the images and replay the images for tuning and evaluation purposes by the operator.
- **Automatic Saved Images:** The system shall allow the operator to set as part of the job the automatic saving of random images from the lot. Up to two hundred (200) images shall be able to be saved from a lot, operator to define the frequency of acceptable, or non-reclaimable sheets to be saved.

Inspection images shall be transmitted to a BEP provided GateWay PC at the end of each lot. Image files shall be saved with a contractor proposed Directory/Naming Convention that allows easy access to the images. The Directory/Naming Convention shall separate images by a data/time index, machine identifier, inspection system identifier, lot number, and type of image.

Image files may be compressed for transmission. If compressed for transmission, a means (program) to de-compress the file shall be provided. The system shall retain images of up to the last 10 lots on the inspection system for recall by the operators.

### **C.3.3.9 DELIVERIES**

The HFM shall be equipped with a minimum of three (3) full pile deliveries for the selective delivery of sheets depended upon the processing and inspection results. Deliveries shall use BEP provided Stack-N-Rack carts for the stacking of the sheets, see **Attachment D**. The operator shall be able to configure the press to selective delivery only good quality sheets to a pile(s) and delivery into a specific pile any sheets that did not have foils applied or if the inspection system determines the sheet to be of unacceptable quality or out of registration.

Deliveries shall be programmable for the number of sheets to be delivered to a pile prior to automatically switching to another pile. Operator shall be able to configure the delivery to deliver between 100 to 1500 sheets for stacking on individual trays within the Stack-N-Rack cart. Sheets

shall be aligned within accuracy of  $\pm 0.8$  mm (1/32 inch). The delivery shall automatically descend as sheets are delivered.

Each delivery pile shall have fast and normal speed control for up and down motion. There shall be a slow-down zone (a reduction of lifting speed) in the up direction as the pile approaches the upper limit. All sheets shall be delivered into the deliveries within  $\pm 2.5^{\circ}\text{C}$  ( $4.5^{\circ}\text{F}$ ) of the temperature of the sheets in the feeder. Any temperature control system(s) required to compensate for the hot foil application and/or UV curing of the sheets shall be included with the press.

#### **C.3.3.10 CONTROL STATIONS**

Control stations shall be provided at all strategic locations to maximize the safe and efficient operation. All controls shall be clearly and permanently marked in English. Each control station shall include emergency stop, stop-and-lock, and inch buttons.

An audible warning device shall sound for at least three (3) seconds prior to the operation of the machine in both “inch” and “run” modes.

#### **C.3.3.11 CENTRAL OPERATION STATION (COS)**

A free-standing Central Operation Station (COS) shall be provided. The COS shall be equipped with a computerized graphical operational interface, which will display all machine status and operational information, and allow adjustment of all parameters and settings for the machine operation. The interface shall utilize windows and drop-down menus. Additional displays shall be strategically located to facilitate operation of the HFM and to minimize the time required for operators to determine the cause of a stoppage and take corrective actions.

When not in use with one of the subsystems, the COS shall display the: life counter, total number of sheets processed during the shift, total number of sheets remaining to be processed within a batch (decreasing), total number of sheets processed within a batch “Load”, Time, Date, Load number being processed, Denomination being processed, consumable materials (screens, inks, and squeegees) and any active error or fault codes.

The COS shall include a bar code reader(s) and standard computer 101 key keyboard to input data. The bar code reader shall read BEP operator and maintenance personnel badges, order number, job suffix load number, and seal numbers. Up to four (4) operating personnel and two (2) maintenance personnel shall be able to be logged onto the machine simultaneously.

The bar code readers shall be capable of reading a character string of up to fifteen (15) digits printed in a medium density “3 of 9” code (10 characters/inch). This may include ID card sets, which will have a “3 of 9” bar code heat press encapsulated in a polyester pouch or between PVC sheets. Card thickness will be between 0.030 and 0.035 inches (0.75 - 0.90 mm).

Access to the HFM, all set points, settings, and data shall be performed through the interface. Levels of password protection shall provide protection to critical information and settings, and for different job classifications and work to be performed. The operators shall have the ability to save the configuration settings and set points, by file name. The HFM shall enable the operators to recall previously saved settings to minimize the time to set up the press to process similar work.

### **C.3.3.12 COUNTERS**

The HFM shall incorporate counters to record the product processed during a given shift and load. The counters shall be recorded as part of the Data Collection System (DCS). All counters shall have an overall accuracy of not less than 99.999%.

At a minimum, the following counters are required:

- A. Sheets Fed
- B. Sheets Processed
- C. Sheets delivered to:
  - 1. Good delivery
  - 2. Good delivery
  - 3. Reject Pile
- D. Rejected sheets:
  - 1. Feeder Faults
  - 2. Print Inspection Rejects
  - 3. Registration
- E. Sheets removed for sampling

The machine shall be able to track via a nine (9) digit non-resettable Life Counter for the total number of sheets processed over the life of the press. The Life Counter shall not be manipulated by any maintenance or repair action. The system shall have provisions to enter the total impression counter in the event of a Programmable Logic Controllers (PLC) failure or replacement.

The machine shall allow for changes to the counters only by authorized personnel. Supervisory personnel shall be required to authorize any changes to the counters, with the exception of the life counter that shall not be resettable.

If separate counters are used to track the count of order and the count of shift, the same check sum functions to ensure accuracy will be applied to both.

Local counters on the deliveries of the printing unit shall only display the information for the individual deliveries, need not display all of the counter information. All counter information shall be displayed on the COS (Central Operation Station). All counters shall be recorded in the data collection system.

Whenever an error or incorrect delivery of a sheet occurs, the system shall facilitate the easy and timely corrective actions of the operator to ensure the correct sheet is in the correct delivery and that a correct accountability of every sheet is maintained. The Contractor shall propose their methodology to ensure accountability during hard stops, manual interventions by the operator and other events that could impact the delivery of the sheets.

### **C.3.3.13 DATA COLLECTION SYSTEM (DCS)**

The equipment shall have an automated Data Collection System (DCS) with the following subsystems. All DCS database records shall be captured at the date and time of any changes within a given record.

The Inspection System shall report its information at the end of each load.

### (1) Accountability Subsystem

The DCS shall include a subsystem to account for all sheets processed on the press. The accountability subsystem shall verify the count of sheets to each individual delivery.

The Bureau processes and accounts for all acceptable and defective sheets of paper in each load (up to 20,000 sheets). Upon entry of this information, the system shall automatically store it.

Records should be generated at the end of every shift and at the end of each load. The records should contain the following:

Element	Type	Length	Format
Machine Number	Alphanumeric	8	
Order Number	Alphanumeric	9	
Job (Suffix)	Numeric	2	
Load Number	Alphanumeric	6	
Crew Members	Alphanumeric	7	
Date Started	Numeric	8	
Time Started	Numeric	6	
Shift Started	Alphanumeric	1	
Beginning Register	Numeric	10	
Date Ended	Numeric	8	
Time Ended	Numeric	6	
Shift Ended	Alphanumeric	1	
Ending Register	Numeric	10	
The following occurs once per load			
Seals Removed "A"	Numeric	7	
Seals Removed "B"	Numeric	7	
Good Sheet Count	Numeric	8	
Bad Sheet Count	Numeric	8	

### (2) Error Code Subsystem

The DCS shall include a subsystem, which will be capable of storing error codes, machine status conditions and associated data. It is required that fault analysis be extended to all components that are monitored by the machine controller. For example, fault analysis of the PLC system shall extend down I/O boards.

The system shall include the time and date of each error occurrence.

### (3) Operator's Daily Log Subsystem

The DCS shall include a subsystem that allows for the entry of operational information by the operators. The equipment shall have provisions for manual entry of data for purposes of allocation of labor to various downtime conditions. The BEP currently maintains a log of downtime labor by manually recording the date, time, duration, and description for each occurrence. To facilitate record keeping, numerical codes have been assigned for the more frequent conditions. One approach is to establish "look up tables", in which the more frequent downtime conditions could be entered into on screen menus. Operating personnel could then quickly log the occurrence

without entering a written description. The precise format will be determined during the course of the design review meetings.

Shift Log visibility from Managers desks will require equipment data to be replicated to an existing replication database in the BEP infrastructure. The Contractor will need to configure the replication.

#### **(4) Machinery Data Logging Subsystem**

The DCS shall include a performance monitoring subsystem which will provide a display of current values and conditions and the ability to electronically record those values according to a variable, operator selected scheme. The equipment shall monitor all specified values and conditions whenever the equipment is running.

The DCS display shall be able to present all electro-mechanical variables that the controller regulates or monitors. Any operating parameter, which may result in a fault trip or error code condition, shall be included. Each display value shall be appended with its set point, alarm and trip limits, and its units of measurement. Values displayed shall be current with the control system logic.

Any variable machinery information available on the DCS shall be recordable. Each data element shall be tagged with its units of measurement, year, month, day, shift, and time.

#### **(5) Product Quality Tracking Subsystem (Sheet Identifier)**

The DCS shall include a Product Quality Tracking Subsystem that will record machine conditions and on-line inspection results data for each sheet.

The BEP is in the process of designing a product quality tracking system that will trace the machinery conditions and inspection results for every sheet, integrate the data across the manufacturing processes and incorporate data from consumables utilized during production from the manufacturers, including data from the paper mill. The press shall have the capability of capturing a sheet identifier that will be provided on each sheet and record all data for that sheet identifier through the manufacturing process. It is desired for the On-Line inspection system to read an identifier printed on a sheet and link the inspection results and press data to that identifier within an Oracle database.

Inspection data shall be integrated into the BEP database for recording the measurement and inspection results by region for each note on every sheet. Data shall include all available inspection results (i.e., measurements, inspection scores, etc.) by regions or zones set by the inspection algorithm, not just the final determination of acceptability. Data shall include at a minimum a timestamp for when the note was processed, Master file utilized, inspection parameters, measurements performed, and batch identifier (i.e., process number).

#### **(6) Management Information System (MIS)**

The DCS shall include the ability for the BEP to connect to the system to retrieve all data stored on the DCS. The configuration, layout, and data type shall be specified as where the access points to the data will be located.

The system shall have provisions for authorized BEP personnel to override any or all capabilities/systems. When the override function is exercised by authorized personnel, the badge number, time, date, system number, and all current counters shall be recorded. When reconnection

occurs, the system shall record the time, data, machine number, and current counters, and prompt for entry as to why the system was disconnected.

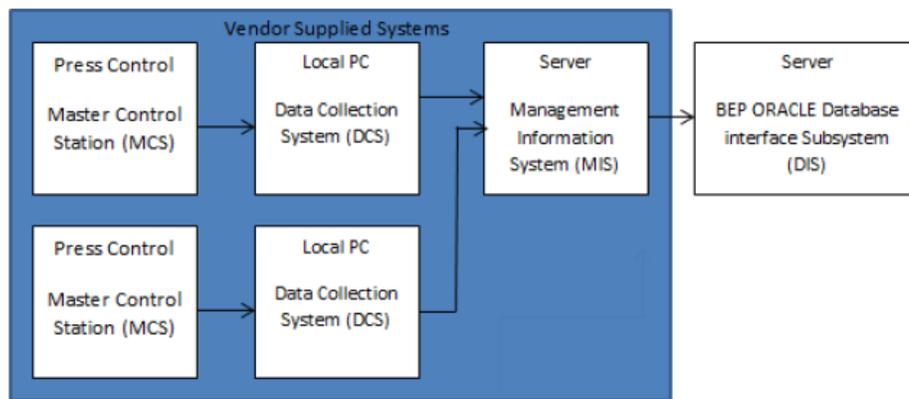
### (7) BEP Database Interface Subsystem (DIS)

The Contractor shall configure the BEP provided hardware and software infrastructure necessary for interconnecting the equipment control system to the BEP's database. The BEP will use a database as the primary information storage layer between machine control system and other BEP information systems. The database will also serve specialized and localized information processing needs, like maintenance management and historical process data retrieval, for example.

The DIS shall perform the actual exchange of digital information between the machine control system and the BEP's database. The information exchanged shall take many forms. This specification identifies the control system data that shall serve as our default configuration.

DIS shall deliver “Bi-Directional Ready” data with the existing equipment event telegraphs and infrastructure. The BEP anticipates additional event telegraphs over the life cycle of the system.

The system shall be laid out as per the following sketch. At a minimum all components within the blue box are to be provided with the presses. A typical front and back press pair are illustrated.



The DIS and press control system shall be designed to accommodate information exchange with the database and to provide communications between the system with minimum interference with the press operation. Transmission of data to the database shall not require the press to be idle or in a wait mode pending completion of the transmission prior to beginning production of the next load of currency.

The system shall be designed using commercial-off-the-shelf (COTS) information technology products available and supported in the United States. The DIS shall be designed such that a programmer familiar with common programming languages and with the machine control system shall be able to make operationally needed configuration changes without the assistance of the Contractor, example, add storage capacity to the database.

The DIS and the control system shall be designed with reasonably sufficient expansion capability to meet the BEP's communication needs over the life of the equipment.

The Contractor must support a bi-directional flow solution which shall enable the Bureau's Manufacturing Execution Console (MEC) and the DIS to communicate across the BEP network

using an Enterprise Service Bus (ESB). The key tasks that are currently enabled for bi-directional communication are Load Start, Load Stop, Assignments, and Consumable data. The Bureau foresees additional bi-directional flows in the future. The purpose of the ESB is to enable all of the various applications within the BEP enterprise (BEN) Architectural framework to communicate with one another via web services. The ESB provides system transparency across the BEN architecture and ensures minimal message loss. The ESB solution at BEP leverages Oracle Fusion Middleware with a small amount of custom Java code. The architecture is loosely coupled. If a consumer system is unavailable the producer shall not be directly affected. Likewise, if a producer is offline the consuming systems shall have nothing to run, but they shall not directly generate errors. This modularization allows producer and consumer to interact with ESB independent of the other and creates more ease in scaling the solution.

The Contractor shall support at least four (4) messages where DIS is the consumer of the message payload and two (2) messages where DIS is the producer of the message payload. If any additional messages are envisioned, the Contractor shall develop the message payload. The payload shall contain at the minimum information such as facility, press name, date and time, operation, load type, jobname, denomination/series, badge name, load size and action.

The Contractor shall provide an accept acknowledgement where the response includes the original message (full payload) and the transaction return status code.

Contractor shall provide error checking for transport when a table insert fails, parsing errors while parsing the XML content, syntax errors for invalid format for data element and semantic errors when items cannot be processed by the application. The Contractor shall create before insert triggers to validate header and payload header information, update columns and transform data.

The Contractor shall create after insert triggers to insert a job into a queue that starts JAVA. JAVA shall read the table records for records with a new status. The JAVA job shall validate the elements, extract a CLOB XML elements into columns and insert the record into the database.

#### **C.3.3.14 LOCKING ARRANGEMENT**

The HFM shall incorporate the ability for the operators to secure the HFM to prevent powered and manual operation without operator authorization.

#### **C.3.4 PERFORMANCE REQUIREMENTS**

The HFM shall meet the following performance requirements.

***NOTE:*** *During the warranty period, the system will be monitored for productivity, spoilage, setup time and/or unscheduled maintenance. If the system fails to demonstrate the requirements, the Contractor shall take all appropriate actions to make improvements to the system, included but not limited to design changes, replacement parts, re-training of personnel and making recommendations to change operational procedures to enable the system to achieve satisfactory performance.*

*If during the last 6 months of the warranty period the system performance is greater than 5% out of specification; the warranty period may, at the government discretion, be extended for an additional 6 months at no additional cost to the government. If the required performance cannot be demonstrated after the 6-month extension, a negotiated settlement will be developed.*

*The Contractor shall include in their proposal how they intend on gathering, analyzing, and presenting the compliance of the system with the performance requirements.*

### **C.3.4.1 OPERATIONAL PROCESS**

The purpose of the HFM is to apply via Hot Stamping methodology security features onto currency sheets. The machine shall operate as per the “Operational Process Control Logic Document” or Process Control Logic Document; **refer to C.3.6.2**. The Process Control Logic Document shall detail all operational processes configurations or modes of the press.

The press shall have, at a minimum, the following operational modes:

- A. **Production Mode:** Ability to feed, apply patches or stripes down the sheet, apply laminate, thermal and/or UV cure the adhesives, inspect sheets, chill the sheets (if option included), and deliver the sheets into one of three deliveries
- B. **Maintenance Mode:** Ability for maintenance personnel to start and run the press, feed paper but not print sheets for the purpose of diagnosing issues or problems with the press.

The press shall interface with the Data Collection System (DCS) for operation. It is envisioned that multiple presses will interface to the DCS and be used to produce the BEP’s production order. The press shall interface with DCS for the following:

#### **1) Operator Log-On/Log-Off:**

The press shall interface with the DCS to verify authorized personnel for the operation of the press. Personnel shall be tiered with increasing authority and permissions based on their level. Personnel may be authorized to either Super-User, Supervisors, Operators, Assistances or Maintenance. Supervisors shall designate individuals as Operators or Maintenance personnel, and their level of operator of the press. Super-Users shall designate Supervisors.

Supervisors shall be able to designate the number of operators, and their authority, required for the press to feed sheets. The press shall not allow the feeding of sheets without at least two (2) authorized Operators logged-on the press.

Supervisors shall be able to designate fixed times for production shifts and shall be allowed to force operator log-off at the end of a shift or allow operators to continue to run the press across shifts.

Operators shall use their BEP PIV Badges for Log-On.

#### **2) Production Set-Up:**

The press shall interface with the DCS for the assignment of the Job to be produced on the press. The job will designate the denomination to be printed. Supervisors shall designate the job for the press.

#### **3) Load Assignment:**

The press shall interface with the DCS for the assignment of a load (batch of sheets) to be processed on the press. The batch size, number of sheets, contained in the load is to be included in the information retrieved from the BEP’s MES system to the press. The press shall not feed and print sheets greater than the quantity of sheets assigned to a load.

**4) Load Completion: Full, Partial and Consolidated:**

At the completion of the feeding of the quantity of sheets within a load or selection by the Operator, the press shall end a load. The press shall provide the DCS with the following at load completion:

- a) Press Number
- b) Start Time
- c) End Time
- d) Operators
- e) Quantity of sheets fed
- f) Quantity of sheets printed
- g) Quantity of sheets delivered to each delivery pile
- h) Quantity of sheets not fed into the press (beginning MUTs)
- i) Quantity of sheets removed from the press after feeding but not delivered (Extractions)

Loads may be stopped prior to reaching the total quantity. Loads stopped prior to reaching the total quantity may be continued on the same or another press for full completion. The press shall not allow feeding of additional sheets until the operators have started a new load once a load completion has begun.

At the full completion of a load, the press shall require the operators to enter the number of sheets not processed (Beginning MUTs and Beginning Extractions). These numbers shall be utilized to compare the total number of sheets printed to the starting number for the load. If the numbers equate or “balance”, the system shall save all information associated with the load to the DCS.

If the load does not balance, the press shall require the shift supervisor to complete a load variance checklist. The completion of the load variance checklist is a supervisor only function and requires a yes answer to all of the questions to proceed. The load variance checklist questions shall be:

- A. Inquiry was made with all crew members assigned to the press. Check aerator and jogging area.
- B. Check feeder areas and Beginning Mut trays located at the feeder end of the press.
- C. Check delivery areas (good deliveries, reject, and waste bin) and the sheet transfer under the press.
- D. Check all shelves of the mut sheet cabinet located at the delivery end of the press.
- E. Check for sheets in the areas of press console, and other such press areas as appropriate to the Production section.
- F. Check under press catwalks.
- G. Open printing units, check roller train including finger guard areas of plate and blanket cylinders.

H. Check general area around press.

I. Beginning Extractions and Reclamation Sheets accounted for.

If the press is interrupted prior to reaching the total quantity for a load and it is intended that the load will continue at a later time on the same or another press, a Partial Completion shall be performed. The entry of the number of sheets not processed (Beginning MUTs and Beginning Extractions) is not required for a Partial Completion. Multiple Partial Completions shall be able to occur prior to reaching the total quantity and performing a Consolidated Completion for a load.

Loads that have been interrupted, once or more, and have reached the final quantity, by feeding or entry of the Beginning MUTs and Beginning Extractions, a Consolidated Completion shall be performed. A Consolidated Completion shall include the summation of all partial runs of the load and the resulting counts of the sheets to each delivery.

#### **C.3.4.2 PROCESSING RATE**

The HFM shall have a rated speed for the application of foils of a minimum of 8,000 sheets per hour. The HFM shall demonstrate an ability to process at least 30,000 sheets within a typical 8-hour production shift during which the press shall be in production for 6 ¼ hours.

The Contractor shall provide detailed information on the capability of their machine, including maximum machine speed, normal operational speed, and their commitment for the average shift rate for 6 ¼ hours of operation. In determining their average shift rate for the system, the following shall be assumed in the calculations:

- Shift is 8 hours in duration
  - (1) Shift will begin with system stopped and cleaned by prior crew, new crew will log onto the system, review settings, and prepare the system for production
  - (2) During shift, operators will stop the system to take two breaks and one lunch break, stopping system and return to production after the stops
  - (3) Crew will stop the system at the end of the shift, clean the machine, log off the system, and prepare to depart
  - (4) Total operational time within a shift is to be assumed to be 6 ½ hours
- System will experience normal stops and restarts with processing sheets
- System will experience normal stops and restarts for exchange of spools and other consumable materials
- System will experience normal stops and restarts every load of paper (20,000 sheets for \$20s & \$50s, or 16,000 sheets for \$100s), operators will clear out the machine of all paper, capture counters, remove, and secure the load completed, and prepare the next load only after finishing the load completed
- System is to be assumed to be operated by normal operators, not experts

- System is to be assumed to be stopped periodically for operator adjustments for registration, positioning, feeding of sheets, delivery of sheets, and testing adhesion of the foils onto the sheets

The average Shift Rate for the system, should be the day-to-day average that is achievable on all three shifts of operation over the operational life of the system, assuming normal and routine preventative and corrective maintenance performed in accordance with the Contractor's recommendations documented in the equipment manuals.

#### **C.3.4.3 MANNING**

The HFM shall require the labor of no more than two (2) trained individuals to successfully operate at full production rate.

#### **C.3.4.4 SYSTEM YIELD (SPOILAGE)**

The HFM shall yield at least 94% acceptable sheets (maximum 6% spoilage); including all startup losses, mis-registrations, jams, and sheets damaged during processing. Sheets damaged during processing includes sheets with partial application of foils. Sheet spoilage does not include samples pulled by the operators, sheets with unacceptable foils due to the foils, or sheets not fed due to defectives on the sheets outside the control of the system.

The Contractor shall provide detailed information on the capability of their machine for the yield to be achieved with the machine offered. The Contractor shall include the number of sheets expected to be wasted with each start and stop that occurs on the system.

#### **C.3.4.5 FOIL USAGE (SPOILAGE)**

The HFM shall successfully apply at least 92% of foils supplied (maximum 8% spoilage); including startup losses, mis-registrations, jams, splicing of spools, and foils incorrectly adhered to the sheets. Foil spoilage does not include samples pulled by the operators, or foils/spools removed by operators due to defects or issues with the materials.

The Contractor shall provide detailed information on the capability of their machine for the yield to be achieved with the machine offered. The Contractor shall include the number of foils expected to be wasted with each start and stop that occurs on the system.

#### **C.3.4.6 SET-UP TIME**

Set-up time is defined as the time it takes from when a crew begins working on the HFM until the HFM is in production, operating at full speed and meeting the quality requirements for the product.

The total time to set up the HFM to process currency, without changing the denomination or configuration of the press, shall be less than 30 minutes.

The total time to set up the HFM to process a new job shall require no more than one (1) eight (8) hour shift.

The total time to set up the press to process currency shall be less than the following:

<b>Change</b>	<b>Definition</b>	<b>Maximum time</b>
Cold Startup	Monday morning startup after down over weekend	2 hours
Load Change	Emptying machine, closing counts, starting new load of the same denomination job	10 minutes
Film Spool Change	Exchanging spools on system, including time to remove old spools, splice films and prepare to return to production	3 minutes per spool in use
Job Change – no format change	Changing from one job (denomination) to another without changing format	3 hours
Job Change w/ format change	Change from one job (denomination) to another with changing format	6.5 hours (1 shift)

**Cold Startup** - Time required to bring the press into operation after it has been stopped for a period (usually 8 hours or more), all components have normalized to ambient air temperature (for example, sitting over the weekend). The press returns to operation with the same job that was in operation prior to stopping.

**Load change** –Time to stop production, empty the machine of all sheets, close the load on the COS and set up the next load for production.

**Job change without format change** –Time to change from processing one job (denomination, format) to another that does not involve changing the format of the system. This includes removing spools from prior job and installing new spools, aligning the backing rollers for the job, and setting all parameters for the new job (curing system, inspection system, chill roller, and delivery configuration).

**Job change with format change** – Time to change from processing one job (denomination, format) to another that involves changing the format of the system. This includes removing spools from prior job and installing new spools, aligning the backing rollers for the job, and setting all parameters for the new job (curing system, inspection system, chill roller, and delivery configuration).

Job changes does not include the time to create a new inspection model or set tuning parameters for a job that has not be previously run on the press.

### **C.3.4.7 UNSCHEDULED AND PREVENTATIVE MAINTENANCE**

The system shall be designed for robust operation with minimal non-productive time. A detailed and robust Preventative Maintenance program shall be documented in the manuals to minimize unscheduled corrective maintenance on the system.

#### **(1) Unscheduled Corrective Maintenance**

An unscheduled corrective maintenance event is considered any time maintenance personnel must be called by the operators or when the HFM is unable to operate within conformance to the functional or performance requirements for more than fifteen (15) minutes.

The mean time between unscheduled corrective maintenance is defined as the Mean-Time-Between-Failure (MTBF). The MTBF will be measured during the extended operation of the system after BAT and Training. If during the extended operation of the system, the system fails to successfully demonstrate the required MTBF, the Contractor shall make any and all corrective actions necessary to increase the robustness and reliability of the system. The overall MTBF shall be greater than 300 hours.

The mean time required to perform corrective maintenance on the system is defined as the Mean-Time-To-Repair (MTTR). The HFM shall have a MTTR less than 2 hours. The MTTR will be measured during the extended operation of the system after BAT and Training. If during the extended operation of the system, the system fails to successfully demonstrate the required MTTR, the Contractor shall make any and all corrective actions necessary to decrease the time required to perform maintenance or repair activities.

#### **(2) Preventative Maintenance**

The yearly average for time utilized for preventative maintenance on the HFM shall not exceed 3% of the operational time. Major components shall have a Mean Time Between Maintenance (MTBM) of no less than 7.5 million sheets.

All Preventative Maintenance work shall be detailed within the Maintenance Manual, including all checklists, procedures, and recommendation for the time to perform.

### **C.3.5 DESIGN REQUIREMENTS**

#### **C.3.5.1 SYSTEM LIFE**

The HFM shall be designed for a service life of no less than twenty (20) years of operation at three (3) shifts per day, five (5) days per week. To the extent possible, means shall be provided to restore all worn surfaces by the simple replacement of individual elements.

Contractors shall provide evidence documenting of the ability of their equipment to meet the service life requirement by either:

- (A) Providing past performance documentation of the same type of equipment being offered meeting the service life requirement; with specific information on major components that experience cyclical loading (e.g., side frames, plate cylinders, impression cylinders and all other major cylinders).

OR

- (B) Contractors shall provide detailed engineering analysis data (Accelerated Life Testing or Finite Element Analysis) documenting the proposed equipment's capability to meet the service life requirement, especially for major components that experience cyclical loading (e.g., side frames, plate cylinders, impression cylinders and all other major cylinders).

It is fully understood that during the life of the system, replacement of software, control hardware, electronics, electrical and mechanical components due to obsolescence will be required. The BEP anticipates that every 7 years that replacement of obsolete components will be required to maintain the system in operation. The Contractor shall provide routine periodic replacement/upgrades to support the system in operation through the intended life of the system. Contractor shall provide annual notifications to the BEP on upcoming obsolescence and replacement/upgrade package availability. These notifications shall include expected disruptions or limitations in the future for part or supplier components availability.

### **C.3.5.2 PRODUCTION AREA**

The HFM shall fit within the area provided and operate on BEP provided utilities.

#### **(1) Site**

The HFM shall be designed to operate within a 12.192 meter (40 ft) wide x 24.384 meter (80 ft) long with 6.096 meter (20 ft) clear height site. The site shall be sufficient for the operation and maintenance of the press and for material handling at the feeder and delivery end based upon maximum production rate. At a minimum, access to any area of the equipment to support maintenance shall not be less than 915 mm (36 inches). Contractor is to propose location of access doors/gates to comply with this requirement.

#### **(2) Ambient Conditions**

The HFM shall be designed for normal operations under the following ambient conditions at the installation site:

- Temperature:  $73 \pm 2^{\circ}\text{F}$  ( $22.8 \pm 1.1^{\circ}\text{C}$ )
- Relative Humidity:  $45 \pm 5\%$

#### **(3) On-Grade Installation**

The press shall be installed on a flat slab. Trenches in the floor for the routing of non-electrical utilities to/from or within the press is allowed but the trenches shall not exceed 100 mm (4 inches) in depth. Recesses, if required, at the deliveries and feeder are allowed but shall not exceed 100 mm (4 inches) in depth. Control and power wiring to/from and within the press shall be routed via overhead wire ways. Control wiring shall be shielded within wire ways to prevent interference from power lines. The locations of all trenches, recesses and overhead wire ways shall be included on the Site Preparation Drawing for the press.

#### **(4) Floor Loading/Vibration**

The vibration produced by the operation of the HFM at any speed within the specified limits and its impact to the building shall be minimized. Vibration isolation devices shall be provided to

prevent vibrations from entering the facility. The maximum floor loading shall not exceed 200 pounds per square foot.

### **C.3.5.3 UTILITIES**

The equipment shall operate with the following BEP provided utility services.

The Contractor shall provide and install devices such as, transformers, filters, dryers, surge suppressors, etc., to make these BEP provided utilities compatible with proper functioning and operation of the press.

The Contractor shall provide interface signals from the machinery to the BEP's Facilities Infrastructure to indicate when the equipment is power on, running sheets and when wash-ups or cleaning is occurring.

The Contractor shall be responsible for utilities connections from disconnect points. The BEP will furnish all utilities to within 6 meters (20 feet) of the installation site for the press. The utilities shall be connected overhead.

**(1) Electrical power - Main**

- 480 volts
- 3 phase
- 60 hertz
- Four wire alternating current
- Up to 250 amps (total for press and all subsystems)

**(2) Electrical power – Secondary (Control System)**

- 120 volts
- 1 phase
- 60 hertz
- Three wire alternating current
- Up to 50 amps (total for press and all subsystems)

**(3) Compressed Air**

- 8 Bar (120 psig)
- Not oil free
- Ambient temperature and humidity
- Up to 300 m<sup>3</sup>/hour

**(4) Vacuum**

- 18 inches Mercury (Hg)
- Up to 100 m<sup>3</sup>/hour

NOTE: The use of compressed air driven venturi pumps is encouraged for low volume applications that require more than 18 inches Hg.

**(5) Chill Water**

- 3 Bar (45 psig)
- 10°C (50°F)
- Up to 150 L/minute

**(6) Exhaust (VOC and non-VOC)**

If required, Contractor shall specify the flow rate, duct sizing and composition of the

exhaust occurring.

The Contractor shall provide interlocks on the equipment for any mandatory exhaust or environmental abatement systems to disable operation of the equipment without the necessary facility support systems in operation.

#### **C.3.5.4 FAULT RECOVERY**

The machine shall have detection components to detect whenever a fault, i.e., jam or error, occurs that could cause damage to the equipment, produce unsatisfactory product, or operation would pose a safety hazard to personnel. The machine shall take appropriate actions when a fault is detected to stop and notify the operators.

The machine shall display specific detailed step-by-step information on operator stations for trained operators to locate and take corrective actions to correct the fault and return to production. Personnel shall be able to access any training modules, reference materials, manuals, drawings, or other information necessary for them to complete the recovery process.

At no times shall recovery require the resetting of electronics, closing and restarting (or rebooting) of programs, or allow the loss of data. The machine shall record the event and all associated data into the DCS (Data Collection System).

#### **C.3.5.5 UNIFORMITY**

All equipment delivered to the BEP under the terms of this contract shall be of the same type, model, software version etc. Any changes that are made to the machine or support systems, including software shall be retrofitted onto any previously accepted system(s). The installation of changes on a press previously accepted shall not occur until after the change has been proven during a BEP Acceptance Test.

#### **C.3.5.6 COMPONENT ACCESS**

Components that require regular service, such as motors, pumps, etc., shall be located to facilitate maintenance and repair. Access to these parts shall not take more than 15 minutes by no more than 2 persons. All enclosures, which conceal gears, shafts, bearings, etc., shall be accessible without the requirement of dismantling or removing of sub-units or components.

Sub-assemblies that require frequent adjustment, maintenance, replacement, and repair, such as main motor, banding units, numbering blocks, note counters, sealing bars, etc., shall be of modular design to facilitate easy and quick replacement.

#### **C.3.5.7 GENERAL ELECTRONIC & ELECTRICAL REQUIREMENTS**

All electronic and electrical components, especially Programmable Logic Controllers (PLCs), network communications hardware and any embedded computers, shall be of the latest version available on date of fabrication of the press. All components shall be commercially available within the United States. All motors shall be of Alternating Current (AC) design unless individually approved by the Contracting Officer's Representative (COR).

Control of the machinery shall be performed via Programmable Logic Controllers (PLC) or industrial rated PCs. The model of PLC used on the press shall be uniform. The PLC shall be commercially available and supported within the United States. Communication ports shall allow access of a programming panel and peripheral devices such as modem, printer, and Programmer Interrogator (PI). The makes and models of PLCs that can be incorporated into the press shall be

included with the proposal such that the BEP can select the most advantageous.

The power supply(s) shall contain circuitry for the orderly shutdown of the machine in the event that the incoming power does not meet the requirements. The power supply shall be capable of operation with voltages  $\pm 15\%$  of the normal supply. The machine shall be capable of restarting following return of the power to normal supply without problems or resetting. An Uninterrupted Power Supply (UPS) shall be provided on the press for all computers and control systems to ensure against the loss of data or operational setting during power variations.

All electrical and electronic components shall be designed to operate in an industrial environment without the use of external fans, air conditioning, or electrical filtering. All electronics shall be free from undue electromagnetic radiation and shall be unaffected by normal emissions. The electrical system shall be capable of handling Radio Frequency Interference (RFI) surges of one (1) KV peak to peak with a pulse frequency of less than 10 KHz.

PLC Programs shall be stored in non-volatile memory. All program memory of the machine shall be protected from loss during power interruption. All data shall be retained during loss, spikes, or dips in power supply. Data retention shall be provided for a minimum of 14 calendar days. Key type protection or software password protection shall be provided to ensure software memory protection from unauthorized changes, access, or deletion.

All controllers shall perform internal error checking to ensure reliable data transfer. Detection of internal communication faults shall occur via watchdog timers. In the event that a communication fault is detected, then controllers shall turn off all outputs (i.e., fail-safe). Indication lights shall be provided at all diagnostic points. All Input/Output modules shall have lighted status indicators.

To the maximum extent possible, all software programs shall be commercially available. All programs shall include sufficient documentation to allow maintenance personnel to debug the program. All software to modify, install, or perform diagnostic on the operating software shall be furnished with the press. All software comments shall be in English language.

Configuration settings, randomly determined sampling plans, counters and other operational variables shall not be lost when the equipment is shut down, rebooted or a general reset of the electronics occurs. The system shall retain knowledge of the configuration settings, sampling, counters, and other variables to enable a return to operation in the quickest possible time.

Fluorescent and LED lighting shall be from commercially acceptable fixtures for their intended locations. Lighting shall be provided at all points where fine adjustments are to be performed. A minimum lighting of 1076.4 lumens per square meter (100 foot-candles) on these working areas shall be provided. Individual switches to control these lamps shall be provided. The lights shall be operable without powering on the press.

Lighting provided for the purpose of manual inspection of product shall be in accordance with Commission International de l'Eclairage (CIE) Standard D<sub>65</sub> for daylight as specified in American Society for Testing and Materials (ASTM) Standard D1729. All light fixtures and bulbs shall be in standard sizes available in the United States

All components such as power rectification equipment, control components, etc., shall be mounted on the back panel of the electrical cabinet and not on the sides or the doors of the electrical cabinet for easy access and safety. Mounting of power supplies on the bottom of cabinets shall only be allowed with COR approval and will require a protective cover over the power supply.

### **C.3.5.8 PROGRAMMING-INTERROGATION (PI)**

A Programmer/Interrogator Unit (PI) shall be provided for trained maintenance or engineering personnel to perform diagnostic, maintenance and support services on all embedded electronics, PLCs, PCs, Linear Drives, etc. The Contractor may provide either as a stand-alone PI in the form of a laptop PC with embedded software or the Contractor may provide PI programs on the control systems to support maintenance and engineering functions.

The PI shall be capable of accessing all programs in use on the system, cloning hard drives, making back-up copies, replacing damaged files, or loading backup copies of files, modifying programs, and interrogation of control functions. The PI shall be software password locked to ensure against unauthorized access. The PI shall be provided with all necessary applications to interface all control systems, all source/project files, and all parameter listings for individual units.

### **C.3.5.9 DRIVE CONTROLS**

The main electrical drive of the machine shall have infinitely variable speeds. The range of the drive speed shall be from a crawl speed to the maximum operational speed. The speed shall remain at the set point within  $\pm 1\%$ . Variations in speed of any preset value between no load and full load shall not affect the performance of the press or any subsystem. The main drive motor shall be selected for high efficiency and continuous operation without overheating.

Upon initiation of the start button, the electronic drive controller shall immediately monitor all system circuits. When the system is ready for operation, it shall initiate a safe starting sequence and then terminate it when the system reaches a set minimum operating speed. Manual controls shall be provided for adjusting the operating speed upon completion of the starting sequence. A manual speed increase function shall be selectable via a selector switch.

### **C.3.5.10 IT COMPONENTS, CONFIGURATIONS, & CONTROLS**

The Contractor shall ensure IT components shall be maintained and updated such that over the system lifecycle hardware, operating systems, and software updates or replacements are completed at least 6 months prior to the expected end of useful life or support.

The IT hardware, software, configurations, and controls as of the writing of this statement of work are modern and up to date with what is currently available in the marketplace or what is required by current federal regulations. Depending on when the equipment is delivered to BEP, many of these may be out of date with what is standard at BEP or allowed by regulation or supported by the Contractor.

The following are the IT requirements for embedded and data capturing components of the press. These are not the BEP IT requirements for procuring IT components.

Contractor shall provide a detailed plan to maintain and update all software and hardware on the Hot Foil machine.

Upgradeability is of the utmost importance in the IT components, configurations, and controls section of this document. This will allow for the modernization of the IT components during the 20-year expected life of the equipment, which in turn maintains the usability of the equipment in a safe and secure manner.

As stated, BEP is required by Federal Law to ensure all computer systems are in compliance with Federal Information Systems Management Act (FISMA) security requirements and are consistent

with BEP enterprise architecture. To this end, the Contractor shall assume that the computer components are categorized as a Federal Information Processing Standards (**Attachment F**) (FIPS) LOW system and that NIST Special Publication 800-53 (**Attachment F**) (current version) controls for a LOW information system are required to be addressed as either inherited, hybrid, or system specific security controls and that hybrid and system specific controls shall undergo a security assessment during the deployment phase and prior to the authority to operate being issued. The Contractor shall ensure IT Security Controls are updated as new regulatory requirements are received over the systems life expectancy and allow for periodic updates as threats and vulnerabilities that affect the stability or security of the equipment are identified.

For reference, the previous equipment implemented the following controls as defined in NIST 800-53 Rev 4 as inherited, hybrid, and system specific. BEP cannot provide the System Security Plan (SSP) or specific implementation details due to the security sensitivity of the system. The Contractor shall assume that they will work with the BEP IT Security team to coordinate cybersecurity control implementation post award.

#### Inherited Controls:

CA-1, CA-2, CA-3, CA-5, CA-6, CA-7, PL-1, PL-4, RA-1, RA-5, SA-1, SA-2, SA-3, SA-4, SA-9, PM-1, PM-2, PM-3, PM-4, PM-5, PM-6, PM-7, PM-8, PM-9, PM-10, PM-11, AT-1, AT-2, AT-3, AT-4, AT-5, CM-1, CM-6, CP-1, CP-6, CP-7, CP-8, CP-9, CP-10, IR-1, IR-2, IR-3, IR-4, IR-5, IR-6, IR-7, IR-8, MA-1, MA-2, MA-5, MP-1, PE-1, PE-2, PE-3, PE-4, PE-6, PE-7, PE-8, PE-9, PE-10, PE-11, PE-12, PE-13, PE-14, PE-15, PE-16, PE-17, PE-18, PS-1, PS-2, PS-3, PS-4, PS-5, PS-6, PS-7, PS-8, SI-1, SI-2, AC-1, AC-2, AC-3 AC-19, AU-1, AU-8, AU-9, IA-1, SC-1, SC-7

#### Hybrid Controls:

CA-3, CM-6, MA-2

#### System Specific Controls:

PL-5, RA-3, CM-2, CM-4, CM-7, CM-8, CP-2, CP-3, CP-4, MA-4, MP-2, MP-6, AC-7, AC-8, AC-14, AC-17, AC-18, AC-20, AC-22, AU-2, AU-3, AU-4, AU-5, AU-6, AU-11, AU-12, IA-4, IA-5, IA-6, IA-7, IA-8

Note: For inherited and hybrid controls to be utilized, the Contractor must plan for the following control integration points with enterprise processes and services. Any controls that cannot be integrated with enterprise controls must be implemented as system specific controls.

- There must be a bridge or network component connected to the BEP internal network to facilitate data collection and monitoring.
- If the component is a workstation or server, the component must utilize the enterprise Anti-virus solution to monitor for and protect both the equipment and the BEP infrastructure from malicious code infections. BEP has successfully deployed this solution on other industrial control systems using a modified configuration that allows for real-time protection without impacting real-time data processing. BEP will work with the Contractor to test and tune these control settings as part of this effort.

- A minimum of two service account for BEP IT Operations and IT Security use is required to be added to the bridge component.

The following sections provide additional details for specific cybersecurity control implementation details for implementation:

**(1) Access Control**

- a. Systems shall include a mechanism to require users to uniquely identify and authenticate themselves to the equipment before beginning to perform any actions.
- b. The Contractor shall provide the capability to logout users after a period of either system or user inactivity to prevent user logins from persisting past the user being present at the press.
- c. System operational settings shall not be changed remotely, nor shall operation of the equipment occur over the BEP Manufacturing Local Area Network (LAN) connection; but shall remain under the control of the equipment operators.
- d. Authentication shall utilize Personal Identity Verification (PIV) smartcards.
- e. Passwords may only be used as a temporary (30 day) authentication for users who have damaged or lost smartcards; or for service/machine accounts. Password rules shall be consistent with the rules documented in NIST US Government Security Baseline (USGCB) (**Attachment F**) with the following enterprise approved exception: service/machine accounts must have random complex passwords with a minimum length of 16 characters that may be set to not expire. The Contractor shall provide a mechanism to allow BEP to change passwords for events including, but not limited to, suspicion of an account compromise, departure of a privileged user who may have had access to the password(s).
- f. Access to the equipment must be limited based on user identification, role within the organization, or context of a particular request, or any combination of the above.
- g. System or application administrative privileges must be required to change the access control configuration on equipment.
- h. Administrator shall be able to aggregate users (for example, by assigning them to groups or roles) to simplify administration.
- i. Users with both non-privileged and privileged (Administrator) roles shall use a different authentication token to elevate their access rights. For reference: BEP utilizes ActivClient to allow Privileged users to use a Digital Signature certificate to be used for elevating accounts to a privileged level (see Department of Justice Reference (**Attachment F**) for additional details).
- j. The equipment shall maintain and protect authentication data, which contains information for verifying the identity of individual users (e.g., passwords) so that an unauthorized user cannot access it. Specifically, authentication information (e.g., passwords) shall be stored as “salted hashes” in accordance with NIST FIPS

guidance and industry best practices to protect authentication information from being compromised due to unauthorized access to the system. Note: For additional information on this topic, please search the NIST site (csrc.nist.gov). There are multiple guides, papers, and recommendations available.

- k. Passwords stored for scripting or task automation shall leverage operating system security controls (e.g., encrypted password storage vault built into the Microsoft Operating system). Passwords shall not be stored in clear text.
- l. BEP utilizes Computer Associates (CA) Identity Manager (IDM) for facilitating account access management controls. The Contractor shall provide the necessary capability and support to integrate the user access management capability for the equipment to allow the CA IDM to automate updating user access rights, provisioning, and de-provisioning users.
- m. The system shall use identification and authorization data to determine user access to information.
  - i. The system shall be able to define and control access between subjects and objects in the computer system.
  - ii. Access permission to an object by users not already possessing access permission shall be assigned only by authorized administrators.
  - iii. Access controls shall be implemented to enforce “Least Privilege”, access to the information providing only the required access for an individual to perform their job specific duties.
  - iv. Access controls shall also enforce separation of duties.

**(2) Audit Log and Monitoring**

- a. In accordance with NIST SP 800-53 (current version) control objectives, the Contractor shall document the IT Security Specific events that represent normal, suspicious, and cybersecurity incident states for the system and system component including, but not limited to: activities, including administrative actions, that might modify, bypass, or negate security controls. Logged events shall include the following minimum information: time/date of the event, identity of the user or system performing the event, actions taken (e.g., software changes, add or delete accounts, system time clock changes, etc.), whether the action completed successfully or not including any associated system event id.
- b. The Contractor shall document the location of the logs where the security events are captured
- c. The Contractor shall provide an automated mechanism to search, extract, and aggregate the logs for alerting and analysis.
- d. The Contractor shall provide the ability to forward events to a centralized enterprise event log management system.

- e. The Contractor shall ensure safeguards are in place to detect and minimize the inadvertent modification or destruction of data, and to detect and prevent the malicious destruction or modification of data.
- f. The mechanisms that enforce access control and other security functions shall be continuously protected against tampering and/or unauthorized changes.
- g. The audit trail shall be of sufficient detail to reconstruct events in determining the cause or magnitude of compromise should a security violation or malfunctions occur. As a minimum, the log files shall show the identity of each person and device, successful and unsuccessful logon attempts, applications, and files accessed and time/date stamps.

### **(3) Data Storage**

The system shall have capabilities to collect and store all information while processing sheets. The system shall integrate to the existing Oracle 19 database currently utilized by the BEP. In the event the system is unable to connect to the BEP database, the system shall have storage capacity for at least 4 days of continuous operation of the system. When the data storage system is reaching max capacity, an alarm shall be initiated to provide sufficient time to archive data and prevent overwriting of the data (e.g., 70% capacity allows for sufficient time to archive data and prevent data overwriting).

### **(4) Network Connection**

All BEP network attached systems shall support Gigabit Ethernet (10/100/1000Mb/sec) and TCP/IP protocols. Network interface cards (NIC) shall support 10/100/1000Base-Tx/RJ-45 connections. All Simple Network Management Protocol (SNMP) enabled equipment shall support SNMP v.3. All physical network connections and addressing shall be initiated and maintained by the Office of Information Technology (IT) Operations. The Contractor may assume that they will be provided IP addresses within the same class C network for connectivity to the BEP Network. If a secondary, internal network is used, the Contractor shall not utilize addresses in the 10.0.0.0/8 range but shall use IP addresses that are compliant with RFC 1918 for IPv4 addresses. The Contractor will coordinate with OITO on this address space assignment to verify that the addresses and networking configuration do not conflict with existing network configurations. In accordance with BEP Directives, this acquisition requires all functionality, capabilities and features to be supported and operational in both a dual-stack IPv4/IPv6 environment and an IPv6 only environment.

### **(5) Database Connection**

Database management systems shall be compatible to current BEP Oracle version (Oracle 19c as of this writing) or later. Client-server applications shall be Open Database Connectivity (ODBC) compliant.

### **(6) Computer Software Requirements: (Application Development Environment)**

Development shall be subject to Software Development Life Cycle best practices of configuration management procedures. Specifically, for BEP, Changes shall be submitted as Requests for Changes for review and approval by the BEP Change Control Board. Approved changes shall be coordinated under a project management plan that shall include development and testing in a non-

production environment prior to user acceptance, functional, and security testing prior to deployment to production.

### **(7) Computer Hardware Requirements**

All BEP network attached workstation and desktop computers on the production floor shall be BNR Industrial PCs or newer and be configured with minimum solid state drive storage capacity - 8TB, available NIC slot - 6 (six), Capable to run in 24v UPS supply from press, be equipped with optical DVD +/-RW, USB ports, serial ports, auto switching power supply, minimum of a 19" flat screen monitor, accommodate Arcnet card if needed. Any dual network computers shall be configured to block routing between the connected networks. These computers shall alert operators if they are configured in a bridged or router mode.

All computer systems whether internal or external will utilize hardware and peripherals that are supported and maintained by the Contractor (either equipment Contractor or hardware Contractor).

The Contractor shall provide support and capability to update and upgrade the system, system components, software, applications, and drivers to allow the system to be maintained with up-to-date operating system and application system software.

The system shall allow for the deployment of operating system and software security patches. At a minimum, the Contractor shall support applying all relevant operating system and application patches at least once per year during the BEP Year-End-Shutdown and work with BEP to deploy any out-of-cycle patch that might be identified during the year that is determined to be critical for the stability or security of the equipment platform.

The system shall be capable of being upgraded to the latest computer technology and/or components (including operating system) during the life of the system without the need to perform redesign or modifications to the other components or software.

### **(8) Operating System Requirements**

All workstations internal to the equipment may utilize either Microsoft Windows server 2019 or newer and Microsoft Windows 10. All workstation external to the equipment shall utilize Windows Enterprise. All workstations either internal or external shall be configured with the NIST USGCB configuration (<http://usgcb.nist.gov/>) compatible with that operating system. All server class components internal to the equipment shall utilize either Microsoft Windows Server 2019 or Windows Server 2019 Imbedded. All server class components external to the equipment shall use Microsoft Windows Server 2019. All server components shall be configured in accordance with Windows 2019 Member Server (MS) DISA STIG (<http://iase.disa.mil/stigs/os/windows/Pages/index.aspx>) compatible with that operating system.

BEP recognizes that the configuration standards may not be compatible with full system functionality. If the Contractor identifies one or more settings that must be altered from the configuration standard, they shall document the requested deviation, provide the justification for the need to deviate from the setting, and identify any risk mitigation either existing or planned to compensate for the deviation. BEP IT Security shall review all deviation requests and make a risk-based determination to allow or reject the request.

### **(9) Backup and Recovery Requirements**

The Contractor shall provide a backup and recovery process for all production systems and all embedded computer components in the Hot Foil machine. Contractor shall provide a detailed Backup and Recovery plan in section L.

### **(10) Fault Tolerant System Design**

All Computer systems critical to the continuous operation of the equipment (i.e., the equipment will not operate without it running) whether internal or external to the equipment, should have some form of high availability or fault tolerance built into the design of the systems. Fault-tolerant describes a computer system or component designed so that, in the event that a component fails, a backup component or procedure can immediately take its place with no loss of service. Fault tolerance can be provided with software, or embedded in hardware, or provided by some combination. At a hardware level, fault tolerance is achieved by duplexing each hardware component. Disks are mirrored. Multiple processors are "lock-stepped" together and their outputs are compared for correctness. When an anomaly occurs, the faulty component is determined and taken out of service, but the machine continues to function as usual.

## **C.3.5.11 GENERAL DESIGN AND CONSTRUCTION REQUIREMENTS**

Currency production equipment delivered to the BEP shall meet the following design and construction requirements.

### **(1) Bearings**

Bearings shall be selected based on ANSI/ABMA or comparable international (ISO) Standards for life and performance. The L<sub>10</sub> life of major bearings shall be fifty thousand (50,000) hours. Bearing load capacity, including applicable safety and life factors as recommended by the bearings manufacturer, shall be equal to or greater than the maximum bearing load under specified operating conditions of the system.

### **(2) Castings**

All castings shall be of uniform quality, free of blowholes, porosity, hard spots, shrinkage defects, cracks, or other injurious defects. Materials, strength, and other physical properties of castings shall be adequate for the intended use. Under no circumstances shall a defective casting be used.

### **(3) Welding, Brazing and Soldering**

Welding, brazing, and soldering shall be performed in accordance with American Welding Society (AWS) or comparable international standards and codes (ISO, CEN). These operations shall not be employed as repair measures for defective parts.

### **(4) Surface Treatments**

All equipment surfaces subject to rust, corrosion, galvanic action, or other deterioration shall have an appropriate protective treatment (surface finish) such as painting, plating, lacquering, anodizing, etc. This treatment shall be done in accordance with American Society for Testing and Materials (ASTM) standards.

### **(5) Gears**

All gears shall be designed for a minimum service life of fifty thousand (50,000) hours and shall

be in accordance with American Gear Manufacturers Association (AGMA) or comparable international standards (ISO). Provisions shall be made to ensure that the gears are aligned prior to meshing of any gear set.

## **(6) Lubrication**

Equipment shall utilize an automatic lubrication system(s). All automatic lubrication systems shall operate according to an adjustable time cycle, based on the running of the system. Automatic lubrication systems shall have indicators and interlocks to indicate the need for service and filling. Recommended lubricants identification shall be provided. All bushings and other surfaces with sliding contact shall have provisions for lubrication.

Lubrication points shall be available for servicing without the removal or disassembly of components. Effective means shall be provided to ensure against the contamination of the production environment by lubricating and/or hydraulic oil.

### **C.3.6 SUPPORT SYSTEMS/MATERIALS**

The following supporting materials are to be provided under this contract. Unless specified otherwise, all support materials shall be delivered with each system.

#### **C.3.6.1 CONTRACTOR FURNISHED MATERIALS**

Any other materials required for successful utilization of the HFM shall be specified and an initial batch of the materials shall be provided by the Contractor. The specification shall be complete to allow the BEP to competitively procure the materials in the future. An initial batch shall be sufficient for one year (240 working days) at three (3) shifts per day, eight (8) hours operation per day. The initial batch shall be in addition to that supplied by the Contractor for startup and testing of the system prior to final acceptance.

Any Contractor supplied materials shall have a shelf life of not less than 1 year. Materials with specific storage requirements to maintain their shelf life shall be identified or shall be furnished in batches to minimize the time in stock.

An initial batch of material(s) shall be supplied prior to the performance of the Bureau Acceptance Test (BAT) on the system by the Contractor. The remaining supply of material(s) shall be scheduled in accordance with the anticipated usage rate of the HFM with the final material(s) being supplied no later than 9 months after completion of the BAT.

A specification and SDS (Safety Data Sheet) shall be provided for each Contractor proposed material no later than 90 days prior to FIT. Materials shall be reviewed and approved by Environmental, Health and Safety prior to their bringing the material on site. Materials not approved shall not be brought on to the site and consequently not used on the system. In this case, alternative materials shall be proposed.

#### **C.3.6.2 PROCESS CONTROL LOGIC DOCUMENT**

The Contractor shall create, maintain, and furnish a clear, easy to understand and fully detailed Process Control Logic Document for all equipment delivered to the BEP. The BEP recommends a matrix type presentation; Contractor is to propose the format and their version control process. The purpose of a Process Control Logic Document is to provide a clear, concise, and detailed description of the control logic, as designed and implemented by the Contractor's controls programmers. The detail and extent of the Process Control Logic Document will vary by the

complexity of the equipment; commercially available equipment that have no unique controls programming does not require a Process Control Logic Document.

The Process Control Logic Document shall include all operational uses, or “modes”, of the equipment or system being provided. It shall address the configuration of the equipment, subsystems (including inspection and product tracking), material inputs and outputs, and data collection. It shall detail the configuration of the equipment to begin, end and change operational modes, including restrictions, as well as the configuration of the equipment to begin, end and change lots or batches of materials being processed. The document shall include error and fault recovery, product or material tracking as required by the equipment, and data collection included on the equipment. During Training on the equipment, the Process Control Logic Document shall be reviewed to provide an understanding of the equipment controls logic.

Draft versions of the Process Control Logic Document shall be presented during each of the Design Review Meetings by the Contractor for review, discussion, and agreement with the BEP. Any changes shall be recorded in the change history of the document. The Contractor shall include in their presentation suggested methodologies for testing to verify the controls logic. Verification of the controls logic shall be included in all testing, Factory Inspection Test (FIT) and Bureau Acceptance Test (BAT), performed on the equipment.

A final PDF format version of the Process Control Logic Document shall be furnished as part of the Technical Documentation for the equipment and shall be displayable on the equipment’s Central Operator Station (COS). If during the warranty period of the equipment any changes to the control’s logic occurs, an updated version of the Process Control Logic Document shall be provided.

### **C.3.6.3 SPARE PARTS LISTING**

A listing of all parts that the Contractor recommends the BEP carry in stock to support the 24-hour operation of the HFM shall be provided no later than eight weeks prior to the 4<sup>th</sup> design review meeting. Contractor shall recommend quantity of spare parts based on normal operation and life expectancy of subsystems. The listing shall be provided in MS-Excel format. The listing shall include the manufacturer’s part number, detail description of the part, function, lead time for delivery, estimated mean time for failure/maintenance, recommended quantity, and unit price. Parts that are common to other production machinery made by the Contractor shall be identified on the spare parts listing.

Proprietary spare parts shall be identified on the spare parts listing. Proprietary is defined within the Merriam Webster Dictionary as: (i) used, made, or sold only by the particular person or company that has the legal right to do so, (ii) something that is used, produced, or marketed under exclusive legal right of the inventor or maker.

The BEP recognizes that the initial list may not be complete, as the design may not be final. The Contractor shall provide any changes or additions to the original list prior to delivery of the equipment to the BEP.

### **C.3.6.4 SITE PREPARATION INFORMATION**

The Contractor shall supply no later than sixty (60) days after award of the contract, complete and accurate site preparation information in sufficient detail to allow the BEP to prepare the site for the machine, support equipment and any other equipment delivered under this contract. The site

preparation information shall include the following information at a minimum: equipment layout (plan and elevation views), floor loading, utility requirements, location of utility connections, required clearances around the equipment for operation and maintenance, location of mounting points and bearing area, static and dynamic loading of each mounting point, dynamic loading frequency. Utility information provided shall include the required amperes, power factor, largest motor HP rating, connection locations, and requirements such as flow rates, temperatures, pressures, differential temperatures, differential pressures, power requirements, voltage, frequency, phases, diversity factors, and heat load. This data is to be supplied in Auto-CAD (.dwg) format.

### **C.3.6.5 TECHNICAL DOCUMENTATION**

The Contractor shall provide the BEP with accurate, complete, and current technical documentation of the equipment, including all supporting equipment. The documentation shall include engineering drawings, bill of materials, operation and maintenance manuals, and purchase component information.

The complete technical documentation package shall be accessible on the COS on the press. One (1) complete set of documentation shall be provided in electronic format upon delivery of the first machine to the BEP. The set shall be provided on Compact Disk – Read Only Memory (CD-ROM). The files shall enable the BEP to copy the data onto servers for access not only on the machinery but also for engineering, maintenance, and operations personnel via the BEP’s intranet.

The Contractor shall also be responsible for providing updates, whenever changes or modifications occur during the term of this contract. The Contractor shall supply technical data covering the press, support equipment, optional equipment (if exercised), and any other equipment/items delivered to the BEP under this contract.

In the event the equipment is to be furnished by firms whose standard technical documentation does not use the English language or engineering terminology commonly used in the U.S., the aforementioned technical documentation shall be modified as follows:

- All documentation shall be provided in the English language, including drawing titles, part names, material specifications, manufacturing processes, heat treatments, finishes, or any other notations necessary for manufacturing the part. It will not be necessary to translate metric (SI) measurements into inch or foot measurements.
- If standard systems are employed to designate dimensional tolerance, surface textures, heat treatments, or coatings, comprehensive explanations of systems shall be in sufficient detail to be readily understood by American manufacturers.
- Any international standards (ISO and DIN) referenced shall be provided translated into the English language.

#### **(1) Engineering Drawings**

Drawings covering the entire machine, support equipment and any other equipment delivered under this contract shall be provided; mechanical, electrical, hydraulic and/or pneumatic; and shall include individual parts, subassemblies, and assemblies. Drawings for all individual parts, detail drawings, shall show the form, fit and function of the part, materials utilized, and any manufacturing process information required for the BEP to reproduce the part in an emergency.

Detail drawings shall reference their respective subassemblies and assembly drawings.

Drawings shall be provided as raster images in TIFF (.tif) electronic format. If generated via a Computer Aided Drafting (CAD) system, the drawings shall also be provided as vector images in AutoCAD (.dwg) electronic format.

Each drawing shall be a separate independent file. Drawings that consist of multiple pages shall be supplied as a single file. Drawings shall be scanned at an industry standard resolution not finer than 200 x 200 dpi. Consultative Committee for International Telegraphy and Telephony (CCITT) Group 4 (2d) Fax standard for compression shall be used. All drawing images shall be supplied free of scanning or conversion defects. Images shall be cropped to the border of the drawing with no outside white remaining. Images shall be straightened and oriented so that the title block is located on the lower right corner. The technical rights the BEP obtains under this contract to the drawings shall be annotated on the images.

The BEP utilizes the properties tab fields for the purposes of sorting and incorporating inventory information with part drawings. All TIFF (.tif) image files provided shall include the following fields within the properties summary tab available for utilization by the BEP: Author, Keyword, Comments, Title and Subject.

Files shall be identified using the drawing number as the title. A separate folder shall be provided for each logical group of assemblies.

## **(2) Bill of Materials**

A fully indented Bill of Materials (BOM) covering the entire machine, support equipment and any other equipment delivered under this contract shall be provided. The BOM shall annotate all purchase components, recommended spare parts and consumables. The BOM shall be provided as a single PDF document or MS-Excel file.

## **(3) Purchase Component Literature**

All literature on purchase components utilized on the machine, support equipment and any other equipment delivered under this contract shall be provided. At a minimum, the Original Equipment Manufacturer's (OEM) brochures and/or manuals shall be provided. All purchase component literature shall be provided as PDF documents.

## **(4) Operation and Maintenance Manuals**

Operation and maintenance manuals shall be provided for the machine, support equipment and any other equipment delivered under this contract. Manuals shall, via text and graphical illustrations, address all the requirements necessary for operation and maintenance personnel to operate and maintain the equipment without prior training. A list of trouble-shooting procedures should be available for quick reference to identify malfunctions. One electronic copy in Adobe intelligent PDF format or MS-Word shall be provided. This copy shall have links added from the table of contents, list of figures and an index, if available, to the referenced pages. Any internal table of contents or references to figures shall be linked to the referenced page or figure. In addition, the Contractor shall add bookmarks to the PDF files for all major headings. The manuals shall include a listing of all codes/programs used in the equipment and include a section devoted to safety, health, and environmental topics. The manuals shall detail all safety functions and locations.

## **(5) Electronic Database Documentation**

A complete detailed design document for the Data Collection System (DCS) and all subsystems shall be provided. The documentation shall include a complete listing of all database tables, entity-relationship diagram (ERD), all calculation items, interface points, DCS functions and processes, process flow diagrams, hardware and software configurations and a glossary of all terms and entries.

### **C.3.6.6 SPARE HARD-DRIVES**

Each machine shall include a complete set of spare hard-drives for every computer hard-disk on the press and support equipment; pre-loaded and readily usable. A pre-loaded and readily usable hard drive shall be fully formatted, have all software installed and be configured to be utilized on the press by swapping the spare for the drive within the computer. The Contractor shall also provide procedures for BEP maintenance personnel to clone all hard drives within the press to ensure back-ups are available with the latest software versions.

### **C.3.6.7 BACK-UP SOFTWARE**

The Contractor shall supply a full backup copy of all software used on the machine and support equipment along with a method to incrementally back up all control systems. The backup copy shall be provided prior to BAT on the first machine.

The backup copies of software shall cover all Personal Computers (PCs), Programmable Logic Controllers (PLCs) and any drives or other electronic controls components that require software to be loaded when replaced.

The Contractor shall be responsible for providing updates, whenever changes or modifications occur during the term of this contract.

The backup copies shall be complete for expert Maintenance personnel to reload and/or modify the programs. The Contractor shall provide the source code for any software written specifically for the equipment specified in this SON.

### **C.3.6.8 SPECIAL TOOLS**

Each machine shall include a complete set of any special tools required to operate, service and/or maintain the equipment. Special tools are any items or devices not commercially available but are needed to operate or maintain the equipment including ancillary equipment, diagnostic software, and fixtures.

For any component weighing over 50 pounds (22.7 kg), the Contractor shall provide a mechanical method to lift, move, and install the component.

All special tools required for normal operation shall be self-contained within the machine.

### **C.3.6.9 SPARE MODULAR COMPONENTS**

Modular components are assemblies/subassemblies designed to ensure continued operation of the system with the quick and easy replacement of the entire assembly/subassembly without the need for maintenance to disrupt machine operation. Modular components are not individual parts.

For each modular component on the machine, each machine shall be supplied with at least one

spare. For modular components utilized multiple times on the system, e.g., banders or note counters used multiple times on a machine, at least one (1) spare for every two (2) on the system shall be supplied.

Carts for transportation and storage of modular components shall be supplied for any weighting more than 15 pounds (6.8 kg), bulky or difficult to handle, or those that require specific alignment for installation. Sufficient carts shall be supplied with each machine for all modular components in the system plus all spares for transport to/from maintenance and the machine.

Off-line testing or set-up stand(s) required to pre-align or work on items shall be supplied with each press.

Quantities of spare modular components will be further discussed in detail, following award of contract.

### **C.3.7 SERVICES**

The Contractor shall provide the following services under this contract. The Contractor shall abide by all BEP Security and Safety regulations, rules and policies while performing work within the BEP.

#### **(1) Security Requirements**

The Contractor shall comply with all policies, regulations, requirements, and instructions from the Bureau's Office of Security. In addition to those requirements within section H, the Contractor shall:

##### **a) Non-Disclosure Agreement**

The Contractor shall sign and have notarized a Non-Disclosure Agreement (NDA) prior to the Government's release of proprietary and/or sensitive information. The NDA will cover all work to be performed under this contract and shall apply to all Contractor personnel as well as any subcontractors.

##### **b) Safeguarding Government Furnished Materials:**

Under the performance of this Contractor, the BEP will provide Government Furnished Materials that are considered items of security. The Contractor shall abide by all requirements and instructions of the BEP's Office of Security during the performance of this contract.

#### **(2) Safety Requirements**

All services to be performed on-site within the BEP shall be performed in a manner consistent with the BEP's Environmental, Health and Safety (EHS) policy and applicable EHS laws, regulations, and other applicable requirements. The Contractor shall abide by all applicable requirements within the attached document, EH&S Boilerplate Requirements for Construction and Services Contractors (75.00-ENV-005-FY), **Attachment G**.

### **C.3.7.1 PROJECT MEETINGS**

The Contractor shall schedule meetings during the performance of the contract for the delivery of the equipment to the BEP. The Contractor shall present their status on project activities, open

items/issues, and next steps. At a minimum, the Contractor shall include in their project plan (Gantt Chart) and schedule the following:

- A. **Project Kick-off:** Single meeting at the BEP occurring within 45 days of award of contract to review the Contractor's plan, major milestones and the performance, functionality, and design of the equipment.
- B. **Design Review(s):** At least three (3) meetings scheduled between Project Kick-Off and FIT during the performance of the base contract for the delivery of the first press to review and discuss the schedule, design, performance, functionality, fabrication, testing, training, inspection, and data collection from the equipment. The first meeting shall be held at the BEP with the following two (2) meetings held at a contractor's site. On optional systems, at least one (1) meeting shall be scheduled. The first meeting shall be used to review and discuss the objectives and expectations for the system, known problematic areas, high-risk areas, complex functionalities, and past issues/problems with similar equipment. If BEP personnel are unable to travel to physically attend the meetings at contractor's site, the BEP may decide to perform these meetings virtually.
- C. **Pre-FIT:** Single meeting at the FIT Site occurring within 45 days prior to the FIT to review the system status, contractors plan for preparing for the FIT, coordinate testing and sampling activates. If BEP personnel are unable to travel to physically attend the meetings at contractor's site, the BEP may decide to perform these meetings virtually.
- D. **Delivery and Installation:** Single meeting at the BEP occurring within 45 days prior to the delivery of the press to review the plan for the delivery, delivery path and BEP coordination during the installation.
- E. **Pre-BAT:** Single meeting at the BEP occurring within 15 days prior to the BAT to review the system status, Contractor's plan for preparing for the BAT, coordinate testing and sampling activates, and BEP coordination.
- F. **Training:** Single meeting at the BEP occurring within 15 days prior to training commencing to review the training program, instructors, materials and BEP coordination.

The Contractor shall submit for review their attendee listing, daily/hourly schedule, and agenda for each meeting no later than three (3) weeks prior to the meeting. Topic to be covered, subcontractor participation and read-ahead shall be included.

### **C.3.7.2 TESTING**

The contractor shall perform in the presence of BEP personnel a Factory Inspection Test (FIT) and Bureau Acceptance Test (BAT) in accordance with the requirement in **Section E.2 – INSPECTION AND ACCEPTANCE** on each system delivered to the BEP. Additional testing or demonstrations may be required to demonstrate the system, or subsystems, capabilities, and compliance with the requirements.

The contractor shall review the draft Test Plan, **Attachment H**, and submit for review, discussion,

and agreement with the BEP the final Test Plan for the system.

The FIT may be performed either virtually or in person, at the BEP's discretion. The contractor shall be required to provide sufficient visual IT infrastructure to allowing viewing of the entire system during a virtual FIT, including performance of the system and operation / control interfaces of the machine. The BEP will work with the contractor on the mutually agreeable software, configuration, timing, and execution plan for a virtual FIT. Due to limitations with a virtual FIT, the duration may be extended to accommodate all testing and the contractor may be required to demonstrate additional items during the pre-BAT commissioning.

The duration of the FIT shall be planned by the contractor and reviewed in the pre-FIT meeting. The schedule and plan shall be approved by BEP. A job change in the middle of the FIT shall be performed to demonstrate the configuration and setup of the system going from one format/job to another. Demonstrations of offline or support items, e.g., cleaning system and consumable preparation systems that can be performed during the production run days shall be included in the schedule.

The duration of BAT is expected to be ten (10) working days for each press, of which six (6) days will require production. A job change shall be performed within the production days to demonstrate the configuration and setup of the system going from one format/job to another.

### **C.3.7.3 SHIPPING, DELIVERY, AND INSTALLATION**

The Contractor shall provide all materials and services to crate, ship, deliver, assemble, install, start up, test, and turn over to the BEP all equipment to be delivered under this contract. The Contractor shall crate and ship to the BEP site, deliver the components to the site, uncrate, and remove any packing materials, set up the equipment, connect to BEP utilities, start up the equipment, perform testing to ensure contract compliance and turn the equipment over to the BEP for operation (i.e., Turn-Key Installation).

Additional requirements for commissioning and testing are covered in **section E.2** of this contract. Additional requirements for delivery and installation are cover in **section F.2** of this contract.

### **C.3.7.4 TRAINING**

Training for Operators, Maintenance, Controls/Electronics, Inspection, Data Collection, Accountability and Engineering shall be provided. Refresher classes for Operator, Maintenance, Control System, and Inspection shall be provided on each system.

Training shall be based upon the information included in the equipment's operation and maintenance manuals, Process Control Logic Document, any other supplemental documentation, and information that the Contractor and BEP jointly deem necessary for the satisfactory training. Class attendees shall be provided with copies of all training materials for their future reference. For all training classes, a review of the "Process Control Logic Document" shall occur.

Training shall be sufficient to educate experienced individuals in their respective field to support the system in operation.

Trailing information and reference materials shall be accessible on the machine's COS for review by personnel.

Refresher classes shall be included for personnel that take Operator, Maintenance, Control System, and Inspection training. The number of refresher classes, number of BEP personnel attending and times for the refresher classes will be the same as for the initial classes. Refresher training will be scheduled within six (6) months of the initial training.

### **Training Plan**

The Contractor shall submit for approval a training plan to the BEP.

Two (2) months prior to the start of the training, the Contractor shall prepare and deliver to the COR, a detailed training plan and schedule. The Training Plan shall include an hourly break down of the subject matter to be covered during each training session. One week prior to conducting a class, the Contractor will be informed as to the shift that the training sessions will occur on.

### **Instructor Qualifications**

Instructors shall create a positive learning environment to facilitate the intellectual development of students. Instructors for all training sessions shall have the following qualifications:

- Capable of developing, managing, and delivering training using classroom and hands-on instruction to attain learning objectives in relation to BEP organizational needs.
- Reviewing training materials considering the student's backgrounds and course objectives to ensure the consistency of quality and accuracy of content.
- Ensure a variety of learning styles can be met by selecting appropriate methods and media for instructional delivery.
- Monitoring participant progress and instructional program effectiveness; establishing and maintaining a learning environment to promote student engagement and participation actively and freely.
- Fluent in English and all training materials shall be presented in English.
- Must have successfully completed training in the craft, of which training will be provided, to a level sufficient to be classified at least at the Journeyman level, Master level preferred.
- Possesses full and detailed knowledge, experience, skills, and proficiency with the subject equipment; capability to configure, set up, trouble-shoot, and make adjustments or adjust settings, etc.
- Shall be considered a Subject Matter Expert in the area being covered by the training. Continually updating technical knowledge of equipment and techniques within the subject area.

**(6) Operator Training (Basic and Advanced)**

The Contractor shall conduct training classes for the operators of the machine, including any subsystems and supporting equipment. Training shall be separated into a Basic and Advanced Training.

Basic Training shall cover the entire system, including the inspection and control systems, providing general instruction on the operation and use of the system. Operators that complete the Basic Training shall be fully able to operate the system meeting the performance and quality requirements, including utilizing the inspection system to maintain the production of a quality product.

Advanced Training shall elaborate on the system's design and functionality capabilities, range of settings, and configuration of the system. Operators that complete the Advanced Training shall be fully able to support other operators experiencing difficulties or issues with production or quality, configure the system for new designs and adjust the inspection system.

Training shall be sufficient prepare the operators to safely run the machine by themselves while meeting the production and quality requirements. Training shall include related safety, health, and environmental topics such as those outlined in this SOW.

Training shall consist of both classroom and hands-on training. Training shall cover the entire machine, including all subsystems and support equipment. Training shall last 8 ½ hours and correspond to the start and stop times for operational shifts of the BEP; Days (6:30 am – 3:00 pm), Evenings (2:30 pm – 11:00 pm), and Nights (10:30 pm – 7:00 am).

INITIAL CLASSES:

Three (3) Basic Operator classes for up to four (4) operators per class, each class lasting at least two (2) weeks in length shall be provided with each press delivered.

One (1) Advanced Operator class for up to four (4) operators, class lasting at least one (1) week in length shall be provided with each press delivered. Advanced students will take a basic training on the system prior to the advanced class.

REFRESHER CLASSES:

Three (3) Basic Operator refresher classes for up to four (4) operators per class, each class lasting at least one (1) week in length shall be provided with each press delivered.

One (1) Advanced Operator refresher class for up to four (4) operators, lasting two (2) days in length shall be provided with each press delivered.

**(6) Maintenance Training (Basic and Advanced)**

The Contractor shall conduct training classes for maintenance personnel on the machine, including subsystems and supporting equipment. BEP Electro-Machinists are cross-trained Electricians-Machinists and shall be trained in both the electrical and mechanical diagnostics and maintenance of the press, inspection system, and control system. Training shall be separated into a Basic and Advanced Training.

Basic Training shall cover the entire system, including the inspection and control systems, providing general instruction on the diagnostic and maintenance of the system. Maintenance personnel that complete the Basic Training shall be fully able to perform all general support and

maintenance on the system meeting the performance and quality requirements, including cleaning, and maintaining the inspection system to ensure the production of a quality product.

Advanced Training shall elaborate on the system's design and functionality capabilities, electronics, and control system. Personnel that complete the Advanced Training shall be fully able to perform backups, load patches, perform in-depth diagnostics and troubleshooting, install, and configure electronics, and perform major repair of the electronics (PLCs/PCs), controls system, and data/image capture infrastructure. Training shall cover making clones of hard-drives, exchanging hard-drives, and loading backup versions of software on the system.

Training shall be sufficient prepare maintenance personnel to safely diagnose issues or problems with the machine and to maintain the machine to ensure productivity, quality, and reliable operation. Maintenance training shall include related safety, health, and environmental topics such as those outlined in this SOW.

Maintenance Training shall consist of both classroom and hands-on training. Training shall cover the entire machine, including all subsystems and support equipment. Training shall last 8 ½ hours and correspond to the start and stop times for operational shifts of the BEP; Days (6:30 am – 3:00 pm), Evenings (2:30 pm – 11:00 pm), and Nights (10:30 pm – 7:00 am).

INITIAL CLASSES:

At least three (3) Basic Maintenance classes for up to six (6) Ems per class each lasting at least two (2) weeks in length shall be provided with each press delivered.

One (1) Advanced Maintenance class for up to four (4) Ems, class lasting at least one (1) week in length shall be provided with each press delivered. Advanced students will take a basic training on the system prior to the advanced class.

REFRESHER CLASSES:

Three (3) Basic Maintenance refresher classes for up to six (6) Ems per class, each class lasting at least one (1) week in length shall be provided with each press delivered.

One (1) Advanced Maintenance refresher class for up to four (4) Ems, lasting two (2) days in length shall be provided with each press delivered.

**(3) Inspection System Training**

Specialized training shall be provided for the BEP's inspection experts on the inspection system. General training on the inspection system for Operators and Maintenance personnel shall be covered within their respective training. Training shall cover the entire inspection system, algorithms, model creation/changes, tuning and data/image capture.

Inspection training shall consist of both classroom and hands-on training. Training shall cover all inspection/quality tools for entire machine, including all subsystems and support equipment. Training shall last 8 ½ hours from 7:30 am – 4:00 pm.

INITIAL CLASSES: One (1) training class for up to four (4) BEP SMEs lasting at least one (1) week in length shall be provided with each press.

REFRESHER CLASSES: One (1) training class for up to four (4) BEP SMEs lasting at least two (2) days in length shall be provided with each press.

**(6) Data and Image Collection Training (Presses 1 & 2 only)**

Specialized training shall be provided for BEP personnel on the Data Collection System, including data and images captured by the inspection system. Training shall cover in addition to the hardware and software, the format, database structure and storage of all data generated by the system. The training shall be sufficient so that the BEP personnel fully understand how data is created from within the system, captured, recorded, and how to access and analyze the data.

Training shall consist of both classroom and hands-on training. Training shall the entire system, including all subsystems and support equipment. Training shall last 8 ½ hours from 7:30 am – 4:00 pm.

One (1) training class for up to four (4) BEP SMEs lasting at least three (3) days in length shall be provided on the first press at a facility (Presses 1 and 2).

**(6) Security and Accountability Training (Presses 1 & 2 only)**

Specialized training shall be provided for the BEP's Security and Accountability personnel. Training shall provide a general overview of the press and all subsystems with detail information on counters and load accountability.

Training shall consist of both classroom and hands-on training. Training shall cover the entire machine, including all subsystems and support equipment. Training shall last 8 ½ hours from 7:30 am – 4:00 pm.

One (1) training class for up to six (6) personnel lasting one (1) day shall be provided on the first press at a facility (Presses 1 and 2).

**(6) Engineering Training (Presses 1 & 2 only)**

Specialized training shall be provided for the BEP's Office of Production Engineering, Office of Product Development and other technical personnel on the general principles and design of the press and all subsystems, detailed training on the system's control system, data capture, diagnostic of the press and subsystems for performance or quality issues, means and methodology for testing to validate system performance, and limitations and capabilities of the press to produce other designs. The training shall provide engineering personnel the knowledge and tools to monitor data from the press, trouble-shoot problems with system performance, quality, or controls, testing to validate system conformance to design parameters, and implement new design or features on the press.

Training shall be sufficient prepare engineering personnel to safely diagnose issues or problems with the machine or control system, monitor the system to ensure productivity, quality, and reliable operation, review and assess currency designs for manufacturability on the system, and set and evaluate tolerances and allowable variations in products. Engineering training shall include related safety, health, and environmental topics such as those outlined in this SOW.

Engineering training shall consist of both classroom and hands-on training. Training shall cover the entire machine, including all subsystems and support equipment. Training shall last 8 ½ hours from 7:30 am – 4:00 pm.

One (1) training class for up to six (6) engineers lasting five (5) days shall be provided on the first press at a facility (Presses 1 and 2).

### **C.3.7.6 START-UP ASSISTANCE (6 MONTHS)**

After completion of the Testing and Training, the Contractor shall assist the BEP in the transition of the press into full production with “live” product for the first press at a facility. The Contractor shall furnish personnel to assist the BEP in this transition for the first six (6) months of operation.

The Contractor shall furnish the following:

- A. Operator Instructor for three (3) – three (3) week segments
- B. Maintenance Instructor for three (3) – three (3) week segments
- C. Electronics/Controls Instructor for three (3) – one (1) week segments
- D. Inspection Instructor for three (3) – two (2) week segments

The BEP and Contractor will coordinate on the weeks for the support services to be present, including the shifts they will support. This assistance shall include on-the-job-training of BEP’s personnel in all the possible operation and maintenance functions of the press.

If possible, the same individuals assigned to perform startup assistance shall be the same that performed training to BEP personnel. Any substitutes shall meet the same requirements of the training instructors.

### **C.3.7.5 WARRANTY**

The Contractor shall provide the following warranties.

#### **(1) 15-Year Major Component Warranty**

The Contractor shall provide a fifteen (15) year warranty on all major components of the press, e.g., side frames, printing cylinders, and all other major components designed to last the 20-year life of the press. If a major component fails during the 15-year warranty timeframe, the Contractor shall provide all labor and parts required to repair the press and return the press back into an operational state. Repair work shall begin within 2 weeks of notification.

#### **(2) 2-Year Equipment Warranty**

Warranty shall include materials and labor for the repair or replacement of defective parts and service at the installation site for a period of at least two years (24 calendar months) after the BEP’s final acceptance of the equipment.

During the warranty period, the Contractor personnel shall respond to a service call within 72 hours or less, and have spare parts, if required, for the service call. The Contractor shall provide all necessary information for the COR to make service contacts, i.e., names, addresses and telephone numbers. Upon completion of a service call, the Contractor shall furnish a report, in English, documenting the work performed and any recommendations, including preventative maintenance, to lessen the potential of a future occurrence.

#### **(6) Parts Warranty**

A one-year (12 calendar months) warranty shall be included on all parts from the time the parts are removed from BEP stock to be used on the press. The BEP agrees that the total time from when the part was received from the manufacturer into stock cannot exceed 24 months.

### **C.3.7.7 PROJECT MANAGEMENT**

During the performance of this contract, the Contractor shall coordinate with the BEP on the design, fabrication, assembly, testing, shipment, delivery, startup and acceptance of the machine and performance of all services, as well as provide the BEP with information on the status of the work being performed.

After delivery of the machine to the BEP, the Contractor's project manager assigned to oversee the installation and testing of the press shall be responsible for meeting with BEP personnel and making decisions on requests from the BEP. The project manager shall be available at all times while work is being performed within the facility.

The contract shall build into their schedule the following major milestones for the project:

- Design Reviews
- Fabrication/Assembly
- Setup/Pre-FIT
- FIT
- Disassembly/Crating
- Shipment
- Delivery/Installation
- Startup/Commissioning
- Pre-BAT
- BAT
- Training
- 6-month Assistance

### **C.3.8 CONTRACTOR QUALIFICATIONS & RESOURCES**

The Contractor shall furnish plans, including documentation on their qualifications and resources, for providing and supporting the equipment. The BEP intends on utilizing the equipment for the entire design life in multiple shifts per day operation. Critical to the BEP's long-term utilization of the equipment is the Contractor's capabilities, resources, and plans to support the system.

The Contractor documentation shall include their strategic plans, procedures, activities, resources, and infrastructure to provide a quality machine on time, provide the materials and services to support the development, fabrication, testing, installation, start-up, and training on the system to the BEP, and provide services to support the system during the entire life of the system.

### **C.4 OPTIONS**

The Contractor shall provide the following options with the press.

#### **C.4.1 ADDITIONAL HFMS**

The Contractor shall provide individual options for up to twelve (12) HFMs to be provided under this contract. Optional HFMs shall meet the requirements of the base machine delivered under this contract.

The installation site for each optional machine may be either the Western Currency Facility (WCF) located in Fort Worth, Texas or new DCF located in Beltsville, MD. The Contractor will be requested to provide pricing for the respective installation site of the optional machine.

#### **C.4.2 FLARE COMPENSATION SYSTEM**

The BEP desires a flare compensation system to reduce potential spoilage generated from the stacked tolerances from the paper supplier and BEP process variation. However, the flare compensation system is not a requirement and considered an optional system. If a company is unable to provide a proposal or pricing for the optional system, the proposal will not be rejected.

The requirements for the Flare Compensation System are specified in **section C.3.3.4**.

#### **C.4.3 FIT AND DEMONSTRATION MATERIALS**

The BEP may decide not to supply the Government Furnished Materials (GFM) for the Factory Inspection Test (FIT), as stated in Section E, and/or other demonstrations to be performed under this contract due to security, production, or cost reasons. The Contractor shall provide an option to offer services to provide all materials necessary for setting up and performance of FIT or demonstration testing within their facility.

If the BEP decides not to provide the GFM, the BEP will issue a Request for Proposal (RFP) to the Contractor for the materials and services needed supply all materials required to conduct a test in accordance with the terms and conditions of the contract and test plan. The Contractor shall submit a proposal in response to the RFP for evaluation and approval. When approved, the BEP will issue a contract modification to include the funding necessary to produce the test materials.

#### **C.4.4 SPARE PARTS**

The BEP intends to purchase spare parts for the HFM by ordering parts from the Spare Parts Listing supplied by the Contractor. Each individual spare part ordered and delivered shall bear a tag with the manufacturer's part number and the BEP's stock number that will be on the BEP purchase order. Any parts not identified properly will be returned to the Contractor for correction at the Contractor's expense.

#### **C.4.5 PRODUCT TESTING ON SITE SUPPORT**

Optional production support after 6 months start-up assistance. This production support option requires the contractor to provide personnel on site to support BEP product testing and resolve any equipment, controls, and inspection issues during the product testing.

1. Product verification 1 testing – three 3 weeks (12hours/day) – July 2025
2. Product testing – two (2) week (12hours/day) – Sept. 2025
3. Product testing – two (2) week (12hours/day) – Oct. 2025
4. Product testing – two (2) week (12hours/day) – Jan. 2026
5. Product testing – two (2) week (12hours/day) – Feb. 2026
6. Product verification 2 testing – three 3 weeks (12hours/day) – April 2026
7. Product testing – two (2) week (12hours/day) – Aug. 2026
8. Product testing – two (2) week (12hours/day) – Sept. 2026
9. Product testing – two (2) week (12hours/day) – Jan. 2027
10. Product testing – two (2) week (12hours/day) – March 2027

11. Product validation test - two (2) week (12hours/day) – May 2027

**C.5 DELIVERABLES**

SOW #	Deliverable	Due Date	Deliverable Recipient	Deliverable Format
3.2.1	Non-Disclosure Agreement	Part of the submission package	CO	Notarized Agreement
3.2.1.10	Safety Data Sheets	90 Days Prior to FIT	COR	PDF
3.2.2	Drawings of Equipment	During the 1 <sup>st</sup> Design Review Meeting	COR	PDF
3.6.3	Spare Parts Listing	8 Weeks Before 4 <sup>th</sup> Design Review Meeting	COR	PDF
3.6.4	Site Preparation Information	60 Days After Contract Award	COR	PDF and 3D CAD
3.6.5	Technical Documentation	Upon Delivery of 1 <sup>st</sup> Machine	COR	CD-ROM
3.6.5.1	Engineering Drawings	Submission of Technical Documentation	COR	.tiff or CAD and .dwg
3.6.5.3	Purchase Component Literature	Submission of Technical Documentation	COR	PDF
3.6.5.4	Operation and Maintenance Manuals	Submission of Technical Documentation	COR	PDF or MS-Word
3.6.5.5	Electronic Database Documentation	Submission of Technical Documentation	COR	PDF
3.6.6	Spare Hard-Drives	Upon Delivery of Each Machine	COR	Hard-drive
3.6.7	Back-up Software	After BAT on 1 <sup>st</sup> Machine	COR	Software
3.7.1	Design Review #1	TBD Between Kick Off and FIT	COR	Meeting
3.7.1	Design Review #2	TBD Between Kick Off and FIT	COR	Meeting
3.7.1	Design Review #3	TBD Between Kick Off and FIT	COR	Meeting
3.7.2	Testing Plan	3 <sup>rd</sup> Design Review Before FIT	COR	MS Excel

3.7.4	Training, Operation and Maintenance Manuals	2 Months Prior to Training	COR	As defined
3.7.4	Training Plan	2 Months Prior to Training	COR	PDF
3.7.4	Instructor Qualifications	2 Months Prior to Training	COR	PDF
3.7.4	Contact Information	Upon BEP Acceptance of Machine	COR	PDF
3.7.7	Project Management	Weekly	COR	Meeting

**C.6 PERIOD OF PERFORMANCE**

The period of performance shall be eight (8) years and three (3) months from the time after contract award.

**[END OF SECTION]**

## SECTION D – PACKAGING AND HANDLING

The following instructions are required for any shipments to the BEP:

### **D.1 Notice of Packaging Slip Requirements:**

The following outlines the Bureau of Engraving and Printing's packaging slip requirements to ensure efficient processing of shipments to the BEP:

- The Bureau of Engraving and Printing requires that all packaging slips be placed in a self-adhesive pack list envelope and affixed to the outside a shipment.
- The packing slip shall include, at minimum the following information:

### **D.2 General Items – Information Required for Each Shipment:**

- Contract Number – The contract number BEP assigned to this purchase.
- Shipping Address – Point from which the merchandise was shipped.
- Telephone Number – The telephone number of the vendor contact to be called for inquires related to the merchandise.
- Customer Information – The name and telephone number of the party to which the merchandise is being shipped.
- Total Weight of Packages, Item number and the total number of items within the current shipment.
- If items are drop shipped from a supplier, you must ensure the proper contract number is written on the packaging slip by your supplier.

### **D.3 Line Items – Information Required for Each Line Item Included in the Shipment:**

- Manufacturer Product Identification – Item Number assigned by manufacturer/supplier.
- Quantity Ordered – Quantity on the purchase order or unit of measurement.
- Quantity Shipped – With the packing slip.
- Quantity Back-ordered, where applicable.

### **D.4 Notice of Shipping Label Requirements:**

Every box/skid must have at least one shipping label applied to it. The label is to include, at minimum, the following information:

- Manufacturer or Supplier – Name of Manufacturer or supplier/and
- Shipping Address – Point from which the merchandise was shipped/and
- BEP Contract Number – PO# or CC order #/and
- Customer Name & Telephone Number – First and last name, building and room #.

\*\*The vendor shall ensure that all items shipped to the BEP are properly labeled. Items may include but not be limited to closed containers, sealed boxes, wrapped packages, or strapped palettes. Failure to adhere to the packing slip and shipping label requirements could result in shipment rejection, processing delay, and payment delay. \*\*

[END OF SECTION]

## SECTION E – INSPECTION AND ACCEPTANCE

### **E.1 FAR CLAUSE 52.252 2 CLAUSES INCORPORATED BY REFERENCE (FEB 1998)**

This contract incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. Also, the full text of a clause may be accessed electronically at this address: [www.acquisition.gov/](http://www.acquisition.gov/) (End of Clause)

CLAUSE NUMBER TITLE DATE

52.246-2	INSPECTION OF SUPPLIES—FIXED-PRICE	AUG 1996
52.246-4	INSPECTION OF SERVICES – FIXED PRICE	AUG 1996
52.246-16	RESPONSIBILITY FOR SUPPLIES	APR 1984

### **E.2 INSPECTION AND ACCEPTANCE**

The following details the means for testing and acceptance of the presses, support equipment and any other equipment delivered under this contract.

In order for the systems to be acceptable to the Government, the equipment must meet all requirements outlined in Section C of the contract. If the equipment does not meet the requirements as outlined in Section C, then the systems will be deemed unacceptable. Therefore, final acceptance and payment for each system will not be made until the Bureau has fully accepted the systems.

Inspection and acceptance of the supplies to be provided hereunder shall be made in accordance with FAR Clause 52.246-2, Inspection of Supplies – Fixed Price. The Contracting Officer (CO) will appoint a Contracting Officer Representative (COR) at award to provide oversight on behalf of the CO.

When items are rejected for noncompliance, written notification of the rejection will be furnished by the Contracting Officer, within ten (10) calendar days after inspection has been completed. The notification shall include an explanation of the deficiencies noted during inspection, the reasons for the rejection, and the Government's terms as to what remedies will be made by the Contractor. All parts found insufficient or damaged must be replaced at the contractor's expense.

#### **(1) Testing**

The system will be tested at the contractor's facility (Factory Inspection Test – FIT) prior to the BEP authorizing shipment of the system for installation. Acceptance testing (Bureau Acceptance Test – BAT) will be performed at the BEP after installation and startup of the system for acceptance.

All testing shall be performed in the presence of BEP personnel (either in person or virtually) and according to the established test plan for the system.

**(2) Place of Inspection**

The system will be tested and inspected at the contractor’s facility during the Factory Inspection Test (FIT) and after installation and start-up at the BEP the system will be tested during the Bureau Acceptance Test (BAT).

**(3) Test Plan**

The final FIT/BAT Test Plan will be established after award of the contract. The contractor shall review the draft test plan, **Attachment H**, create and submit for BEP review and approval the detailed testing procedures and daily/hourly testing schedule for all testing to be performed.

The contractor’s first draft of their detailed Test Plan shall be submitted fifteen (15) days prior to the first Design Review Meeting so the plan may be discussed during the meeting. The Final Test Plan shall be submitted fifteen (15) days prior to the FIT Coordination Meeting for approval. A Security Plan for the safeguarding of BEP furnished materials or items of reproduction shall be submitted for review and approval by BEP’s Office of Security prior to award of the contract and prior to the receipt of any U.S. securities as per section H.22.

The contractor shall demonstrate equipment conformance with all requirements during FIT and BAT. Testing may be performed by one of four (4) methods. The contractor shall propose the testing methodology for each requirement. Conformance may be demonstrated by:

A. Certification

Written documentation for design elements or any other requirements that cannot be reasonably tested or demonstrated during the performance of test shall be provided. Certifications shall be supplied on company letterhead, signed by officer with responsibility for the design of the equipment.

B. Visual Inspection

Visual inspection or verification of a requirement that does not require demonstrations or witnessing during the production run.

C. Demonstration

Demonstration shall be used for any requirement that can only be verified while the equipment is not in operational mode or for which demonstration during operational mode would interfere with the operation of the equipment.

D. Dynamic Inspection

Dynamic Inspection applies to any requirement that can be demonstrated or witnessed while the equipment is in an operational mode and does not impact the performance of the equipment.

An Excel Spreadsheet referencing every requirement in the contract shall be created by the BEP Office of Production Engineering (OPE). Within the spreadsheet, for each requirement the following shall be specified:

A. Testing Methodology

B. Procedures for Test

### C. Day/Time of test

The spreadsheet will be used to track all requirements.

Certification document(s) shall be supplied to BEP on or prior to conducting any testing. A universal certification document for all systems is acceptable.

All sampling of performance measurements shall be demonstrated via the following: ( $3\sigma <$  specified measurement tolerance). Where  $\sigma$  = standard deviation of the samples. The sampling plan shall be sufficient to provide an appropriate confidence that the equipment operates as specified.

For complex systems, overall reliability can be verified to the Bureau by certification(s) and/or demonstration(s) of the reliability of individual system components. This approach is recommended in the case of highly restrictive requirements or for systems that demonstration of the entire system reliability would require testing far beyond the intended testing time frame.

The production run on the equipment required the production of a specific quantity of sheets within a specific time period. During the production run, the spoilage and print registration will be tracked for analysis.

Each machine will be tested independently and acceptability will be solely based upon the performance of the individual machine to meet the requirements specified in the contract.

Prior to the testing, the contractor will process sheets to ensure the machine is ready for the performance of the test. Contractor will notify the COR when testing is to begin.

If for reasons beyond the control of the Bureau and contractor testing cannot occur on a given day; testing will be arranged to be performed on the next available day.

The test plan shall specify how testing will be performed. The test plan can be changed by mutual agreement between the Bureau and contractor.

During production runs all cabinets, panels and covers shall be closed. No test or diagnostic equipment shall be permitted to be connected to the system.

System shall be operated by the number of personnel required. Additional personnel as observers or for specific data collection may be allowed but these individuals may not assist or operate the system.

All production runs shall be conducted as if they were actual production runs. BEP will not interfere with the continuous operation of the machine during the production runs. However, samples (sheets, straps, bundles, bricks or cash-paks) may be required. If the BEP notices an issue with the system or operation of the system that would void the testing results, the BEP will notify the contractor's representative to stop operation.

#### **(4) Factory Inspection Test**

The purpose of the Factory Inspection Test (FIT) is to ensure that all functions of the press will conform to the specified requirements in the contract, prior to authorization for the vendor to deliver the press to the BEP. The BEP will only furnish the items listed as inputs that the government will provide for the operation. The contractor shall supply any other materials and all resources (personnel, utilities, etc.) necessary for the preparation of the system and performance of the FIT. Sufficient advance notification, 30 days minimum, shall be provided to

the BEP to enable the arrangement of travel for BEP personnel to witness the test. The contractor shall ensure that proper security requirements are implemented. Since security items may be present during the performance of the FIT, the contractor shall abide by the security plan as agreed by joint resolution. The contractor shall meet and comply with all requirements and instructions from the Bureau's Office of Security.

The FIT will be performed in accordance with the approved test plan. The duration of the FIT is specified in C.76.19. Contractor is responsible to schedule all daily activities in such a way that all required functionalities shall be sufficiently demonstrated.

During operation, the equipment shall demonstrate compliance with production rates and capabilities as required. The impact, if any, of unconditioned space utilized for the FIT will be taken into account.

The purpose of this test is to ensure that all functions of the equipment will conform to the specified requirements in the contract, prior to delivery of the equipment to BEP. The BEP will only furnish the items listed "Government Furnished Materials" as inputs that the government will provide for the operation of the equipment. The BEP will provide sheets of either blank or simulated currency for the performance of the FIT. The contractor shall supply all other materials and consumables for the preparation and performance of the FIT. The Contractor shall also be responsible for providing the labor and utilities for the operation of the equipment during the FIT (i.e., operating personnel and utility expenses). The Government will provide for BEP personnel lodging and travel. If the equipment does not successfully pass the first FIT and must be retested, the Contractor shall assume ALL costs of all retesting including BEP personnel lodging, travel, and materials. All retesting for the FIT, will be at the contractor's expense.

The contractor shall ensure that proper security requirements are implemented. Since security items will most likely be present during the performance of the FIT, the contractor shall base costing on the following:

- System will require isolation from unauthorized entry.
- Contractor will have to furnish sufficient facilities for storage of materials.
- Contractor will have to furnish destruction means for destruction of any printed work following successful performance of the FIT.
- Contractor shall furnish overnight security personnel and/or electronic monitoring equipment/services to safeguard the equipment and/or Government Furnished Materials overnight.

No testing shall begin prior to BEP personnel certifying that the print unit set up is complete and the quality of print, registration and printing pressure is satisfactory. Contractor personnel shall follow the procedures as described within the Operational Procedures as noted in the Test Plan document for the set up and operation of the equipment during production runs.

***NOTE:** If BEP personnel are unable to travel to physically attend the FIT on the system, the BEP may decide to perform a virtual FIT. The contractor will be required to provide sufficient cameras for viewing of the system during operation and to demonstrate the system remotely. The BEP will work with the contractor on the mutually agreeable software, configuration, timing, and coordination for the FIT. Due to limitations with a*

*virtual FIT, the duration may be extended to accommodate all testing and the contractor may be required to demonstrate additional items during the pre-BAT commissioning.*

## **(5) Pre-BAT Commissioning**

During commissioning of the system within the BEP and prior to the contractor being allowed to perform the BAT, the contractor shall successfully demonstrate the following items:

- A. Compliance with IT requirements, including BEP loading and running Virus Protection Software to ensure no viruses are on the system prior to connection to BEP infrastructure
- B. Verification of Data Integrity and connection to BEP IT infrastructure
- C. Safety and Environmental Audit by OEHS
- D. Noise Measurements by OEHS
- E. Configuration and demonstration of the Inspection System to demonstrate capabilities to ensure BEP quality levels
- F. Demonstration and validation of all counters
- G. Setup and configuration of the system to produce work within acceptable quality levels

Any issues or items identified during commissioning shall be addressed prior to scheduling the BAT.

## **(6) BEP Acceptance Test**

The Bureau Acceptance Test (BAT) will occur at the BEP's facility after installation and startup of the equipment. The purpose of the BAT is for demonstration of all requirements by the contractor for acceptance by the BEP. Since the system may be processing live or actual currency, tests/demonstrations shall be performed prior to the BAT to demonstrate that the system is ready and capable of operating in a production environment. The BEP will furnish all items listed as inputs that the government will provide for the operation of the press. The BEP will provide sheets of test or live currency for the performance of the BAT.

Testing of the system shall be scheduled to occur by the contractor in accordance with the schedule at Contract Award. The Contractor shall notify the COR, in writing, at least fifteen (15) days prior to the start of the test schedule. The approved test plan will be used to conduct the BAT. Contractor is responsible to schedule all daily activities in such a way that all required functionalities shall be sufficiently demonstrated.

All acceptance testing shall be performed in the presence of authorized Bureau personnel.

The purpose of the BAT is to ensure that all functions of the equipment will conform to the specified requirements in the contract and to ensure that the equipment operates as tested at the Contractor's facility. The BEP will furnish "Government Furnished Materials", all utilities required to perform the BAT, and personnel to assist in BAT items. The contractor shall furnish all other materials, consumables, and labor for the performance of the testing. The Contractor

shall be responsible for their operating personnel and their associated travel costs (i.e., transportation, lodging, food, etc.). If the equipment does not successfully pass the first BAT and must be retested, the Contractor shall assume ALL costs of retesting including personnel lodging, travel, and materials.

During the BAT, the equipment will process actual currency, i.e., “live” work. The contractor shall ensure that the equipment is operational and capable of generating acceptable product prior to the start of the BAT. During testing, the contractor representatives shall be responsible for the operation of the equipment and for the demonstration of all requirements. The Contractor shall perform the tests in accordance with the contractor prepared and BEP approved BAT Plan. The BEP will supply personnel to assist during the running of the equipment and for performing all security and accountability functions during the BAT. The total number of personnel working on the equipment during testing shall not exceed the number specified to be required to operate the equipment in normal operation, including BEP and Contractor personnel assigned. If during the performance of testing, it is deemed that the equipment is not performing to the specified requirements, the testing may be stopped to allow for corrective actions to occur and restarted only after joint agreement by both BEP and the contractor.

If it is determined that significant problems or corrective actions are required, the contractor can request that testing be stopped. Once corrective actions have occurred, the contractor shall notify the BEP for rescheduling the test.

If the test is deemed unacceptable, the BEP reserves the right to require a full or a partial retest of the equipment and the Contractor must provide the BEP with all of the following:

- a. Causative factors for the nonconformance;
- b. A written explanation on how the Contractor proposes to correct the nonconformance;
- c. The estimated time that will be necessary to correct the nonconformance; and
- d. How the Contractor intends to demonstrate compliance.

Once a BAT is in progress, if there are extenuating circumstances or equipment-caused delays, the Bureau may exercise one of the following options:

- (a) Extend the test accordingly;
- (b) Restart the test from the beginning; or
- (c) Abort the test.

Since during testing security items will be required, all security measures, policies, and procedures of BEP shall be followed. All contractor personnel assigned to work around or on the equipment during testing shall have been approved by the BEP’s Office of Security. Approval by the BEP’s Office of Security requires that each individual completes and submits a Standard Form 85, Questionnaire for Non-Sensitive Positions, and associated supplements to the BEP for review and background check to be performed.

Since ‘live’ production materials will be required during the performance of the BAT, all work produced off the equipment, irrespective of the outcome of the BAT, shall be usable by the BEP.

The successful use of the materials produced during any testing of the equipment does not constitute acceptance of the equipment.

**(7) Acceptance**

Final acceptance of the system will occur after the following:

- A. Successful completion of the BAT
- B. Successful Training of all BEP personnel
- C. Resolution of any punch-list or open items
- D. Successful completion of Extended Run – BEP operation of the system for a six (6) week period in full production, meeting the productivity and quality requirements of the system.

Final acceptance will not occur until incorporation of all components and/or retrofitting of the system with specification changes have been completed. Performance of the equipment shall demonstrate a successful run as per the specifications set forth in this contract and must be approved in writing by both the CO and the COR for successful completion of the BAT.

**[END OF SECTION]**

## **SECTION F - DELIVERIES OR PERFORMANCE**

### **F.1 FAR CLAUSE 52.252-2 CLAUSES INCORPORATED BY REFERENCE (FEB 1998)**

This contract incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. Also, the full text of a clause may be accessed electronically at this/these address(es):

[www.acquisition.gov/](http://www.acquisition.gov/) (End of Clause)

<u>CLAUSE NUMBER</u>	<u>TITLE</u>	<u>DATE</u>
52.242-15	Stop-Work Order	AUG 1989
52.242-17	Government Delay of Work	APR 1984
52.247-34	F.O.B. Destination	NOV 1991
52.247-35	F.O.B. Destination Within Consignee's Premises	APR 1984

### **F.2 PLACE OF DELIVERY**

Deliverables as required during the performance of this contract shall be delivered F.O.B. destination within consignee's premises. The equipment and supplies identified shall be delivered to the following addresses:

- (1) Bureau of Engraving and Printing  
Western Currency Facility  
9000 Blue Mound Road  
Fort Worth, Texas 76131
- (2) Bureau of Engraving and Printing  
DC Replacement Facility  
6900 Powder Mill Road  
Beltsville, MD 20705

### **F.3 NOTIFICATION OF DELIVERY**

The Contractor shall be responsible for providing all materials and services required for the delivery and placement of the equipment and all support equipment and supplies at the designated installation site(s) within the BEP. The delivery services shall also include all freight, rigging, unpacking, and removal of packing materials from BEP premises. The BEP will not provide any assistance during deliveries.

The contractor shall develop and submit a delivery plan to the COR seven (7) days prior to scheduling any deliveries to the BEP. The following information should be provided for all deliveries to BEP facilities:

- Name of supplier/manufacturer
- Contract/Purchase Order Number
- Total number of cartons or pallets
- Total weight
- Date and Time of Delivery

Copies of the packing lists shall be included with this notification and a list of Contractor employees who will need access to the BEP to perform installation and testing of the equipment.

**(1) Deliveries to the Western Currency Facility:**

9000 BLUE MOUND ROAD, FORT WORTH, TEXAS: Vendors must contact WCF General Stores/Receiving at (817) 231-4125 or (817) 847-3855 at least twenty-four (24) hours in advance to notify of approximate delivery time and date. Deliveries are accepted during the operating hours of 7:00 am to 2:15 pm. After hours contact numbers are (817) 231-4125 or (817) 231-4167. WCF General Stores/Receiving operating hours are from 7:00 am to 2:30 pm local time, Monday through Friday, excluding holidays. To resolve any delivery issue, please contact WCF General Stores/Receiving management at (817) 231-4167 or (817)847-3855.

**(2) Deliveries to Washington, DC Annex Building:**

LOADING DOCK ON “D” STREET SW, BETWEEN 13TH & 14TH STREETS SW): Vendors must call the appointment hotline at (202) 874-2333 twenty-four (24) hours in advance to schedule approximate delivery times. The hotline is manned from 6:30 am to 2:15 pm Monday through Friday. A voicemail message maybe left after normal working hours. Deliveries are accepted between 8:00 am and 2:15 pm, Monday through Friday, excluding holidays.

Over the road vehicles having an overall height exceeding 12’6” (3.8 meters) empty, or an overall length exceeding 42’ (12.2 meters) cannot be accommodated at our receiving platform.

To resolve any delivery issue, please contact Shipping & Receiving at (202) 874-3620 care of Material Handler/Leader.

**F.4 INSTALLATION (TURN-KEY)**

The contractor shall provide all materials and services to assemble and install the equipment, set up the equipment, perform testing to ensure contract compliance and turn the equipment over to the BEP for operation (i.e. Turn-Key Installation). The materials and services shall include all those necessary for assembly, alignment, connection, start-up and preparation of the equipment for the BEP Acceptance Test (BAT).

Normal working hours at the BEP are between 6:30 AM and 3:00 PM Monday through Friday except Federal holidays. If work is required outside of normal working hours or during Federal holidays, the contractor shall provide the COR with a written request 72 hours prior to when the work will be required. The BEP is not obligated to authorize contractor performance during off-duty hours or Federal holidays.

The Contractor shall furnish supervision, packing, unpacking, and placement of equipment without additional charge to the BEP. The Contractor shall remove all packing and installation materials from the BEP's premises and dispose of them at their own expense. The Contractor shall supply all installation mounting materials, including brackets, fasteners, and wire ways required for the installation.

**F.5 DOCUMENTATION**

Delivery of all technical data and documentation shall be in accordance with Section D & F and shall be F.O.B. destination, within consignee's premises, to the locations specified in Section F.2 of this solicitation, to the attention of the COR identified in the contract.

**F.6 DELIVERABLES AND DELIVERY SCHEDULE**

DESCRIPTION	DESIRED DELIVERY DATES (Calendar months/years After Award or Exercising of Option)
<b>Base System</b>	
Factory Inspection Test	7 Months
Delivery	9 Months
BAT	11 Months
<b>Optional Systems</b>	
Factory Inspection Test	9 Months
Delivery	12 Months
BAT	15 Months

**F.7 DELIVERY LOCATION AND OPTION AWARD DATES**

Optional systems shall be available to be exercised based on the following

DESCRIPTION	Delivery Location	DESIRED DATES (Calendar Months After Award)
Base System	Western Currency Facility	
Optional System 2	Western Currency Facility	Up to 18 Months after Contract Award
Optional System 3	Western Currency Facility	Up to 24 Months after Contract Award
Optional System 4	DC Replacement Facility	Up to 30 Months after Contract Award
Optional System 5	DC Replacement Facility	Up to 36 Months after Contract Award

Optional System 6	DC Replacement Facility	Up to 42 Months after Contract Award
Optional System 7	Western Currency Facility	Up to 48 Months after Contract Award
Optional System 8	DC Replacement Facility	Up to 54 Months after Contract Award
Optional System 9	Western Currency Facility	Up to 60 Months after Contract Award
Optional System 10	DC Replacement Facility	Up to 66 Months after Contract Award
Optional System 11	Western Currency Facility	Up to 72 Months after Contract Award
Optional System 12	DC Replacement Facility	Up to 78 Months after Contract Award

The BEP may exercise Optional System 2 after successful completion of the FIT on the Base System. Additional options may be exercised every 6 months thereafter dependent upon the need of the BEP for additional systems.

**F.8 PERIOD OF PERFORMANCE**

The period of performance shall be eight (8) years and three (3) months from the time after contract award.

**F.9 BEP YEAR END SHUTDOWN PERIOD AND FEDERAL HOLIDAYS**

BEP observes the federal holidays that are listed on the Office of Personnel website at: <https://www.opm.gov/policy-data-oversight/snow-dismissal-procedures/federal-holidays/#url=2017>. BEP’s Y.E.S. Period typically occurs *December 25th through January 1st* of each calendar year.

**[END OF SECTION]**

## SECTION G – CONTRACT ADMINISTRATION DATA

### G.1 CONTRACT ADMINISTRATION OFFICE

(a) This contract shall be administered by:

Bureau of Engraving and Printing  
Office of the Chief Procurement Officer  
9000 Blue Mound Road  
Fort Worth, TX 76131

(b) Written communication to the Contracting Officer shall make reference to the contract number.

### G.2 DTAR 1052.201-70, Contracting Officer's Representative (COR) Appointment and Authority (APR 2015)

- (a) The COR **SHALL BE APPOINTED AT CONTRACT AWARD.**
- (b) Performance of work under this contract is subject to the technical direction of the COR identified above, or a representative designated in writing. The term “technical direction” includes, without limitation, direction to the Contractor that directs or redirects the labor effort, shifts the work between work areas or locations, and/or fills in details and otherwise serves to ensure that tasks outlined in the work statement are accomplished satisfactorily.
- (c) Technical direction must be within the scope of the contract specification(s)/work statement. The COR does not have authority to issue technical direction that:
- (1) Constitutes a change of assignment or additional work outside the contract specification(s)/work statement;
  - (2) Constitutes a change as defined in the clause entitled “Changes”;
  - (3) In any manner causes an increase or decrease in the contract price, or the time required for contract performance;
  - (4) Changes any of the terms, conditions, or specification(s)/work statement of the contract;
  - (5) Interferes with the Contractor's right to perform under the terms and conditions of the contract; or
  - (6) Directs, supervises or otherwise controls the actions of the Contractor's employees.
- (d) Technical direction may be oral or in writing. The COR must confirm oral direction in writing within five workdays, with a copy to the Contracting Officer.
- (e) The Contractor shall proceed promptly with performance resulting from the technical direction issued by the COR. If, in the opinion of the Contractor, any direction of the COR or the designated representative falls within the limitations of (c) above, the Contractor shall

immediately notify the Contracting Officer no later than the beginning of the next Government workday.

- (f) Failure of the Contractor and the Contracting Officer to agree that technical direction is within the scope of the contract shall be subject to the terms of the clause entitled “Disputes.”  
(End of clause)

**G.3 DTAR 1052-223-7003, Electronic Submission of Payment Requests (APR 2015)**

(a) Definitions. As used in this clause—

- (1) “Payment request” means a bill, voucher, invoice, or request for contract financing payment with associated supporting documentation. The payment request must comply with the requirements identified in FAR 32.905(b), “Content of Invoices” and the applicable Payment clause included in this contract.
- (b) Except as provided in paragraph (c) of this clause, the Contractor shall submit payment requests electronically using the Invoice Processing Platform (IPP). Information regarding IPP, including IPP Customer Support contact information, is available at [www.ipp.gov](http://www.ipp.gov) or any successor site.
- (c) The Contractor may submit payment requests using other than IPP only when the Contracting Officer authorizes alternate procedures in writing in accordance with Treasury procedures.
- (a) If alternate payment procedures are authorized, the Contractor shall include a copy of the Contracting Officer's written authorization with each payment request. (End of clause)

**[END OF SECTION]**

## **SECTION H – SPECIAL CONTRACT REQUIREMENTS**

### **H.1 TYPE OF CONTRACT**

This is a Firm Fixed-Price type contract.

### **H.2 INTERPRETATION OF CONTRACT REQUIREMENTS**

No interpretation of any provision of this contract, including applicable specification(s)/work statement, shall be binding on the Government unless furnished or agreed to in writing by the Contracting Officer (CO).

### **H.3 NOTICE TO THE GOVERNMENT OF DELAYS**

In the event the Contractor encounters difficulty in meeting performance requirements, or when it anticipates difficulty in complying with the contract delivery schedule or date, or whenever the Contractor has knowledge that any actual or potential situation is delaying or threatens to delay the timely performance of this contract, the Contractor shall immediately notify the CO and the COR, in writing, giving pertinent details, provided, however, that this data shall be informational only in character and that this provision shall not be construed as a waiver by BEP of any delivery schedule or date or of any rights or remedies provided by law or under this contract.

### **H.4 NON-DISCLOSURE OF NON-PUBLIC INFORMATION AND DATA**

During the period of performance of the contract, the Contractor may be granted access to Non-Public information and data, which is the sole property of BEP, as well as proprietary information and data, which is the sole property of entities other than the contracting parties. In particular, the Contractor agrees that all information provided by representatives of BEP, either before or after contract award, concerning the design, manufacture, processing or transporting of United States currency is nonpublic. Such information shall be shared only with employees or agents of the company having a need to know, and shall not be disclosed to other persons without the written consent of the CO.

Further, the Contractor agrees to maintain the confidentiality of all such information and data and shall not disclose any information and data, interpretations of, and/or derivatives of, such information and data to any unauthorized party without the express written approval of the CO, or of the party in which title is wholly vested. The Contractor hereby agrees to include this clause in all subcontracts or consulting agreements relating to work under this contract. The Contractor shall be required to sign a Non-Disclosure Agreement (Attachment A).

### **H.5 INDEMNIFICATION**

- (a) Responsibility for Government Property: The Contractor assumes full responsibility for and shall indemnify the Government against any and all losses or damage of whatsoever kind and nature to any and all Government property, including any equipment, supplies, accessories, or parts furnished, while in his custody and care for

storage, repairs, or service to be performed under the terms of this contract, resulting in whole or in part from the negligent acts or omissions of the Contractor, any subcontractor, or any employee, agent or representative of the Contractor or subcontractor.

If due to the fault, negligent acts (whether of commission or omission) and/or dishonesty of the Contractor or its employees, any Government-owned or controlled property is lost or damaged as a result of the Contractor's performance of this contract, the Contractor shall be responsible to the Government for such loss or damage, and the Government, at its option, may in lieu of payment thereof, require the Contractor to replace at his own expense, all property lost or damaged.

- (b) **Hold Harmless and Indemnification Agreement:** The Contractor shall save and hold harmless and indemnify the Government against any and all liability claims, and cost of whatsoever kind and nature for injury to or death of any person or persons and for loss or damage to any Contractor property or property owned by a third party occurring in connection with or in any way incident to or arising out of the occupancy, use, service, operation, or performance of work under the terms of this contract, resulting in whole or in part from the acts or omissions of the Contractor, any subcontractor, or any employee, agent, or representative of the Contractor or subcontractor.
- (c) **Government's Right of Recovery:** Nothing in the above paragraphs shall be considered to preclude the Government from receiving the benefits of any insurance the Contractor may carry which provides for the indemnification of any loss or destruction of, or damages to property in the custody and care of the Contractor where such loss, destruction or damage is to Government property. The Contractor shall do nothing to prejudice the Government's right to recover against third parties for any loss, destruction of, or damage to Government property, and upon the request of the Contracting Officer shall, at the Government's expense, furnish to the Government all reasonable assistance and cooperation (including assistance in the prosecution of suit and the execution of instruments of assignment in favor of the Government) in obtaining recovery.
- (d) **Government Liability:** The Government shall not be liable for any injury to the Contractor's personnel or damage to the Contractor's property unless such injury or damage is due to negligence on the part of the Government and is recoverable under the Federal Torts Claims Act, or pursuant to other Federal statutory authority.

## **H.6 ORGANIZATIONAL CONFLICTS OF INTEREST**

- (a) The Contractor warrants that, to the best of the Contractor's knowledge and belief, there are no relevant facts or circumstances which could give rise to an organizational conflict of interest (OCI), as defined in FAR 9.5, Organizational and Consultants Conflicts of Interest, or that the Contractor has disclosed all such relevant information.

- (b) The Contractor agrees that if an actual or potential OCI is discovered after award, the Contractor shall make a full disclosure in writing to the Contracting Officer. This disclosure must include a description of actions, which the Contractor has taken or proposes to take, after consultation with the Contracting Officer, to avoid, mitigate, or neutralize the actual or potential conflict.
- (c) The Contracting Officer may terminate this contract for convenience, in whole or in part, if it deems such termination necessary to avoid an OCI. If the Contractor was aware of a potential OCI prior to award or discovered an actual or potential conflict after award and did not disclose or misrepresented relevant information to the Contracting Office, the Government may terminate the contract for default, debar the Contractor from Government contracting, or pursue such other remedies as may be permitted by law or this contract.
- (e) The Contractor must include this clause in all subcontracts and in lower tier subcontracts unless a waiver is requested from, and granted by, the Contracting Officer.
- (f) In the event that a requirement changes in such a way as to create a potential conflict of interest for the Contractor, the Contractor must:
- 1) Notify the Contracting Officer of a potential conflict, and;
  - 2) Recommend to the Government an alternate approach which would avoid the potential conflict, or
  - 3) Present for approval a conflict-of-interest mitigation plan that shall:
    - Describe in detail the changed requirement that creates the potential conflict of interest; and
    - Outline in detail the actions to be taken by the Contractor or the Government in the performance of the task to mitigate the conflict, division of subcontractor effort, and limited access to information, or other acceptable means.
  - 4) The Contractor must not commence work on a changed requirement related to a potential conflict of interest until specifically notified by the Contracting Officer to proceed.
  - 5) If the Contracting Officer determines that it is in the best interest of the Government to proceed with work, notwithstanding a conflict of interest, a request for waiver must be submitted in accordance with FAR 9.503.

#### **H.7 DISCLOSURE OF CONFLICTS OF INTEREST**

It is the BEP policy to award contracts to only those Quoters whose objectivity is not impaired because of any related past, present, or planned interest, financial or otherwise, in organizations regulated by BEP or in organizations whose interests may be substantially affected by Departmental activities. Based on this policy, if at any time during the performance of this

contract the Contractor knows of any Conflict-of-Interest situation affecting the organization, any of its officers or Key Persons working under this contract, has reason to believe that a conflict of interest situation might arise, or is made aware of an actual or potential conflict of interest situation:

- (a) The Contractor shall immediately provide to the Contracting Officer a written statement which describes in a concise manner all past, present or planned organizational, financial, contractual or other interest(s) with that organization regulated by BEP, or with that organization or individual whose interests may be substantially affected by Departmental activities, and which is related to the work under this contract. The interest(s) described shall include those of the Contractor, its affiliates, consultants, Subcontractors and key personnel of any of the above. Past interest shall be limited to within one year of the date of the quoter's technical offer. Key personnel shall include any person owning more than 20% interest in the organization, and the organization's corporate officers, its senior managers and any employee who is responsible for making a decision or taking an action on this contract where the decision or action can have an economic or other impact on the interests of a regulated or affected organization.
- (b) The Contractor shall describe in detail when it became aware of the actual or potential conflict of interest, what action the organization has taken or proposes to take to mitigate and / or rectify the situation, and why it believes, in light of the interest(s) identified in (a) above, that performance of the contract can still be accomplished in an impartial and objective manner.
- (c) In the absence of any relevant interest identified in (a) above, the Contractor shall certify in its statement that to its best knowledge and belief no affiliation exists relevant to possible conflicts of interest. The Contractor must obtain the same information from any potential Subcontractors prior to award of a subcontract.
- (d) The Contracting Officer shall review the statement submitted and may require additional relevant information from the Contractor. All such information, and any other relevant information known to BEP, shall be used to determine whether a conflict of interest exists, or a situation exists that may create a conflict of interest. If any such conflict of interest is found to exist, the Contracting Officer may (1) terminate the contract, or (2) determine that it is otherwise in the best interest of the United States to continue the contract with the Contractor and (3) modify the contract to include appropriate provisions to mitigate or avoid such conflicts in the contract.
- (e) If the Contractor refuses to provide the written statement called for in paragraph (a), or any additional information that the Contracting Officer may require, the Contracting Officer may terminate the Contract for convenience if he or she deems that termination is in the best interest of the Government.

## **H.8 POST AWARD MEETING**

At its discretion, BEP may schedule and conduct a post award meeting with the Contractor after contract award. The objectives of this meeting would be to: introduce key participants and explain their roles, review deliverables, review the statement of work and tasks to ensure a common understanding of the requirements and objectives, as well as other matters of importance and relevance. The Contracting Officer will provide advance notice, agenda, and meeting days and time, which will be between 8AM-4PM Central. If BEP determines that a post award meeting is necessary, the day(s) and time(s) of any such meeting will be determined after contract award.

## **H.9 EVALUATION OF CONTRACTOR PERFORMANCE**

- (a) Interim and final evaluations of Contractor performance shall be prepared for this contract in accordance with FAR 42.1503. The final performance evaluations shall be prepared at the time of completion of work.
- (b) The Contractor can elect to review the evaluation and submit additional information or a rebuttal statement. The Contractor shall be permitted 60 calendar days to respond. Contractor response is voluntary. If the Contractor does not respond within 60 days, the Government shall presume that the Contractor has no comment. Any disagreement between the parties regarding an evaluation shall be referred to an individual at a level above the Contracting Officer, whose decision is final.
- (c) Copies of the evaluations, Contractor responses, and review comments, if any, shall be retained as part of the contract file, and may be used to support future award decisions.

Bureau of Engraving and Printing utilizes the Contractor Performance Assessment Reporting System (CPARS) and the Federal Awarded Performance and Integrity Information System (FAPIIS) to record and maintain past performance information. The past performance systems host a suite of web-enabled applications that are used to document Contractor performance information that is required by Federal Regulations.

The CPARS module assesses performance on contracts for Systems, Services, Information Technology, and Operations Support, Architect-Engineer contracts, and performance on Construction contracts. CPARS reference material can be accessed at <https://cpars.cpars.gov/cpars/app/home.do>

Federal Awarded Performance and Integrity Information System (FAPIIS)  
<http://www.fapiis.gov/fapiis/govt/datareports.jsp>

The registration process requires the Contractor to identify an individual that shall serve as a primary contact. This individual shall be authorized access to the evaluation for review and comment. In addition, the Contractor is encouraged to identify a secondary contact in the event the primary contact is unavailable to process the evaluation within the required 60-day time period. After the BEP Contract Specialist registers the contract in one of the systems listed above, the Contractor shall receive a system generated e-mail notifying him/her that the contract

is registered. A system generated e-mail shall also provide the Contractor with a User ID if the person does not already have a system User ID.

Once a performance evaluation has been prepared and is ready for comment, the Contractor representative shall receive a system generated e-mail notification that the performance evaluation is electronically available for review and comment. The Contractor representative shall receive an automated e-mail whenever an assessment is completed and can subsequently retrieve the completed assessment from system. Contractors may access evaluations at one of the websites listed above for review and comment in CPARS.

#### **H.10 SAFETY**

State “Right to Know” laws and 29 CFR 1910.1200, Employees Hazard Communication Program, require manufacturers, importers and suppliers to label containers of toxic substances or hazardous chemicals with the chemical name and appropriate hazard warning and to provide Material Safety Data Sheets (MSDS) for these substances. Hazard Material Information not meeting the requirement shall not be accepted (off-loaded) by the BEP.

All machinery delivered under this contract shall be in accordance with the BEP’s Safety, Health and Environmental requirements. **Refer to Attachment G.**

All on-site work performed by the Contractor and any subcontractor personnel, within the Western Currency Facility (WCF) shall be performed in accordance with the BEP’s Safety requirements for on-site work **(Attachment G)**.

#### **H.11 GOVERNMENT FURNISHED MATERIALS (GFM)**

All Government furnished materials, especially security items, shall be safeguarded, accounted for, and returned to the BEP in accordance with the requirements set forth. All Government furnished materials/security items shall be returned to the Government within ten (10) calendar days after written request by the COR.

All requests for GFM shall be submitted to the Bureau no later than thirty (30) calendar days prior to the materials being required for use under this contract. All requests for GFM shall be submitted to the Contracting Officer. No security items will be furnished until completion of a security audit and implementation of appropriate security provisions to ensure their safeguarding and accountability.

The Contractor shall exercise diligence in the care and safekeeping of the property mentioned herein. In the event of the damage to BEP property or equipment caused by the Contractor, the amount of compensation due to the BEP by the Contractor shall be the actual cost of repair, provided such amount does not exceed the economical repair value.

In the case of loss or damage caused by the Contractor beyond economical repair to equipment, the amount of the Contractor’s liability shall be depreciated replacement value of the item to be determined by the Contracting Officer. Any failure of the Contractor to agree with such determination shall be treated as a dispute pursuant to the clause of this contract entitle, “Disputes.”

The Contractor, any subcontractor, or their employees or agents shall not use Government property in any manner for any personal advantage, business gain, or other personal endeavor.

#### **H.12 ACCIDENT PREVENTION**

The Contractor shall comply with safety practices as may be deemed necessary by the Bureau Safety Manager to ensure the safety and health of Contractor and Bureau employees.

When the Contractor's performance requires the use of power-activated devices for welding, cutting, or burning using open-flame or electric-arc equipment, the Contractor shall provide no less than three (3) days advanced written notice to the COR requesting approval for the use of the power-activated devices. The COR shall obtain clearance of such use through the Bureau Safety Manager and provide written confirmation of approval or disposal to the Contractor.

The Contractor shall take any other precautions necessary to protect all persons against injury at the work site and shall be held responsible for all damages to persons and property that occur as a result of his fault or negligence in performing the contract work.

Any Contractor personnel that are deemed to be working in an unsafe manner or endangering their own or others health may be removed from the Bureau under order of the Contracting Officer. Any Contractor personnel removed for failure to maintain a safe and healthy work environment may not be allowed to return to the Bureau's property.

#### **H.13 BUREAU WORKING RESTRICTIONS**

When the project specifications permit the undertaking of contract work during Bureau working hours, such work must be performed without:

- Interfering with Government business;
- Unduly restricting traffic;
- Causing unsafe conditions for employees and visitors; and
- Adversely affecting the operation of Bureau equipment.

When, the Contracting Officer has determined that the Contractor's work is in violation of any of the four restrictions above, the Contractor shall be required to perform the work at such time and under such conditions as are in the best interest of the Bureau. In this connection, the directions of the Contracting Officer shall be binding and shall be executed by the Contractor at no additional cost to the Government.

#### **H.14 PARKING**

Limited Parking will be available for Contractor personnel at the Fort Worth, TX facility pending availability. All vehicles entering the facility are subject to inspection. There is no available parking at the DCF.

#### **H.15 UTILITIES PROVIDED**

For the purpose of this contract, utilities such as water, electricity, etc., shall be furnished by the

Government at no cost to the Contractor for the preparation and performance of the BAT and installation of the equipment at the Bureau. All extensions, wiring, hoses, etc., required for connection to such utilities shall be furnished by the Contractor. The Contractor shall be required to participate in all BEP utility conservation programs. Long distance and FTS telephone services shall not be provided. If the Contractor anticipates any interruption to a utility service, the Contractor shall provide written notification to the COR ten (10) calendar days prior to the utility interruption.

#### **H.16 BUREAU'S REGULATIONS**

All persons working on Bureau premises under the terms of the Contract shall, while on the premises, be under the administrative direction of the Contracting Officer and shall be subject to all general rules and regulations governing the Bureau and, in particular, all applicable security regulations. If the contract requires contract employees to work on Bureau premises for a period of time exceeding five calendar days, such employees shall be subject to an appropriate preliminary personnel security check to be conducted by the Bureau's Office of Security. Such employees shall be approved by the Contracting Officer prior to commencing work on the premises. Employees who do not meet established security criteria shall not be permitted to work on the premises.

#### **H.17 PERMITS AND LICENSES – GENERAL**

In the performance of work hereunder, the Contractor shall obtain and maintain in effect all necessary permits and licenses required by Federal, State, or local government, or subdivision thereof, or of any other duly constituted public authority. The Contractor shall comply with all laws and regulations applicable to work to be performed hereunder.

#### **H.18 CONTRACTOR'S REPRESENTATIVE (CR)**

(a) Upon contract award, the Contractor shall furnish to the Contracting Officer the name of the person he has designated and assigned exclusively to this contract as his agent or representative. The Contractor's Representative shall exercise overall management responsibility for the contract effort, receive technical direction, and handle problems arising under the contract, such as dismissals, disciplinary matters, etc. The CR is further responsible for coordinating matters of mutual concern with BEP representatives. In the event questions of responsibility arise, they shall be resolved by the Contracting Officer or his authorized representative.

(b) The CR may not be diverted to other projects for fourteen (14) consecutive days or more without giving prior notification to the Contracting Officer or his representative. Such notification shall include a justification for the diversion, together with information on the proposed substitute in sufficient detail to permit analysis of any potential negative effects on contract performance. No substitution shall be made without the written consent of the Contracting Officer; provided however, that the Contracting Officer may grant such consent retroactively. Any such substitution of a permanent nature will be made a part of this contract through issuance of a modification.

(c) When the CR is temporarily unavailable to manage the contract effort for a period longer than seventy-two (72) hours including absences due to vacation or illness, the Contractor shall provide to the COR written designation of an alternative representative, itemizing any limitations

in the alternate's authority. The procedures of paragraph (b) above do not apply to such temporary designations unless they are expected to exceed the time period indicated in that paragraph.

#### **H.19 COMPLIANCE WITH OCCUPATIONAL SAFETY AND HEALTH ACT OF 1980 GOVERNMENT OWNED FACILITIES/EQUIPMENT**

Performance of work hereunder shall comply with the provisions of the Occupational Health and Safety Act of 1980, as amended (OSHA). If at any time during the performance of this contract, the Government - furnished facilities and/or equipment do not conform to OSHA standards, the Contractor must so notify the Contracting Officer, in writing, including a recommendation of the corrective action needed.

#### **H.20 SECURITY REQUIREMENTS**

BEP's facilities are considered to be secure government facilities; therefore, visitors to BEP may be given a visitor's security badge by security personnel and escorted by Government authorized personnel. Visitor security badges shall be worn above the waist, clearly visible, with picture or front side front forward at all times. Visitor security badges are to be returned upon leaving the site.

#### **H.21 PERSONNEL SECURITY REQUIREMENTS**

Personnel Security Clearance. Contractor and subcontractor employees involved in the repair, maintenance, installation, modification, inspection, or any other capacity requiring access to the BEP, access to the BEP computer systems or information contained therein, or other information pertinent to BEP personnel or security operations shall be subjected to suitability investigations, conducted by the BEP, before assignment to perform work under this contract.

All Contractor and subcontractor personnel requiring access to the BEP or working on the BEP contract shall be required to complete and submit, to the COR, all security forms furnished by the Personnel Security Division, commensurate with the sensitivity of their positions.

Upon receipt of the Statement of Work, the Office of Security shall provide an assessment of access level and the type of background investigation that shall be granted as well as the appropriate Position Sensitivity Levels which shall be assigned to all positions occupied by Contractor and Subcontractor employees. The position sensitivity of all positions occupied by Contractor and Subcontractor employees, which involve access to the Personal Computer function, including those involved in the inspection of the work are designated as Low Risk. Should other positions be identified, requiring a higher sensitivity, the position sensitivity shall be designated as High Risk. Access to the BEP and placement in these positions require that the BEP conduct a Full Field Background investigation, and that it be favorably completed. Required security packets are required to be submitted to the COR, within ten (10) working days, for use by Personnel Security Division, Office of Security. The Contractor shall submit packages of all personnel expected to be present at the Bureau for extended periods of time in excess of ten (10) working days no later than ninety (90) days prior to the delivery of the equipment to the Bureaus.

The BEP reserves the right to deny access to its facilities and/or security systems, following adjudicative guidelines set forth in Executive Order 10450 and applicable supplemental directives, to any individual about which an adverse suitability determination is made. Failure to submit the required security investigation packet or to truthfully answer all questions contained in security investigation packets shall constitute grounds for denial of access clearance.

The selected Contractor shall not provide access to employees, or subcontract employees, until written access clearance is provided by the Personnel Security Branch, office of Security, BEP. Contractors and subcontractors are responsible for reporting all changes to the COR within five (5) days of the occurrence of the change concerning any of their employees, which may affect the suitability of their employees for access to the BEP or placement in any of these positions including additions, or deletions.

The COR shall maintain a current listing of access requirements and provide that information to the Personnel Security Division, BEP. The Personnel Security Division shall inform the COR of all access denials. The reason for the denial shall not be provided to the company contact in accordance with the Privacy Act of 1974. Denial of access to the BEP does not preclude employment of the individual concerned, by the Contractor, in any capacity not associated with the contract. Reinvestigation may be required throughout the life of the contract to adhere to Government security requirements.

## **H.22 SECURITY/ACCOUNTABILITY REQUIREMENTS:**

The following requirements provide for essential physical security, control, and employee suitability measures to be considered for implementation by contractors. These measures apply to all "prime" and "sub" contractors who, as a result of a contract with the Bureau of Engraving and Printing (BEP), will receive, utilize, process or produce United States securities or instruments of reproduction for the United States Government. United States securities/instruments or reproduction, hereafter referred to as US securities, are defined as designated items or materials included in or used in the manufacture of US paper currency. U.S. securities are considered to be, and remain, the property of the U.S. government. The unauthorized possession and reproduction of any U.S. obligation, security, distinctive components, paper, and/or instruments of reproduction is strictly prohibited by Title 18, U.S.C.

Contractor responsibility regarding protection requirements for U.S. securities encompasses a broad scope of controls and protective measures. These include, but are not limited to comprehensive accountability and control, physical protection, loss prevention, and employee suitability (personnel clearance) programs. Accordingly, it will be the responsibility of the contractor to establish and maintain effective measures that will ensure the integrity of U.S. securities and/or instruments of reproduction throughout all phases of the contract.

A written plan detailing the measures that will be employed for the protection of U.S. securities shall be submitted and approved by the BEP's Office of Security prior to award of a contract and prior to the receipt of any U.S. securities. All security plans and revisions will be effective only after written approval has been obtained from the Chief, Office of Security, BEP. This approval is contingent upon verification of the existence of the protective security measures reflected in the security plan.

The BEP Office of Security reserves the right to conduct initial and unannounced periodic site

inspections and surveys to determine the vulnerability of U.S. securities based upon the protective measures proposed by the security plan. No changes in the control, handling, location, and/or storage of U.S. securities shall occur until a revised security plan is approved in writing by the Chief, Office of Security, BEP.

In proposals requiring bid samples of U.S. securities or instruments of reproduction, solicitations requiring the use of U.S. securities or instruments of reproduction only for equipment factory inspection tests, or for specific short-term contracts, the security plan may provide means for temporary protection of the project to include labor intensive measures using appropriately cleared personnel. These temporary measures shall be addressed in the plan. However, prior to contract award, the contractor shall comply with the protection requirements as prescribed herein.

The BEP considers all areas where U.S. securities are processed, manufactured, or stored, including critical components/features and/or controlled ingredients necessary to produce these items as critical or vulnerable areas. At a minimum, the following categories shall be considered in the development of a physical security program. Compensatory security measures may be proposed for the review/approval of the BEP Office of Security.

Building Exterior is defined as the exterior area of a building where U.S. securities are present and includes exterior doors, walls, and windows. Lighting must be sufficient to allow unrestricted viewing of the building exterior and be free of obstructions that could impair observation of the area by the naked eye.

Building exterior doors allowing access to areas where U.S. securities are present shall be constructed in accordance with Hollow Metal Door Manufacturers (HMM) Specification 863. Doors shall consist of a 14-gauge steel, flush mounted, self-closing and latching, hollow metal door set into a 12-gauge steel frame and shall be hung using nonremovable pins. All hardware shall be appropriate for the door installed. Roof hatches or other related openings shall be of similar construction. Doors and roof hatches should be protected by high-security type locks.

Exterior cargo doors affording access to areas where U.S. securities are present shall be constructed of at least 18-gauge steel slats with continuous end locks. The bottom bar of the door shall consist of two steel angles, at least one-quarter inch thick. Door guides shall be at least one-quarter inch thick. Cargo doors shall be configured with a high-security locking device at each lower corner and installed over concrete floors/surfaces.

Authorized employees shall access buildings where U.S. securities are present only through control stations established at entrances and departure points. These control stations shall be controlled by an automated access control system (i.e., card access system).

All visitors/contractors should be identified prior to admittance at the perimeter of the facility. Visitors will be processed at a single designated center. Emergency egress doors shall be constructed to the same standards as prescribed for exterior doors.

Electronic intrusion detection systems should include balanced magnetic switches for all exterior doors permitting access to areas where U.S. securities are present. Cargo doors should be protected by a magnetic switch as well as dual-tech motion detectors on each side of the door.

Emergency egress doors, roof doors and /or hatches shall be equipped with balanced magnetic switches and audible, local alarms.

In areas where U.S. securities are present all windows shall be alarmed to detect intrusions. Windows shall be protected by security bars, security screening, or window glazing to preclude window breakage in all areas where U.S. securities are present. In addition, windows that permit public view of U.S. securities will be opaque. Openings, i.e., heating vents, ducts, etc., will be protected by security bars and/or security screening so as to preclude the unauthorized removal of U.S. securities.

### **H.23 CONTRACTOR CLEARANCE THROUGH U.S. CUSTOMS AND BORDER PROTECTION**

In the event the Contractor is to provide equipment of foreign manufacture, which must be imported into the United States, it shall be the responsibility of the Contractor to make entry through United States Customs and Border Protection and pay all duties and charges appurtenant thereto. Imports guidelines, questions and answers can be found at <http://www.cbp.gov/trade>.

### **H.24 PROTECTING SENSITIVE INFORMATION**

#### **(a) Applicability**

This clause applies to the Contractor, its subcontractors, and contractor personnel (hereafter referred to collectively as “Contractor”) and addresses specific BEP requirements in addition to those included in the Federal Acquisition Regulation (FAR), Privacy Act of 1974 (5 U.S.C. 552a - the Act), the Health Insurance Portability and Accountability Act of 1996 (HIPAA, Pub. L. 104-191, 110 Stat. 1936), the Sarbanes-Oxley Act of 2002 (SOX, Pub. L. 107-204, 116 Stat 745), and other laws, mandates, or executive orders pertaining to the development and operations of information systems and the protection of sensitive information and data. The following should not be construed to alter or diminish civil and/or criminal liabilities provided under various laws or mandates.

#### **(b) Authorization to Use, Store, or Share Sensitive Information**

- (1) Written approval by the Chief Information Officer (CIO), or delegate, is required prior to the use or storage of BEP Sensitive Information or sharing of BEP Sensitive Information by the Contractor with any subcontractor, person, or entity other than BEP.
- (2) Contractor must not remove Sensitive Information from approved location(s), electronic device(s), or other container(s), without prior approval of the CIO, or designate.

#### **(c) Information Types**

The term Information is synonymous with Data, regardless of format or medium. Personally Identifiable Information (PII) is a subset of Sensitive Information. Sensitive PII is a subset of PII, and therefore a subset of Sensitive Information. All requirements for Sensitive Information apply to PII and Sensitive PII. All requirements for PII apply to Sensitive PII.

- (1) Sensitive Information, Sensitive Information is any information, which if lost, compromised, or disclosed, could result in substantial harm, embarrassment, inconvenience, or unfairness to an individual, the Government, or the Government’s

interests. Sensitive Information is subject to stricter handling requirements because of the increased risk if the data are compromised. Some categories of Sensitive Information include Intellectual Property, Proprietary Manufacturing Information, Financial, Medical or Health, Legal, Strategic and Business, Human Resources, Personally Identifiable Information (PII), and Sensitive PII. These categories of information require appropriate protection as stand-alone information and may require additional protection in aggregate.

(2) Personally Identifiable Information (PII) PII, as defined in OMB Memorandum M-07-16, refers to information that can be used to distinguish or trace an individual's identity, either alone or when combined with other personal or identifying information that is linked or linkable to a specific individual. The definition of PII is not anchored to any single category of information or technology. Rather, it requires a case-by-case assessment of the specific risk that an individual can be identified. In performing this assessment, it is important to recognize that non-PII can become PII whenever additional information that is publicly available — in any medium and from any source — is or can be combined to identify an individual. As an example, PII includes a name and an address because it uniquely identifies an individual, but alone may not constitute Sensitive PII.

(3) Sensitive PII refers to information that can be used to target, harm, or coerce an individual or entity, assume or alter an individual's or entity's identity, or alter the outcome of an individual's or entity's activities. Sensitive PII requires stricter handling because of the increased risk to an individual or associates if the information is compromised. Some categories of Sensitive PII include stand-alone information, such as Social Security numbers (SSN) or biometric identifiers. Other information such as a financial account, date of birth, maiden names, citizenship status, or medical information, in conjunction with the identity of an individual (directly or indirectly inferred), are also considered Sensitive PII. In addition, the context of the information may determine whether it is sensitive, such as a list of employees with poor performance ratings or a list of employees who have filed a grievance or complaint.

#### (d) Information Security Incidents

An Information Security Incident is an incident that includes the known, potential, or suspected exposure, loss of control, compromise, unauthorized disclosure, unauthorized acquisition, or unauthorized access of any Contractor or Government systems or information, including, but not limited to, Sensitive Information.

##### (1) Information Security Incident Reporting Requirements

All Information Security Incidents must be reported in accordance with the requirements below; even if it is believed the Incident may be limited, small, or insignificant. BEP will determine when an Incident requires additional focus and attention.

a. Contractor employees must report all Information Security Incidents to the BEP Service Desk

(202) 874-3010 immediately, but not later than 30 minutes, after becoming aware of the Incident, regardless of day or time.

b. When notifying the BEP Service Desk, copy the Contracting Officer Representative (COR) if possible, or if reporting by phone or COR's email is not immediately available; contact the COR immediately after reporting the incident to the Service Desk.

- c. If you have questions regarding these procedures, contact the COR.
  - d. Do NOT include any Sensitive Information in the subject or body of any e-mail. To transmit Sensitive Information, use FIPS 140-2 compliant encryption methods to protect Sensitive Information in attachments to email. Passwords must not be communicated same mechanism used to send the attachment (e.g., do not send the password using email if you sent the attachment by email).
  - e. Contractor employees must also provide any supplementary information or reports related to a previously reported incident directly to the BEP Service Desk; with the following text in the subject line of the email: "Supplementary Information/Report related to previously reported incident ## [insert number]."
- (2) Information Security Incident Response Requirements
- a. All determinations related to Information Security Incidents, including response activities, notifications to affected individuals and/or Federal agencies, and related services (e.g., credit monitoring) will be made by authorized BEP officials at BEP's discretion.
  - b. The Contractor and contractor employees must provide full access and cooperation for all activities determined by BEP to be required to ensure an effective Incident Response, including providing all requested images, log files, and event information to facilitate rapid resolution of Information Security Incidents.
  - c. Incident Response activities determined to be required by BEP may include but are not limited to, inspections; investigations; forensic reviews; data analyses and processing; and final determinations of responsibility for the Incident and/or liability for any additional Response activities.
  - d. BEP, at its sole discretion, may obtain the assistance of Federal agencies and/or third-party firms to aid in Incident Response activities.
  - e. The Contractor must be responsible for all costs and related resource allocations required for all subsequent Incident Response activities determined to be required by BEP, whether incurred by BEP, agents under contract or on assignment to BEP, or by third party firms.

(e) Contractor Policy Document for Protection of Sensitive Information

The Contractor is responsible for the proper handling and protection of Sensitive Information to prevent unauthorized disclosure. The Contractor must produce policy documentation requiring approval by the CIO, or designate, regarding the protection and handling of Sensitive Information. The policy must address the following, at a minimum:

- (1) Proper marking, control, storage, and handling of Sensitive Information residing electronic media, including computers and removable media, and on paper documents.
- (2) Proper control and storage of mobile technology, portable data storage devices, and communication devices.
- (3) Proper use of FIPS 140-2 compliant encryption methods to protect Sensitive Information while at rest and in transit throughout BEP, contractor, and/or subcontractor networks, and on host and client platforms.
- (4) Proper use of FIPS 140-2 compliant encryption methods to protect Sensitive Information in email attachments, including policy that passwords must not be communicated in the same email as the attachment.
- (5) Information Security Incidents.
- (6) Contractor Access to BEP IT Systems.

- (7) IT Security and Privacy Awareness Training.
- (8) Specialized IT Security Awareness Training for Security Staff.
- (9) Information Systems Policy Compliance requirements and procedures.
- (10) Contract Performance Information.

## **H.25 INTERNET PROTOCOL VERSION 6 (IPV6)**

In accordance with BEP Directives, this acquisition requires all functionality, capabilities and features to be supported and operational in both a dual-stack IPv4/IPv6 environment and an IPv6 only environment. Furthermore, all management, user interfaces, configuration options, reports and other administrative capabilities that support IPv4 functionality will support comparable IPv6 functionality. The Contractor is required to certify that its products have been tested to meet the requirements for both a dual-stack IPv4/IPv6 and IPv6 only environment. BEP reserves the right to require the Contractor's products to be tested within a BEP or third-party test facility to show compliance with this requirement. In accordance with FAR 11.002(g) and BEP Directives, this acquisition must comply with the NIST USGCB Profile and IPv6 Test Program. The Contractor must fund and provide resources necessary to support these testing requirements.

## **H.26 CONTRACTOR ACCESS TO BEP IT SYSTEMS**

Immediately following contract award, the Contractor must provide to the COR an initial and complete list of personnel that require access to BEP information systems. The COR will coordinate with the contractor to complete the necessary paperwork to submit the personnel requested for their Background investigation through the HR Connect system. The contractor is responsible for coordinating the required documentation and background investigation information to the BEP Office of Security and shall allow a minimum of 90 days to complete the background investigation process. Contractors shall not be allowed to access BEP systems or data until the BEP Office of Security has successfully adjudicated the individual for the requested access.

The Contractor must send a staffing change report by the fifth day of each month after contract award to the Contracting Officer's Representative. The report must contain the listing of all staff members who separated or were hired under this contract in the past 60 days. This form must be submitted even if no separations or hires have occurred during this period. Failure to submit a 'Contractor Staffing Change Report' each month may, at the Government's discretion, may result in the suspension of all accounts associated with this contract.

Each contractor employee is required to utilize a Personal Identity Verification (PIV) card to access BEP IT systems and Sensitive Information. Using shared accounts to access BEP IT systems and Sensitive Information is strictly prohibited. BEP will disable accounts, and access to BEP IT systems will be revoked and denied if contractor employees share accounts. Users of the systems will be subject to periodic auditing to ensure compliance with BEP policies.

BEP, at its discretion, may suspend or terminate the access to any systems and/or facilities when an Information Security Incident or other electronic access violation, use or misuse issue gives cause for such action. The suspension or termination may last until such time as BEP determines that the situation has been corrected or no longer exists. Upon request of BEP, the Contractor

must immediately return all

Government information, as well as any media type that houses or stores Government information, regardless of potential violations of other contracts the contractor may have in place, including, but not limited to data stored on recovery media, tape backups, images, etc. The Contracting Officer's Representative (COR) and the BEP Service Desk must be notified at least 5 days prior to a contractor employee being removed from a contract. For unplanned terminations or removals of contractor employees from the contractor organization that occur with less than five-day notice, the COR and BEP Service Desk (202-874-3010) must be notified immediately. BEP PIV cards issued to contractor employees must be returned to the COR prior to departure.

All access to BEP IT systems will be accomplished using Personal Identity Verification (PIV) credentials, in accordance with NIST FIPS 201, Personal Identity Verification (PIV) of Federal Employees and Contractors.

#### **H.27 COMPLIANCE WITH SECURITY IT POLICIES**

Information systems and system services provided to BEP by the Contractor must comply with the current BEP IT, IT security, security and privacy policies and guidance.

Contractors are also required to comply with current Federal regulations and guidance found in the Federal Information Security Management Act (FISMA), Privacy Act of 1974, E-Government Act of 2002, Section 208, National Institute of Standards and Technology (NIST), Federal Information Processing Standards (FIPS) and the 800-Series Special Publications (SP), Office of Management and Budget (OMB) memorandum, and other relevant Federal laws and regulations that BEP must comply with.

#### **H.28 IT SECURITY AND PRIVACY AWARENESS TRAINING**

All Contractor personnel must complete BEP-provided mandatory security and privacy training prior to gaining access to BEP information systems and provide their completion certificate number to the COR or supervisor. The following training requirements are mandatory. Non-compliance may result in revocation of system access.

Security and privacy refresher training must be completed on an annual basis. BEP will provide notification and instructions on completing this training.

The BEP Rules of Behavior must be signed by each user prior to gaining access to BEP information systems and will be reviewed at least annually. BEP will provide access to the rules of behavior and provide notification when a review is required.

#### **H.29 HSPD-12 COMPLIANCE**

All Contractor employees must be subject to screening prior to being authorized access to information systems; and rescreening according to change in position risk designation, new position with higher risk designation, or other requirements according to HSPD-12 requirements.

Contracting Officer's Representative (COR) approval is required prior to contractor personnel

accessing BEP information and information systems. Contractors must sign access agreements before access is granted to BEP information and information systems.

Procurements for services and products involving facility or system access control must be in accordance with HSPD-12 policy and the Federal Acquisition Regulation.

All development for BEP systems must include requirements to enable the use PIV credentials, in accordance with NIST FIPS 201, Personal Identity Verification (PIV) of Federal Employees and Contractors, prior to being operational or updated.

### **H.30 SECURITY TECHNICAL IMPLEMENTATION**

The Contractor must certify applications are fully functional and operate correctly as intended on systems using the Federal Desktop Core Configuration (FDCC)\United States Government Configuration Baseline (USGCB).

The standard installation, operation, maintenance, updates, and/or patching of software must not alter the configuration settings from the approved FDCC\USGCB configuration. The information technology should also use the Windows Installer Service for installation to the default “program files” directory and should be able to silently install and uninstall.

Applications designed for normal end users must run in the standard user context without elevated system administration privileges.

The Contractor must apply due diligence at all times to ensure that the required level of security is always in place to protect BEP systems and information, such as using Defense Information Systems Agency Security Technical Implementation Guides (STIGs).

### **H.31 FIPS140 ENCRYPTION REQUIREMENTS**

Cryptographic modules used to protect BEP information must be compliant with the current FIPS 140 version and validated by the Cryptographic Module Validation Program (CMVP). The Contractor must provide the validation certificate number to BEP for verification. Encryption is required to protect federal and contractor data when transmitting between systems.

### **H.32 MANDATORY REQUIREMENT FOR CONTRACTOR RETURN OF ALL BEP AND BEP-ACTIVITY-RELATED INFORMATION (INCLUDING BUT NOT LIMITED TO ALL RECORDS, FILES, AND METADATA IN ELECTRONIC OR HARDCOPY FORMAT)**

Within thirty (30) days after the end of the contract performance period or after the contract is suspended or terminated by BEP or by the Contractor for any reason, the Contractor must return all original (and at least one duplicate copy of those information types specified by BEP) of all BEP- provided and BEP-Activity-Related Information, (including but not limited to all records, files, and metadata in electronic or hardcopy format); including but not limited to the following:

- (1) Provided by BEP; or
- (2) Obtained by the Contractor while conducting activities in accordance with the contract with BEP; or
- (3) Distributed for any purpose by the Contractor to any other related organization and/or any other component or separate business entity; or
- (4) Received from the Contractor by any other related organization and/or any other

component or separate business entity.

Within forty-five (45) days after the end of the contract performance period or after the contract is suspended or terminated by BEP or the Contractor for any reason, the Contractor must provide BEP with an associated Certification of Verified Return of all original (and at least one duplicate copy of those information types specified by BEP) of all BEP and BEP-Activity-Related Information, (including but not limited to all records, files, and metadata in electronic or hardcopy format); including but not limited to the following:

- (1) Provided by BEP; or
- (2) Obtained by the Contractor while conducting activities in accordance with the contract with BEP; or
- (3) Distributed for any purpose by the Contractor to any other related organization and/or any other component or separate business entity; or
- (4) Received from the Contractor by any other related organization and/or any other component or separate business entity.

This certification must be provided by a third-party firm approved by BEP in advance. All costs and resource allocations required for this third-party service must be the sole responsibility of the Contractor.

**H.33 MANDATORY REQUIREMENT FOR VERIFIED SECURE DESTRUCTION OF ALL BEP AND BEP-ACTIVITY-RELATED INFORMATION (INCLUDING BUT NOT LIMITED TO ALL RECORDS, FILES, AND METADATA IN ELECTRONIC OR HARDCOPY FORMAT)**

Within sixty (60) days after the end of the contract performance period or after the contract is suspended or terminated by BEP or by the Contractor for any reason, BUT ONLY after BEP has accepted and approved the Contractor's compliance with the Certified Verification of Return of Information Requirement, the Contractor must execute secure destruction (either by the contractor or third party firm approved in advance by BEP) of all existing active and archived originals and/or copies of all BEP and BEP-activity-related files and information, (including but not limited to all records, files, and metadata in electronic or hardcopy format); by procedures approved by BEP in advance and in accordance with applicable BEP IT Security Policy Requirements; including but not limited to the following:

- (1) Provided by BEP; or
- (2) Obtained by the Contractor while conducting activities in accordance with the contract with BEP; or
- (3) Distributed for any purpose by the Contractor to any other related organization and/or any other component or separate business entity; or
- (4) Received from the Contractor by any other related organization and/or any other component or separate business entity.

Within seventy-five (75) days after the end of the contract performance period or after the contract is suspended or terminated by BEP or the Contractor for any reason, BUT ONLY after BEP has accepted and approved the Contractor's compliance with the Certified Verification of Return of Information Requirement, the Contractor must provide BEP with Certification of Secure Destruction of all existing active and archived originals and/or copies of all BEP and

BEP-activity-related files and information, (including but not limited to all records, files, and metadata in electronic or hardcopy format); by procedures approved by BEP in advance and in accordance with applicable BEP IT Security Policy Requirements; including but not limited to the following:

- (1) Provided by BEP; or
- (2) Obtained by the Contractor while conducting activities in accordance with the contract with BEP; or
- (3) Distributed for any purpose by the Contractor to any other related organization and/or any other component or separate business entity; or
- (4) Received from the Contractor by any other related organization and/or any other component or separate business entity.

This certification must be provided by a third-party firm approved by BEP in advance. All costs and resource allocations required for this third-party service must be the sole responsibility of the contractor.

#### **H.34 MANDATORY REQUIREMENT FOR CONTRACTOR RETURN OF ALL BEP-OWNED AND LEASED COMPUTING AND INFORMATION STORAGE EQUIPMENT**

Within sixty (60) days after the end of the contract performance period or after the contract is suspended or terminated by BEP or by the Contractor for any reason; or within a time period approved by BEP, the Contractor must return all BEP-owned and leased computing and information storage equipment.

Within seventy-five (75) days after the end of the contract performance period or after the contract is suspended or terminated by BEP or the Contractor for any reason, the Contractor must provide BEP with Certification of Verified Return of all BEP-Owned and Leased Computing and Information Storage Equipment. This certification must be provided by a third-party firm approved by BEP in advance. All costs and resource allocations required for this third-party service must be the sole responsibility of the Contractor.

#### **H.35 TRAVEL COST**

All travel associated with the Factory Inspection Test (FIT), Shipping, Installation and Commissioning, Bureau Acceptance Test (BAT), and training must be included in the total cost in Section B – Supplies or Services and Prices/Costs, B.2. Pricing Schedule in the contract line items associated in the proposal for these specific services as a fixed price. The Contractor shall be responsible for their operating personnel and their associated travel costs (i.e. transportation, lodging, food, etc.).

BEP will not be responsible for travel costs incurred should the equipment fail the first BAT.

Due to COVID-19 concerns, travel may be limited and/or restricted. Prior to traveling to the Bureau, Contractor shall notify the COR. The COR and Contractor shall agree upon a date and time for clearance into the building. For update to information regarding travel advisories, please visit <https://travel.state.gov/content/travel/en/traveladvisories/ea/covid-19-information.html>

### **H.36 QUALITY ASSURANCE PLAN**

If any of the work required under the contract is subcontracted, the Contractor shall require that the Subcontractor submit and adhere to a Quality Assurance Plan.

The Quality Assurance plan submitted by Subcontractor to the Contractor shall be accepted by the CO for this contract which will be incorporated and made part of this contract as an Attachment (prior to contract award).

### **H.37 SPARE PARTS**

The Bureau intends to procure parts, on a competitive basis, as needed during the life of the contract. To assist the Bureau in procuring parts, a complete list shall be provided for all parts and components of the press and subsystems are required under the SOW Section C.3.6.3 Spare Parts Listing. The name of the subsystem along with its corresponding position number within each group shall be listed. All components listed shall be cross-referenced and supplied with the technical drawings, manufacturers' literature, and any other purchased part documentation. The listing shall be organized by the type of the part, i.e., bearings, relays, etc.

### **H.38 AGENCY POLICIES REGARDING COVID-19**

Keeping the workforce virus-free is a shared responsibility of BEP employees and contractors. Public health experts agree that face coverings are an additional step to protect against COVID-19 when combined with social distancing and good hygienic practices. Along with social distancing, wearing a mask is one of the key recommended preventive measures in limiting the spread of this virus to others, especially from infected individuals who do not show symptoms.

All personnel entering and exiting the facilities are required to wear a facial covering (cloth or mask). Bandanas, Novelty/non-protective masks, masks with ventilation valves, or face shields are not a substitute for proper masks and are PROHIBITED from use in BEP facilities.

All personnel must wear a face covering while in common spaces:

- Hallways
- Elevators
- Restrooms

BEP will enforce proper mask usage with contractors inside the Bureau. Masks shall be worn properly.

### **H.39 COVID-19 RECOMMENDED SAFETY GUIDANCE AND PROTOCOLS**

The BEP is following all currently recommended safety guidance and protocols. This guidance includes actions individuals must take:

- **DO NOT** come to work if sick **or feel unwell** in any way.
- Maintain social distancing of 6 feet or more whenever possible.
- **Wear masks and face coverings onsite! It is mandatory** when social distancing cannot be maintained.
- **Limit movement within the plant to only what is necessary to delivery or pick-up items.**
- Follow healthcare provider's and CDC's guidance regarding recovery.

**Contractors awaiting results from a coronavirus test are required to remain off premises.**

#### **H.40 SOCIAL DISTANCING CONTRACT TRACING WEARABLE DEVICE (SDCT) PROGRAM**

The Bureau of Engraving and Printing (BEP) is implementing a Social Distancing Contract Tracing wearable device (SDCT Device) program in a continued effort to promote social distancing and to protect workers from spreading COVID-19. This program complies with the Occupational Safety and Health Act of 1970, Pub. L. 91-596, 29 U.S.C. § 668, which requires Federal agencies to maintain an illness prevention program.

Beginning on or after April 1 2021, your employees who work on site at BEP will be issued a SDCT device as Government Furnished Equipment, and they will be responsible for wearing and maintaining the device. The SDCT Device must be worn and displayed like a PIV badge by all workers while in BEP's facility. Device interactions, including serial number, date, and duration, are collected by sensors and digitally stored in the Cloud for contact trace reporting in the event of a COVID-19 exposure on site. The devices contain a unique serial number, and they do not transmit Personally Identifiable Information. The workers' names are stored in a separate database and only accessed if a worker tests positive for COVID-19 and discloses this information to BEP. If contact tracing is required, the worker's identity will be shared only with personnel who have a need-to-know to perform official duties.

The SDCT Device uses radio frequency-based communications, and it is not GPS-based. The SDCT Devices do not provide the specific geographic location of the device, nor do they track the movement of workers. The SDCT Devices lose connectivity with facility sensors when they are 100 feet or more from the facility or when deactivated by the worker. As required by the Privacy Act of 1974, the Department of the Treasury published a system of records notice that covers the use of the SDCT devices at BEP.

<https://www.federalregister.gov/documents/2021/02/24/2021-03770/privacy-act-of-1974-system-of-records>. For your reference, we have attached a copy of the Privacy Act Statement regarding the SDCT devices (**Attachment I**). Also, for additional information about this program, please see the attached document containing answers to frequently asked questions.

Finally, BEP encourages you to support your employees in obtaining priority to receive the COVID-19 vaccine. Please contact your Contracting Officer for a letter from BEP indicating that your contract qualifies as a Federal government mission essential contract because it supports BEP's continued production of the nation's currency during the pandemic.

Please do not hesitate to contact your Contracting Officer if you have any questions about the SDCT Device Program.

**[END OF SECTION]**

## SECTION I – CONTRACT CLAUSES

<u>CLAUSE NUMBER</u>	<u>TITLE</u>	<u>DATE</u>
52.202-1	Definitions	JUN 2020
52.203-3	Gratuities	APR 1984
52.203-5	Covenant Against Contingent Fees	MAY 2014
52.203-6	Restrictions On Subcontractor Sales to The Government	JUN 2020
52.203-7	Anti-Kickback Procedures	JUN 2020
52.203-8	Cancellation, Rescission, and Recovery of Funds for Illegal or Improper Activity	MAY 2014
52.203-10	Price or Fee Adjustment for Illegal or Improper Activity	MAY 2014
52.203-12	Limitation On Payments to Influence Certain Federal Transactions	JUN 2020
52.203-13	Contractor Code of Business Ethics and Conduct	NOV 2021
52.203-17	Contractor Employee Whistleblower Rights and Requirement to Inform Employees of Whistleblower Rights	JUN 2020
52.203-19	Prohibition on Requiring Certain Internal Confidentiality Agreements or Statements	JAN 2017
52.204-4	Printed or Copied Double-Sided on Recycled Paper	MAY 2011
52.204-10	Reporting Executive Compensation and First-Tier Subcontract Awards	JUN 2020
52.204-13	System for Award Management Maintenance	OCT 2018
52.204-18	Commercial and Government Entity Code Maintenance	AUG 2020
52.204-19	Incorporation by Reference of Representations and Certifications	DEC 2014
52.204-23	Prohibition on Contracting for Hardware, Software, and Services Developed or Provided by Kaspersky Lab and Other Covered Entities	NOV 2021
52.204-25	Prohibition on Contracting for Certain Telecommunications and Video Surveillance Services or Equipment	NOV 2021
52.209-6	Protecting The Government’s Interest When Subcontracting with Contractors Debarred, Suspended, Or Proposed for Debarment	NOV 2021
52.209-9	Updates of Publicly Available Information Regarding Responsibility Matters	OCT 2018
52.209-10	Prohibition on Contracting with Inverted Domestic Corporations	NOV 2015
52.210-1	Market Research	NOV 2021
52.211-5	Material Requirements	AUG 2000
52.215-2	Audit and Records – Negotiation	JUN 2020
52.215-8	Order of Precedence – Uniform Contract Format	OCT 1997
52.215-10	Price Reduction for Defective Certified Cost or Pricing Data	AUG 2011

52.215-11	Price Reduction for Defective Certified Cost or Pricing Data – Modifications	JUN 2020
52.215-12	Subcontractor Certified Cost or Pricing Data	JUN 2020
52.215-13	Subcontractor Certified Cost or Pricing Data - Modifications	JUN 2020
<b><u>CLAUSE NUMBER</u></b>	<b><u>TITLE</u></b>	<b><u>DATE</u></b>
52.215-14	Integrity of Unit Prices	NOV 2021
52.215-15	Pension Adjustments and Asset Reversions	OCT 2010
52.215-19	Notification of Ownership Changes	OCT 1997
52.219-8	Utilization of Small Business Concerns	OCT 2022
52.219-9	Small Business Subcontracting Plan – Alternate II	OCT 2022
52.219-14	Limitations on Subcontracting	OCT 2022
52.222-1	Notice to the Government of Labor Disputes	FEB 1997
52.222-3	Convict Labor	JUN 2003
52.222-20	Contracts for Materials, Supplies, Articles, And Equipment	JUN 2020
52.222-21	Prohibition of Segregated Facilities	APR 2015
52.222-26	Equal Opportunity	SEP 2016
52.222-40	Notification of Employee Rights under the National Labor Relations Act	DEC 2010
52.222-50	Combating Trafficking in Persons	NOV 2021
52.223-6	Drug-Free Workplace	MAY 2001
52.223-18	Encouraging Contractor Policies to Ban Text Messaging While Driving	JUN 2020
52.225-5	Trade Agreements	DEC 2022
52.225-13	Restrictions on Certain Foreign Purchases	FEB 2021
52.227-1	Authorization and Consent	JUN 2020
52.227-14	Rights in Data - General	MAY 2014
52.227-17	Rights in Data-Special Works	DEC 2007
52.228-5	Insurance-Work on a Government Installation	JAN 1997
52.229-6	Taxes-Foreign Fixed-Price Contracts	FEB 2013
52.232-1	Payments	APR 1984
52.232-8	Discounts for Prompt Payment	FEB 2002
52.232-11	Extras	APR 1984
52.232-17	Interest	MAY 2014
52.232-25	Prompt Payment	JAN 2017
52.232-32	Performance-Based Payments	APR 2012
52.232-33	Payment by Electronic Funds Transfer-System for Award Management	OCT 2018
52.232-39	Unenforceability of Unauthorized Obligations	JUN 2013
52.232-40	Providing Accelerated Payments to Small Business Concerns	MAR 2023
52.233-1	Disputes	MAY 2014
52.233-3	Protest After Award	AUG 1996

52.233-4	Applicable Law for Breach of Contract Claim	OCT 2004
52.242-13	Bankruptcy	JULY 1995
52.243-1	Changes – Fixed Price	AUG 1987
<b><u>CLAUSE NUMBER</u></b>	<b><u>TITLE</u></b>	<b><u>DATE</u></b>
52.244-5	Competition in Subcontracting	DEC 1996
52.244-6	Subcontracts for Commercial Products and Commercial Services	MAR 2023
52.245-1	Government Property	SEP 2021
52.246-18	Warranty of Supplies of a Complex Nature	MAY 2001
52.246-24	Limitation of Liability – High Value Items	FEB 1997
52.246-25	Limitation of Liability – Services	FEB 1997
52.249-2	Termination for Convenience of the Government (Fixed-Price)	APR 2012
52.249-8	Default (Fixed-Price Supply and Service)	APR 1984
52.249-14	Excusable Delays	APR 1984

**FAR 52.204-1, Approval of Contract (DEC 1989)**

This contract is subject to the written approval of the **BEP Contracting Officer** and shall not be binding until so approved. (End of Clause)

**FAR 52.211-11 Liquidated Damages-Supplies, Services, or Research and Development (SEPT 2000)**

(a) If the Contractor fails to deliver the supplies or perform the services within the time specified in this contract, the Contractor shall, in place of actual damages, pay to the Government liquidated damages of \$1,000.00 per calendar day of delay.

(b) If the Government terminates this contract in whole or in part under the Default-Fixed-Price Supply and Service clause, the Contractor is liable for liquidated damages accruing until the Government reasonably obtains delivery or performance of similar supplies or services. These liquidated damages are in addition to excess costs of repurchase under the Termination clause.

(c) The Contractor will not be charged with liquidated damages when the delay in delivery or performance is beyond the control and without the fault or negligence of the Contractor as defined in the Default-Fixed-Price Supply and Service clause in this contract. (End of clause)

**FAR 52.217-7, Option for Increased Quantity – Separately Priced Line Item (MAR 1989)**

The Government may require the delivery of the numbered line item, identified in the Schedule as an option item, in the quantity and at the price stated in the Schedule. The Contracting Officer may exercise the option by written notice to the Contractor within 30 days. Delivery of added items shall continue at the same rate that like items are called for under the contract, unless the parties otherwise agree. (End of clause)

**FAR 52.217-8, Option to Extend Services (NOV 1999)**

The Government may require continued performance of any services within the limits and at the rates specified in the contract. These rates may be adjusted only as a result of revisions to prevailing labor rates provided by the Secretary of Labor. The option provision may be exercised

more than once, but the total extension of performance hereunder shall not exceed 6 months. The Contracting Officer may exercise the option by written notice to the Contractor within 30 days.

(End of clause)

**FAR 52.217-9, Option to Extend the Term of the Contract (MAR 2000)**

(a) The Government may extend the term of this contract by written notice to the Contractor within 30 days before the contract expires. The preliminary notice does not commit the Government to an extension.

(b) If the Government exercises this option, the extended contract shall be considered to include this option clause.

(c) The total duration of this contract, including the exercise of any options under this clause, shall not exceed 99 months. (End of clause)

**FAR 52.237-3, Continuity of Services (JAN 1991)**

(a) The Contractor recognizes that the services under this contract are vital to the Government and must be continued without interruption and that, upon contract expiration, a successor, either the Government or another contractor, may continue them. The Contractor agrees to-

(1) Furnish phase-in training; and

(2) Exercise its best efforts and cooperation to affect an orderly and efficient transition to a successor.

(b) The Contractor shall, upon the Contracting Officer's written notice, (1) furnish phase-in, phase-out services for up to 90 days after this contract expires and (2) negotiate in good faith a plan with a successor to determine the nature and extent of phase-in, phase-out services required. The plan shall specify a training program and a date for transferring responsibilities for each division of work described in the plan and shall be subject to the Contracting Officer's approval. The Contractor shall provide sufficient experienced personnel during the phase-in, phase-out period to ensure that the services called for by this contract are maintained at the required level of proficiency.

(c) The Contractor shall allow as many personnel as practicable to remain on the job to help the successor maintain the continuity and consistency of the services required by this contract. The Contractor also shall disclose necessary personnel records and allow the successor to conduct on-site interviews with these employees. If selected employees are agreeable to the change, the Contractor shall release them at a mutually agreeable date and negotiate transfer of their earned fringe benefits to the successor.

(d) The Contractor shall be reimbursed for all reasonable phase-in, phase-out costs (i.e., costs incurred within the agreed period after contract expiration that result from phase-in, phase-out operations) and a fee (profit) not to exceed a pro rata portion of the fee (profit) under this contract.

(End of clause)

**FAR 52.245-2 Government Property Installation Operation Services (APR 2012)**

(a) This Government Property listed in paragraph (e) of this clause is furnished to the Contractor in an "as-is, where is" condition. The Government makes no warranty regarding the suitability for use of the Government property specified in this contract. The Contractor shall be afforded the opportunity to inspect the Government property as specified in the solicitation.

(b) The Government bears no responsibility for repair or replacement of any lost Government property. If any or all of the Government property is lost or becomes no longer usable, the Contractor shall be responsible for replacement of the property at Contractor expense. The

Contractor shall have title to all replacement property and shall continue to be responsible for contract performance.

(c) Unless the Contracting Officer determines otherwise, the Government abandons all rights and title to unserviceable and scrap property resulting from contract performance. Upon notification to the Contracting Officer, the Contractor shall remove such property from the Government premises and dispose of it at Contractor expense.

(d) Except as provided in this clause, Government property furnished under this contract shall be governed by the Government Property clause of this contract.

(e) Government property provided under this clause: Currency Sheets, Screen Inks, Screens, Squeegees, Stack-N-Rack Carts, and Cleaning Solvents. (End of clause)

#### **FAR 52.252-6 Authorized Deviations in Clauses (NOV 2020)**

(a) The use in this solicitation or contract of any Federal Acquisition Regulation (48 CFR Chapter 1) clause with an authorized deviation is indicated by the addition of "(DEVIATION)" after the date of the clause.

(b) The use in this solicitation or contract of any Ensuring Adequate COVID-19 Safety Protocols for Federal Contractors (86 FR 50985) clause with an authorized deviation is indicated by the addition of "(DEVIATION)" after the name of the regulation. (End of clause)

#### **FAR 52.252-1, Solicitation Provisions Incorporated by Reference (FEB 1998)**

This solicitation incorporates one or more solicitation provisions by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. The offeror is cautioned that the listed provisions may include blocks that must be completed by the offeror and submitted with its quotation or offer. In lieu of submitting the full text of those provisions, the offeror may identify the provision by paragraph identifier and provide the appropriate information with its quotation or offer. Also, the full text of a solicitation provision may be accessed electronically at this/these address(es): <https://acquisition.gov/browsefar> (End of Clause)

#### **FAR 52.252-2, Clauses Incorporated by Reference (FEB 1998)**

This contract incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. Also, the full text of a clause may be assessed electronically at this/these address(es): <https://www.acquisition.gov/> (End of Clause)

#### **DTAR 1052.210-70, Contractor Publicity (APR 2015)**

The Contractor, or any entity or representative acting on behalf of the Contractor, shall not refer to the supplies or services furnished pursuant to the provisions of this contract in any news release or commercial advertising, or in connection with any news release or commercial advertising, without first obtaining explicit written consent to do so from the Contracting Officer. Should any reference to such supplies or services appear in any news release or commercial advertising issued by or on behalf of the Contractor without the required consent, the Government shall consider institution of all remedies available under applicable law, including 31 U.S.C. 333, and this contract. Further, any violation of this clause may be considered as part of the evaluation of past performance. (End of clause)

**DTAR 1052.228-70, Insurance Requirements (APR 2015)**

In accordance with FAR clause 52.228-5, entitled “Insurance—Work on a Government Installation” [or FAR clause 52.228-7 entitled, “*Insurance—Liability to Third Persons*”], insurance of the following kinds and minimum amounts shall be provided and maintained during the period of performance of this contract:

- (a) *Worker's compensation and employer's liability*. The Contractor shall, as a minimum, meet the requirements specified at FAR 28.307-2(a).
- (b) *General liability*. The Contractor shall, at a minimum, meet the requirements specified at FAR 28.307-2(b).
- (c) *Automobile liability*. The Contractor shall, at a minimum, meet the requirements specified at FAR 28.307-2(c). (End of clause)

**DTAR 1052.232-7003, Electronic Submission of Payment Requests (APR 2015)**

(a) Definitions. As used in this clause—

(1) “Payment request” means a bill, voucher, invoice, or request for contract financing payment with associated supporting documentation. The payment request must comply with the requirements identified in FAR 32.905(b), “Content of Invoices” and the applicable Payment clause included in this contract.

(b) Except as provided in paragraph (c) of this clause, the Contractor shall submit payment requests electronically using the Invoice Processing Platform (IPP). Information regarding IPP, including IPP Customer Support contact information, is available at [www.ipp.gov](http://www.ipp.gov) or any successor site.

(c) The Contractor may submit payment requests using other than IPP only when the Contracting Officer authorizes alternate procedures in writing in accordance with Treasury procedures.

(d) If alternate payment procedures are authorized, the Contractor shall include a copy of the Contracting Officer's written authorization with each payment request. (End of clause)

**[END OF SECTION]**

## SECTION J – ATTACHMENTS

Identifier	Title/Description
Attachment A	Non-Disclosure Agreement
Attachment B	Paper Specifications*
	B1 - P CDT1-1B Type I Currency Paper – 12Aug2015 abridged*
	B2 - P CDT4-1B Type IV Currency Paper – 12Aug2015 abridged*
	B3 - P CDT5-1C Type V Currency Paper – 12Aug2015 abridged*
	B4 - P NDBT1A NBP Type I – 12Aug2015 abridged*
	B5 - P NDBT4A NBP Type IV – 12Aug2015 abridged*
	B6 - P NDBT5A NBP Type V – 12Aug2015 abridged*
Attachment C	Foil Specifications**
Attachment D	Stack-N-Rack Cart Drawings
Attachment E	BEP CalCheck Sheet
Attachment F	IT Computer Requirements
	F1 - FIPS-PUB-199
	F2 - NIST.SP.800-53r5
	F3 - BEP Rev 5 MSP
	F4 - DOJ Ref Mapping PIVCard Certificates to a Privileged Account Open Version
	F5 - BCONF Win10 IoT Flowsys 20210324
Attachment G	OEHS Attachments
	G1 - 75W-08.0-02 EHS Boilerplate Requirements for Construction and Services Contractors
	G2 - 75D-07.0-04 EHS Contractor Requirements
Attachment H	Preliminary Test Plan
Attachment I	Social Distancing and Contact Tracing (SDCT) Device FAQ and Privacy Act
Attachment J	Past Performance Questionnaire Form

**NOTE:** Attachments identified with an asterisk (\*) require a Non-Disclosure Agreement (NDA). All NDA documents provided under this contract shall be considered proprietary and sensitive to the government. NDA documents shall not be copied, scanned, or reproduced without written approval by the Contracting Officer (CO). The Contractor shall return all NDA documents to the BEP when no longer required or upon request by the CO.

**NOTE:** Attachments identified with double asterisk (\*\*) require a Non-Disclosure Agreement (NDA) and will be provided after project award.

**[END OF SECTION]**

## SECTION K – CERTIFICATIONS

<b><u>CLAUSE NUMBER</u></b>	<b><u>TITLE</u></b>	<b><u>DATE</u></b>
52.203-11	Certification and Disclosure Regarding Payments to Influence Certain Federal Transactions	SEP 2007
52.203-18	Prohibition on Contracting with Entities that Require Certain Internal Confidentiality Agreements or Statements Representation	JAN 2017
52.204-17	Ownership or Control of Offeror	AUG 2020
52.209-2	Prohibition on Contracting with Inverted Domestic Corporations—Representation	NOV 2015
52.225-25	Prohibition on Contracting with Entities Engaging in Certain Activities or Transactions Relating to Iran – Representation and Certifications	JUN 2020

### **FAR 52.204-8, Annual Representations and Certifications (MAR 2023)**

(a) (1) The North American Industry Classification System (NAICS) code for this acquisition is **333248 – All Other Industrial Manufacturing**.

(2) The small business size standard is **750 employees**.

(3) The small business size standard for a concern that submits an offer, other than on a construction or service acquisition, but proposes to furnish an end item that it did not itself manufacture, process, or produce is 500 employees, or 150 employees for information technology value-added resellers under NAICS code 541519 if the acquisition—

(i) Is set aside for small business and has a value above the simplified acquisition threshold;

(ii) Uses the HUBZone price evaluation preference regardless of dollar value, unless the offeror waives the price evaluation preference; or

(iii) Is an 8(a), HUBZone, service-disabled veteran-owned, economically disadvantaged women-owned, or women-owned small business set-aside or sole-source award regardless of dollar value.

(b) (1) If the provision at 52.204-7, System for Award Management, is included in this solicitation, paragraph (d) of this provision applies.

(2) If the provision at 52.204-7, System for Award Management, is not included in this solicitation, and the Offeror has an active registration in the System for Award Management (SAM), the Offeror may choose to use paragraph (d) of this provision instead of completing the corresponding individual representations and certifications in the solicitation. The Offeror shall indicate which option applies by checking one of the following boxes:

(i)  Paragraph (d) applies.

(ii)  Paragraph (d) does not apply and the offeror has completed the individual representations and certifications in the solicitation.

(c) (1) The following representations or certifications in SAM are applicable to this solicitation as indicated:

(i) 52.203-2, Certificate of Independent Price Determination. This provision applies to solicitations when a firm-fixed-price contract or fixed-price contract with economic price adjustment is contemplated, unless–

(A) The acquisition is to be made under the simplified acquisition procedures in part 13;

(B) The solicitation is a request for technical proposals under two-step sealed bidding procedures; or

(C) The solicitation is for utility services for which rates are set by law or regulation.

(ii) 52.203-11, Certification and Disclosure Regarding Payments to Influence Certain Federal Transactions. This provision applies to solicitations expected to exceed \$150,000.

(iii) 52.203-18, Prohibition on Contracting with Entities that Require Certain Internal Confidentiality Agreements or Statements-Representation. This provision applies to all solicitations.

(iv) 52.204-3, Taxpayer Identification. This provision applies to solicitations that do not include the provision at 52.204-7, System for Award Management.

(v) 52.204-5, Women-Owned Business (Other Than Small Business). This provision applies to solicitations that–

(A) Are not set aside for small business concerns;

(B) Exceed the simplified acquisition threshold; and

(C) Are for contracts that will be performed in the United States or its outlying areas.

(vi) 52.204-26, Covered Telecommunications Equipment or Services-Representation. This provision applies to all solicitations.

(vii) 52.209-2, Prohibition on Contracting with Inverted Domestic Corporations-Representation.

(viii) 52.209-5, Certification Regarding Responsibility Matters. This provision applies to solicitations where the contract value is expected to exceed the simplified acquisition threshold.

(ix) 52.209-11, Representation by Corporations Regarding Delinquent Tax Liability or a Felony Conviction under any Federal Law. This provision applies to all solicitations.

(x) 52.214-14, Place of Performance-Sealed Bidding. This provision applies to invitations for bids except those in which the place of performance is specified by the Government.

(xi) 52.215-6, Place of Performance. This provision applies to solicitations unless the place of performance is specified by the Government.

(xii) 52.219-1, Small Business Program Representations (Basic, Alternates I, and II). This provision applies to solicitations when the contract is for supplies to be delivered or services to be performed in the United States or its outlying areas, or when the contracting officer has applied part 19 in accordance with 19.000(b)(1)(ii).

(A) The basic provision applies when the solicitations are issued by other than DoD, NASA, and the Coast Guard.

(B) The provision with its Alternate I applies to solicitations issued by DoD, NASA, or the Coast Guard.

(C) The provision with its Alternate II applies to solicitations that will result in a multiple-award contract with more than one NAICS code assigned.

(xiii) 52.219-2, Equal Low Bids. This provision applies to solicitations when contracting by sealed bidding and the contract is for supplies to be delivered or services to be performed in the United States or its outlying areas, or when the contracting officer has applied part 19 in accordance with 19.000(b)(1)(ii).

(xiv) 52.222-22, Previous Contracts and Compliance Reports. This provision applies to solicitations that include the clause at 52.222-26, Equal Opportunity.

(xv) 52.222-25, Affirmative Action Compliance. This provision applies to solicitations, other than those for construction, when the solicitation includes the clause at 52.222-26, Equal Opportunity.

(xvi) 52.222-38, Compliance with Veterans' Employment Reporting Requirements. This provision applies to solicitations when it is anticipated the contract award will exceed the simplified acquisition threshold and the contract is not for acquisition of commercial products or commercial services.

(xvii) 52.223-1, Biobased Product Certification. This provision applies to solicitations that require the delivery or specify the use of USDA-designated items; or include the clause at 52.223-2, Affirmative Procurement of Biobased Products Under Service and Construction Contracts.

(xviii) 52.223-4, Recovered Material Certification. This provision applies to solicitations that are for, or specify the use of, EPA-designated items.

(xix) 52.223-22, Public Disclosure of Greenhouse Gas Emissions and Reduction Goals-Representation. This provision applies to solicitations that include the clause at 52.204-7.)

(xx) 52.225-2, Buy American Certificate. This provision applies to solicitations containing the clause at 52.225-1.

(xxi) 52.225-4, Buy American-Free Trade Agreements-Israeli Trade Act Certificate. (Basic, Alternates II and III.) This provision applies to solicitations containing the clause at 52.225-3.

(A) If the acquisition value is less than \$50,000, the basic provision applies.

(B) If the acquisition value is \$50,000 or more but is less than \$92,319, the provision with its Alternate II applies.

(C) If the acquisition value is \$92,319 or more but is less than \$100,000, the provision with its Alternate III applies.

(xxii) 52.225-6, Trade Agreements Certificate. This provision applies to solicitations containing the clause at 52.225-5.

(xxiii) 52.225-20, Prohibition on Conducting Restricted Business Operations in Sudan-Certification. This provision applies to all solicitations.

(xxiv) 52.225-25, Prohibition on Contracting with Entities Engaging in Certain Activities or Transactions Relating to Iran-Representation and Certifications. This provision applies to all solicitations.

(xxv) 52.226-2, Historically Black College or University and Minority Institution Representation. This provision applies to solicitations for research, studies, supplies, or services of the type normally acquired from higher educational institutions.

(2) The following representations or certifications are applicable as indicated by the Contracting Officer:

(i) 52.204-17, Ownership or Control of Offeror.

(ii) 52.204-20, Predecessor of Offeror.

(iii) 52.222-18, Certification Regarding Knowledge of Child Labor for Listed End

Products.

\_\_\_ (iv) 52.222-48, Exemption from Application of the Service Contract Labor Standards to Contracts for Maintenance, Calibration, or Repair of Certain Equipment-Certification.

\_\_\_ (v) 52.222-52, Exemption from Application of the Service Contract Labor Standards to Contracts for Certain Services-Certification.

\_\_\_ (vi) 52.223-9, with its Alternate I, Estimate of Percentage of Recovered Material Content for EPA-Designated Products (Alternate I only).

\_\_\_ (vii) 52.227-6, Royalty Information.

\_\_\_ (A) Basic.

\_\_\_ (B) Alternate I.

\_\_\_ (viii) 52.227-15, Representation of Limited Rights Data and Restricted Computer Software.

(d) The offeror has completed the annual representations and certifications electronically in SAM website accessed through <https://www.sam.gov>. After reviewing the SAM information, the offeror verifies by submission of the offer that the representations and certifications currently posted electronically that apply to this solicitation as indicated in paragraph (c) of this provision have been entered or updated within the last 12 months, are current, accurate, complete, and applicable to this solicitation (including the business size standard applicable to the NAICS code referenced for this solicitation), as of the date of this offer and are incorporated in this offer by reference (see FAR 4.1201); except for the changes identified below [offeror to insert changes, identifying change by clause number, title, date]. These amended representation(s) and/or certification(s) are also incorporated in this offer and are current, accurate, and complete as of the date of this offer.

FAR Clause # Title Date Change

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Any changes provided by the offeror are applicable to this solicitation only, and do not result in an update to the representations and certifications posted on SAM.

(End of provision)

### **FAR 52.209-7, Information Regarding Responsibility Matters (OCT 2018)**

(a) Definitions. As used in this provision—

Administrative proceeding means a non-judicial process that is adjudicatory in nature in order to make a determination of fault or liability (e.g., Securities and Exchange Commission Administrative Proceedings, Civilian Board of Contract Appeals Proceedings, and Armed Services Board of Contract Appeals Proceedings). This includes administrative proceedings at the Federal and State level but only in connection with performance of a Federal contract or grant. It does not include agency actions such as contract audits, site visits, corrective plans, or inspection of deliverables.

Federal contracts and grants with total value greater than \$10,000,000 means—

(1) The total value of all current, active contracts and grants, including all priced options; and

(2) The total value of all current, active orders including all priced options under indefinite-delivery, indefinite-quantity, 8(a), or requirements contracts (including task and

delivery and multiple-award Schedules).

Principal means an officer, director, owner, partner, or a person having primary management or supervisory responsibilities within a business entity (e.g., general manager; plant manager; head of a division or business segment; and similar positions).

(b) The offeror  has  does not have current active Federal contracts and grants with total value greater than \$10,000,000.

(c) If the offeror checked "has" in paragraph (b) of this provision, the offeror represents, by submission of this offer, that the information it has entered in the Federal Awardee Performance and Integrity Information System (FAPIIS) is current, accurate, and complete as of the date of submission of this offer with regard to the following information:

(1) Whether the offeror, and/or any of its principals, has or has not, within the last five years, in connection with the award to or performance by the offeror of a Federal contract or grant, been the subject of a proceeding, at the Federal or State level that resulted in any of the following dispositions:

- (i) In a criminal proceeding, a conviction.
- (ii) In a civil proceeding, a finding of fault and liability that results in the payment of a monetary fine, penalty, reimbursement, restitution, or damages of \$5,000 or more.
- (iii) In an administrative proceeding, a finding of fault and liability that results in—
  - (A) The payment of a monetary fine or penalty of \$5,000 or more; or
  - (B) The payment of a reimbursement, restitution, or damages in excess of \$100,000.
- (iv) In a criminal, civil, or administrative proceeding, a disposition of the matter by consent or compromise with an acknowledgment of fault by the Contractor if the proceeding could have led to any of the outcomes specified in paragraphs (c)(1)(i), (c)(1)(ii), or (c)(1)(iii) of this provision.

(2) If the offeror has been involved in the last five years in any of the occurrences listed in (c)(1) of this provision, whether the offeror has provided the requested information with regard to each occurrence.

(d) The offeror shall post the information in paragraphs (c)(1)(i) through (c)(1)(iv) of this provision in FAPIIS as required through maintaining an active registration in the System for Award Management, which can be accessed via <https://www.sam.gov> (see 52.204-7).  
(End of provision)

**FAR 52.215-6, Place of Performance (OCT 1997)**

(a) The offeror or respondent, in the performance of any contract resulting from this solicitation,  intends,  does not intend [check applicable block] to use one or more plants or facilities located at a different address from the address of the offeror or respondent as indicated in this proposal or response to request for information.

(b) If the offeror or respondent checks "intends" in paragraph (a) of this provision, it shall insert in the following spaces the required information:

Place of Performance (Street Address, City, State, County, ZIP Code)	Name and Address of Owner and Operator of the Plant or Facility if Other than Offeror or Respondent

(End of provision)

**FAR 52.225-18, Place of Manufacture (AUG 2018)**

(a) Definitions. As used in this provision—

Manufactured end product means any end product in product and service codes (PSCs) 1000-9999, except-

- (1) FPSC 5510, Lumber and Related Basic Wood Materials;
- (2) Product or Service Group (PSG) 87, Agricultural Supplies;
- (3) PSG 88, Live Animals;
- (4) PSG 89, Subsistence;
- (5) PSC 9410, Crude Grades of Plant Materials;
- (6) PSC 9430, Miscellaneous Crude Animal Products, Inedible;
- (7) PSC 9440, Miscellaneous Crude Agricultural and Forestry Products;
- (8) PSC 9610, Ores;
- (9) PSC 9620, Minerals, Natural and Synthetic; and
- (10) PSC 9630, Additive Metal Materials.

Place of manufacture means the place where an end product is assembled out of components, or otherwise made or processed from raw materials into the finished product that is to be provided to the Government. If a product is disassembled and reassembled, the place of reassembly is not the place of manufacture.

(b) For statistical purposes only, the offeror shall indicate whether the place of manufacture of the end products it expects to provide in response to this solicitation is predominantly-

- (1)  In the United States (Check this box if the total anticipated price of offered end products manufactured in the United States exceeds the total anticipated price of offered end products manufactured outside the United States); or
- (2)  Outside the United States.

(End of provision)

**[END OF SECTION]**

## SECTION L – INSTRUCTIONS, CONDITIONS, AND NOTICES TO OFFERORS OR RESPONDENTS

<u>CLAUSE NUMBER</u>	<u>TITLE</u>	<u>DATE</u>
52.204-7	System For Award Management	OCT 2018
52.204-16	Commercial And Government Entity Code Reporting	AUG 2020
52.204-18	Commercial And Government Entity Code Maintenance	AUG 2020
52.214-34	Submission Of Offers In The English Language	APR 1991
52.214-35	Submission Of Offers In U.S. Currency	APR 1991
52.215-1	Instructions To Offerors—Competitive Acquisition	NOV 2021
52.222-24	Preaward On-Site Equal Opportunity Compliance Evaluation	FEB 1999
52.237-1	Site Visit	APR 1984

### **FAR 52.216-1, Type of Contract (APR 1984)**

The Government contemplates award of a Firm-Fixed Price contract resulting from this solicitation. (End of provision)

### **FAR 52.222-56 Certification Regarding Trafficking in Persons Compliance Plan (OCT 2020)**

(a) The term "commercially available off-the-shelf (COTS) item," is defined in the clause of this solicitation entitled "Combating Trafficking in Persons" (FAR clause [52.222-50](#)).

(b) The apparent successful Offeror shall submit, prior to award, a certification, as specified in paragraph (c) of this provision, for the portion (if any) of the contract that-

- (1) Is for supplies, other than commercially available off-the-shelf items, to be acquired outside the United States, or services to be performed outside the United States; and
- (2) Has an estimated value that exceeds \$550,000.

(c) The certification shall state that-

(1) It has implemented a compliance plan to prevent any prohibited activities identified in paragraph (b) of the clause at [52.222-50](#), Combating Trafficking in Persons, and to monitor, detect, and terminate the contract with a subcontractor engaging in prohibited activities identified at paragraph (b) of the clause at [52.222-50](#), Combating Trafficking in Persons; and

(2) After having conducted due diligence, either-

(i) To the best of the Offeror's knowledge and belief, neither it nor any of its proposed agents, subcontractors, or their agents is engaged in any such activities; or

(ii) If abuses relating to any of the prohibited activities identified in [52.222-50](#)(b) have been found, the Offeror or proposed subcontractor has taken the appropriate remedial and referral actions. (End of provision)

### **FAR 52.232-28, Invitation to Propose Performance-Based Payments (MAR 2000)**

(a) The Government invites the offeror to propose terms under which the Government will make performance-based contract financing payments during contract performance. The Government

will consider performance-based payment financing terms proposed by the offeror in the evaluation of the offeror's proposal. The Contracting Officer will incorporate the financing terms of the successful offeror and the FAR clause, Performance-Based Payments, at FAR [52.232-32](#), in any resulting contract.

(b) In the event of any conflict between the terms proposed by the offeror and the terms in the clause at FAR [52.232-32](#), Performance-Based Payments, the terms of the clause at FAR [52.232-32](#) shall govern.

(c) The Contracting Officer will not accept the offeror's proposed performance-based payment financing if the financing does not conform to the following limitations:

(1) The Government will make delivery payments only for supplies delivered and accepted, or services rendered and accepted in accordance with the payment terms of this contract.

(2) The terms and conditions of the performance-based payments must—

(i) Comply with FAR [32.1004](#);

(ii) Be reasonable and consistent with all other technical and cost information included in the offeror's proposal; and

(iii) Their total shall not exceed 90 percent of the contract price if on a whole contract basis, or 90 percent of the delivery item price if on a delivery item basis.

(3) The terms and conditions of the performance-based financing must be in the best interests of the Government.

(d) The offeror's proposal of performance-based payment financing shall include the following:

(1) The proposed contractual language describing the performance-based payments (see FAR [32.1004](#) for appropriate criteria for establishing performance bases and performance-based finance payment amounts).

(2) A listing of—

(i) The projected performance-based payment dates and the projected payment amounts; and

(ii) The projected delivery date and the projected payment amount.

(3) Information addressing the Contractor's investment in the contract.

(e) Evaluation of the offeror's proposed prices and financing terms will include whether the offeror's proposed performance-based payment events and payment amounts are reasonable and consistent with all other terms and conditions of the offeror's proposal. (End of provision)

#### **FAR 52.233-2, Service of Protest (SEP 2006)**

(a) Protests, as defined in section [33.101](#) of the Federal Acquisition Regulation, that are filed directly with an agency, and copies of any protests that are filed with the Government Accountability Office (GAO), shall be served on the Contracting Officer (addressed as follows) by obtaining written and dated acknowledgment of receipt from Contracting Officer at:

Claudette Barbee

Bureau of Engraving and Printing  
Western Currency Facility  
9000 Blue Mound Rd  
Fort Worth, TX 76131  
United States  
[Claudette.barbee@bep.gov](mailto:Claudette.barbee@bep.gov)

(b) The copy of any protest shall be received in the office designated above within one day of filing a protest with the GAO. (End of provision)

#### **FAR 52.237-1, Site Visit (APR 1984)**

Due to the nature and complexity of this requirement offerors are encouraged to attend a site visit. The purpose of the site visit is for interested offerors to familiarize themselves with the facility and verify all measurements.

The **site visit will take place at the BEP Western Currency Facility (WCF). The site visit will be conducted for all interested offerors promptly at 1:00 pm Central Standard Time (CST) on Tuesday, May 2, 2023.** Interested vendors shall meet at:

Bureau of Engraving and Printing  
Western Currency Facility  
9000 Blue Mound Road  
Fort Worth, Texas 76131

Interested parties who are confirmed to this visit should be at **the entrance no later than 30 minutes prior to the start of the visit.** Each visitor will need to bring a valid (not expired) government issued (Divers License, Passport, etc.) photo ID to gain access to the WCF.

**All interested vendors attending the site visit will need to forward PII information (full name, date of birth, place of birth, address, company name and address) of the representative who will be attending** as it appears on their Identification (i.e., Driver License or Passport) to Claudette Barbee via E-mail no later than **1:00pm CST, Monday, April 17, 2023** at [claudette.barbee@bep.gov](mailto:claudette.barbee@bep.gov).

#### **L.1 GENERAL INFORMATION**

- L.1.1** Offeror is expected to examine this entire request for proposal. Failure to do so will be at the Offeror's own risk.
- L.1.2** Proposal shall set forth full, accurate, and complete information as required by this RFP package (including Attachments). The penalty for making false statements is prescribed in 18 U.S.C. 1001.
- L.1.3** In responding to this RFP, it is the Offeror's responsibility to provide current, complete, and accurate information in their proposal. If in reviewing the proposal the Government identifies or otherwise learns that the provided proposal information is not accurate or misrepresents the Offeror's status or capabilities, that information may be used by the Contracting Officer as part of the Offeror's responsibility determination and could result in the Offeror not being eligible for award.
- L.1.4** Proposal must be clear, coherent, and prepared in sufficient detail for effective evaluation. Proposal must clearly demonstrate how the Offeror intends to accomplish the

work required and must include convincing rationale and substantiation of all claims. Offeror shall assume that the Government has no prior knowledge of their facilities and experience and will base its evaluation on the information presented in the proposal. To be eligible for evaluation and award, offerors are required to substantially meet all solicitation requirements, such as terms and conditions, technical factors, and pricing information. Failure to comply with all terms and conditions of the solicitation may result in the offeror being removed from further consideration.

- L.1.5** The Government may award a contract without discussions with offeror (except clarifications as described in FAR 15.306(a)); therefore, the offeror's initial proposal should be clear and complete and contain the offeror's best terms from a technical, past performance and cost/price standpoint. The Government reserves the right to conduct discussions if later it is deemed necessary. The Government further reserves the right to reject any or all offers if such action is in the Government's best interest.

### **PERIOD FOR ACCEPTANCE OF OFFER**

The Offeror agrees to hold the prices in its proposal firm for **180** calendar days from the date specified for receipt of proposal unless another time period is specified in an amendment to the RFP.

### **COMMUNICATIONS PRIOR TO CONTRACT AWARD**

Offerors shall direct all communications to the attention of the Contracting Officer cited below in this RFP. Communications with the project officer or other officials may compromise the competitiveness of this acquisition and may result in cancellation of the requirement.

### **RELEASE OF INFORMATION**

Contract selection and award information will be disclosed in accordance with regulations applicable to negotiated acquisitions. Prompt written notice will be provided.

### **NOTICE TO OFFERORS REGARDING CLASSIFIED PROPOSALS**

BEP does not currently anticipate that proposals will be classified. If you choose to submit a classified proposal, you must provide notification of your intent to submit a classified proposal to [claudette.barbee@bep.gov](mailto:claudette.barbee@bep.gov).

### **SIGNATURE REQUIREMENTS**

Each Offeror shall complete the appropriate sections of the SF33 and return it with their proposal. All amendments issued under this RFP must also be signed and returned with the proposal. The SF33 and all other documents must be signed by an official authorized to bind the Offeror.

### **REPRESENTATION AND CERTIFICATIONS**

The Offeror shall complete and provide **all** applicable elements in Section K: Representations, Certifications, and Other Statements by Offerors documents with their proposal. Due to the sensitivity of the equipment, at no time shall the place of performance for the Assembly or FIT be in China.

## **PREPARATION COSTS**

This RFP does not commit the government to pay for the preparation and submission of a proposal. The Contracting Officer is the only individual who can legally bind the Government to the expenditure of public funds in connection with this procurement.

## **REQUEST FOR CLARIFICATION**

All requests for questions and/or clarifications related to the RFP shall be submitted via e-mail to [claudette.barbee@bep.gov](mailto:claudette.barbee@bep.gov). All questions or requests for clarifications must be submitted in writing no later than **12:00 PM CST, Wednesday, May 3, 2023**. The Offeror shall note in the email subject line the Request for Proposal, **2031ZA23R00005** and “Request for Clarification.” Prospective offerors are cautioned against contacting Government technical personnel in regard to this solicitation prior to award of this procurement. If such a contact occurs and is found to be prejudicial to competing offerors, the offeror making such a contact may be excluded from award consideration. Accordingly, all communications prior to award must be directed to Claudette Barbee, Contracting Officer.

**When submitting questions and comments, please refer to the specific text of the RFP in the following format:**

**Subject:** RFP No. **2031ZA23R00005**

**Reference:** RFP Section \_\_\_\_, Paragraph(s)\_\_\_\_\_, Page(s) \_\_\_\_\_.

Offerors may call to confirm receipt of inquiries submitted by these methods. Answers to questions will be provided to all offerors being solicited, giving due regard to the proper protection of proprietary information.

## **L.2 PROPOSAL SUBMISSION AND PREPARATION**

### **L.2.1 Proposal Submission**

Offerors shall examine and follow all instructions. Failure to do so may result in the proposal being determined to be unacceptable, not evaluated further and removed from consideration for award. Proposals shall conform to solicitation provision FAR 52.215-1, Instructions to Offerors – Competitive Acquisition and be prepared in accordance with this section. To aid in the evaluation, proposals shall be clearly and concisely written and well indexed (cross-indexed as appropriate) and logically assembled. Prospective Offerors are asked to bear in mind that all material submitted should be directly pertinent to the requirements of this RFP. Extraneous narratives, elaborate brochures, uninformative “PR” material and so forth, shall not be submitted. All pages of each part shall be appropriately numbered, and identified with the name of the Offeror, the date, and the solicitation number to the extent practical.

**The entire proposal (all Volumes) shall be submitted via email to [claudette.barbee@bep.gov](mailto:claudette.barbee@bep.gov) no later than the date and time specified in SF33 (Solicitation Section 9).**

## L.2.2 Submission Process

Proposal Section	Format	Page Limitation
Volume I, Factor 1, Technical	Written: Adobe PDF	No limitation
Volume II, Factor 2 Delivery Schedule, Factor 3 Contractor Qualifications and Resources, and Factor 4, Past Performance	Written: Adobe PDF	No limitation
Volume III, Factor 5, Cost/Price	Written: Adobe PDF and MS Excel 2013	No limitation

## L.2.3 General Format

Following is the specified format for Volumes I, Technical and Volume II, Delivery Schedule, Contractor Qualifications and Resources, and Past Performance:

- a) Volumes I and II **shall NOT** include price data.
- b) Pages shall be standard 8 ½” by 11” size.
- c) 12-point size type shall be used. The font shall be Times New Roman. The font size for tables and figures can be no smaller than 8-point. The font size for any graphics as it appears on the printed page can be no smaller than 8-point.
- d) Margins shall be one-inch at top/bottom and left/right of the page and pages may not be reduced. Headers and footers are allowed in the margins and their font size can be no smaller than 10-point.
- e) Pages shall be printed doubled-sided.
- f) Multiple pages or foldouts are limited to 11” by 17” size paper and shall count towards the page limit.
- g) Pages must be sequentially numbered.
- h) **Caution:** Pages submitted in excess of the page limits enumerated above will not be evaluated. Text and graphics with font size smaller than the minimum specified will not be evaluated.

## Table of Contents

Each Volume shall contain a Table of Contents, which shall provide sufficient detail so that all the important elements may be easily located. The use of tables and dividers is encouraged. The Table(s) of Contents, dividers, tabs, and cover sheets are excluded from the page count; no content within these pages will be considered for evaluation. Offerors should ensure these document pages are used solely for organization of the proposals.

## Cross Reference Matrix

Each Volume shall contain a cross-reference matrix relating the proposal information to Sections L and M of the RFP. The matrix shall be sorted by RFP section number and placed at the beginning of Volumes I and III.

## Response to the Requirements

Each Offeror shall submit a proposal that clearly and concisely describes and defines the Offeror's response to the requirements contained in the RFP.

**Use of general or vague statements such as “standard procedures will be used”, “noted”, “good engineering practices”, or “contractor will comply” will not satisfy this requirement. Simply repeating or paraphrasing the RFP requirements without substantive, meaningful discussion will not be acceptable.** The Government may consider an Offeror's unsupported assertions or mere restatement or paraphrasing of the Governments requirements, without further explanation, clarification, or context to be deficient.

Unnecessary elaboration or presentation beyond that which is sufficient to present a complete and effective proposal is not desired and may be construed as an indication of the Offeror's lack of understanding or cost consciousness. Elaborate artwork, expensive paper or bindings, and expensive visual or other presentation aids is neither necessary nor desired. The desire is for clear, succinct pictorials, graphs, etc.

## **L.3 VOLUME I/FACTOR 1, TECHNICAL INSTRUCTIONS**

**L.3.1** Offeror's Technical shall reflect an in-depth approach and solution for achieving the objectives of the BEP. Offeror shall present in detail the technical approach, methodologies, technologies, support materials and/or techniques that will be applied in meeting the government requirement.

**L.3.2** The Offerors shall address in sufficient details each of the subfactors and elements as described in each of the Sections in the Statement of Need.

At a minimum, the Offeror shall address the following:

### **Factor 1 – Technical**

- **SubFactor 1 – Materials Requirements (C.3.1)** – The Offeror shall describe, in detail, how the proposed equipment will use BEP supplied materials as described in Section C.3.1 of the Statement of Work. **MANDATORY MINIMUM REQUIREMENT**
- **SubFactor 2– Environmental and Safety Requirements (C.3.2)** – The Offeror shall describe, in detail, how the proposed equipment will meet all the Environmental and Safety requirements as described in Section C.3.2 of the Statement of Work. **MANDATORY MINIMUM REQUIREMENT**
- **SubFactor 3 – Functional Requirements (C.3.3)** – The Offeror shall describe, in detail, how the proposed equipment will meet all the functional requirements as described in Section C.3.3 of the Statement of Work.

- **SubFactor 4 – Performance Requirement (C.3.4)** – The Offeror shall describe, in detail, how the proposed equipment will meet all the performance requirements as described in Section C.3.4 of the Statement of Work.
- **SubFactor 5 – Design Requirement (C.3.5)** – The Offeror shall describe, in detail, how the proposed equipment will meet all the design requirements as described in Section C.3.5 of the Statement of Work. This shall include a detailed plan to maintain and update all software and hardware on the system, as well as the Backup and Recovery plan for the Hot Foil machine as stated in Section C.3.5.10.

The contractor shall also provide a process to calibrate the vision and inspection system, along with a monthly calibration procedure. The contractor may use the BEP CalCheck Sheet (Attachment E) in its calibration process and procedure, but it is not required as long the contractor provides their own calibrated and certified target.

- **SubFactor 6 – Support Systems/Materials (C.3.6)** – The Offeror shall describe, in detail, how the proposed equipment will meet all the support systems and materials requirements as described in Section C.3.6 of the Statement of Work.
- **SubFactor 7 – Services (C.3.7)** – The Offeror shall describe, in detail, how the vendor will provide all the services required as described in Section C.3.7 of the Statement of Work.
- **SubFactor 8 – Options (C.4)** – The Offeror shall describe, in detail, all the options offered for the system as described in Section C.4 of the Statement of Work

*Failure to provide full specifications may result in the offer being deemed unacceptable. A rating of “Unacceptable” for any one sub-factor will render the entire Factor rating to be deemed “Unacceptable”.*

#### **L.4 VOLUME II/ FACTOR 2 DELIVERY SCHEDULE, FACTOR 3 CONTRACTOR QUALIFICATIONS AND RESOURCES, FACTOR 4, PAST PERFORMANCE PREPARATION INSTRUCTIONS**

- L.4.1 FACTOR 2 – DELIVERY SCHEDULE (Section F.6)** - The Offeror shall propose and address all deliverables in Section F.6 of the Solicitation. In addition, Offeror shall provide a schedule for completion of the work and delivery times specified in the SOW as desired requirements. The offeror submitted schedule of completion of the work and delivery time shall be based on their capabilities to complete the work and deliver the equipment. Schedule shall be shown in terms of calendar months from the date of authorization to proceed, or where applicable, from the date of stated event, as for example receipt of a required approval by the Contracting Officer.
- L.4.2 FACTOR 3 – CONTRACTOR QUALIFICATIONS AND RESOURCES (C.3.6 AND C.3.8)** - The Offeror shall furnish plans, including documentation on their qualifications and resources for providing and supporting the equipment. The BEP intends on utilizing the equipment for the entire design life in multiple shifts per day operation. Critical to the BEP’s long-term utilization of the equipment is the Offeror’s capabilities, resources, and plans to support the system.

The Offeror shall provide documentation on their strategic plans, procedures, activities, resources, and infrastructure to provide a quality machine on time, provide the materials and services to support the development, fabrication, testing, installation, start-up, and training on the system to the BEP, and provide services to support the system during the entire life of the system.

The contractor shall provide the following:

**(1) Supply Chain**

The contractor shall provide information on their Supply Chain plans, procedures, and practices. The document shall identify risks, measure impacts, establishes contingencies, provides guidelines, and established audits of suppliers to minimize disruptions to supply of components. The document shall include information on any supplier certifications and agreements with the contractor.

**(2) Quality Assurance**

The contractor shall provide information on their Quality Assurance plans, procedures, and practices. The document shall identify the methods, tests, procedures, and activities that the contractor undertakes to ensure delivery of quality products and services. The document shall identify the resources and infrastructure the contractor has in place to ensure the production of a quality product and providing quality services to customers, including certifications. The documents shall address how the contractor will maintain version control of software and programs used on the system. The document shall address how the contractor monitors and addresses concerns or issues after placing a machine into operation, including addressing issues or concerns raised by other customers of similar products.

**(3) Maintenance and Service**

The contractor shall provide information on their Maintenance and Service plans, procedures, and practices to provide parts and services. The document shall include information on the contractor's infrastructure and resources, parts structure, availability, lead-times for delivery of parts and responses to service requests, training programs for customers and availability of expert technicians to support solving problems, making corrective actions to systems, or modifying equipment.

**(4) Long-Term Support**

The contractor shall provide information on their plan, procedures, and practices to provide Long-Term Support, support of the equipment in operation over the intended life. The document shall identify how the contractor will monitor, notify customers and address the following: supply chain changes or issues; design or component issues that impact the life, functionality or performance of the equipment; upcoming end-of-life or obsolescence of software, parts or components; operational issues experienced by other customers with a model/series of equipment; potential improvements or modifications to a model/series of equipment to address

issues or offer improvements to the service life, functionality or performance of the equipment. The document shall identify the resources and infrastructure in place and plan to support the long-term operation of the equipment.

**(5) Delivery Risk Mitigation**

The contractor shall provide a Delivery Risk Mitigation Plan. The plan shall address how the contractor intends to meet the delivery schedule for the presses, including what contingencies and/or negotiations on other projects that may need to occur to ensure availability of resources to meet the delivery schedule, and taking into account all other critical delivery projects the contractor is obligated to perform, has proposed to perform, or is proposing to perform. The plan shall address the contractor's suppliers, infrastructure, personnel, and other resources. The plan shall take into consideration the existing pandemic and similar global impacts on operations, supplies, shipping, and transportation.

**(6) IT Support**

The contractor shall provide long term IT support plan of the system for operation, including SW upgradation, patching and maintenance.

**L.4.3 FACTOR 4 – PAST PERFORMANCE** - The Government will assess the Offeror's capability to perform under this contract by evaluating Offeror's Past Experience on previous same or similar contracts. Offeror should reference their most relevant projects for consideration for past performance. ***Offerors must identify at least three (3)*** Federal, State, Local, Commercial, or Foreign contracts (preferred with high volume production with currency substrates) that demonstrate recent and relevant experience. Recent is defined as within the last 10 years. Offerors shall provide the following information:

1. Project Title
2. Description of the Project
3. Contract Vehicle Type (Single-Award, or Task Order)
4. Type of Contract (Firm-Fixed Price, Time and Materials, Cost Reimbursable, or Hybrid – please indicate type of hybrid contract)
5. Contract Number
6. Contract Amount
7. Contract role (Prime or Subcontractor)
8. Point of Contact's name, address, phone number and email address
9. Contracting Officer's name, address, telephone number and email address
10. Current status, e.g. completed and/or in progress, start and estimated completion dates
11. A brief narrative of why your firm believes this reference is relevant to the proposed tasks.

BEP may contact those references during the evaluation process to verify relevant experience and the level of performance. The BEP may, at its discretion, obtain and evaluate information from sources other than those provided by the Offeror.

#### **L.4.4 Past Performance Questionnaire Form**

The Offeror shall forward the Past Performance Questionnaire Form (**Attachment J**) to each reference identified in the proposal for the prime and any key teaming partner(s). The Offeror shall ensure the references' contact information is current and accurate. Offeror shall ensure the assessor is properly notified and given adequate time to complete their assessment. The Government reserves the right to contact any number of references and use sources other than those provided by the Offeror to obtain information related to past performance and prior experience. **The Offeror shall ensure that the assessors complete the Past Performance Questionnaire. If the Offeror has Past Performance available, then the BEP requests at least one (1) Past Performance Questionnaire from the assessors by the proposal due date and time via email to [claudette.barbee@bep.gov](mailto:claudette.barbee@bep.gov).**

#### **L.5 VOLUME III/FACTOR 4, PRICE PREPARATION INSTRUCTIONS**

**L.5.1** Offeror's price shall clearly delineate proposed prices, rates and explain its pricing strategy. Offerors are cautioned that their proposed prices should be consistent with the proposed technical approach and delivery schedules in the proposal as well as reflective of the effort required by the solicitation. Unrealistically low proposed prices may be grounds for eliminating a proposal from the competition on the basis that the Offeror does not understand the requirement. Proposed burdened hourly rates shall be rounded to the nearest whole cent, and final monetary extensions (using the CLIN structure in Section B) shall be rounded to the nearest whole dollar.

Offeror shall provide pricing for all CLINs. **The price shall include supporting rationale and any assumptions in terms of its advantage(s) to the Government.** The price proposal must contain sufficient information to allow the government to perform an analysis of the proposed price.

BEP will evaluate unit pricing and aggregate pricing. Offerors are encouraged to submit tiered pricing with volume discounts based on the number of machines ordered, which may be more than one at a time.

#### **L.5.2 Pricing Sheet**

The Offeror's proposal shall include a completed pricing sheet in excel. The Offeror shall ensure mathematical computations are correct. Errors in addition or multiplication may be considered nonresponsive.

- (a) Offeror's proposed pricing shall align with Section B, Supplies or Service and Prices/Costs. The proposed fixed unit prices and amounts shall be adequately supported in order for the Contracting Officer to make the determination that the prices are fair and reasonable.

- (b) Offerors are required to provide a breakdown for each fixed unit price. For proposed labor, Offeror shall propose fully burdened hourly rates for key personnel and estimated hours required for FIT, BAT and Training.
- (c) Pricing Worksheet shall also include all materials, equipment, travel, shipping, and any other costs associated with the performance of the resulting contract.
- (d) Offerors shall propose on all contract line items, either by price or “NSP” (Not Separately Priced). A zero dollar figure in a proposal means the Offeror will provide the line item at no charge to the Government. A line item price left blank will be considered nonresponsive to this request and the proposal will not be considered for award.

**[END OF SECTION]**

## SECTION M – EVALUATION FACTORS FOR AWARD

<u>CLAUSE NUMBER</u>	<u>TITLE</u>	<u>DATE</u>
52.217-4	Evaluation of Options Exercised at Time of Contract Award	JUN 1988
52.217-5	Evaluation of Options	JUL 1990

### **M.1 PROPOSAL PREPARATION COMPLIANCE DETERMINATION**

The Government will review offeror’s proposal to determine compliance with the proposal preparation instructions. If it is determined that the proposal is substantially not in compliance with the instructions in Section L, the Government may deem that proposal to be unacceptable and it will not be evaluated further. The proposal may be removed from consideration for contract award.

An adjectival rating system will be used in the rating of each Contractor’s proposal for all Evaluation Factors with the exception of Factor 5 - Price.

### **M.2 EVALUATION FACTORS FOR AWARD**

Proposals submitted in response to this solicitation will be evaluated in accordance with the criteria set forth in this Section. Pursuant to FAR 15.306(a)(3), offerors are advised that the Government may evaluate proposals and award a contract without discussions (except clarifications as described in FAR 15.306(a)). Therefore, the initial proposal should contain the offeror's best terms from a cost or price and technical standpoint. The Government reserves the right to conduct discussions if the Contracting Officer later determines them to be necessary. Offerors are reminded that unsupported promises to comply with the requirements will not be sufficient. Proposals must document clear and convincing evidence that fully substantiates proposal claims relating to promised performance. Inconsistencies between the various sections of an offeror's proposal may indicate a lack of understanding of the complexity of the requirements and increased proposal risk and could result in a reduced rating in the applicable factor(s) and/or subfactor(s).

### **M.3 COMPETITIVE RANGE DETERMINATION**

The Government intends to award on initial offers. However, the Government reserves the right to establish a competitive range and conduct discussions/negotiations with Offerors if it is in the best interest of the Government, in accordance with FAR 15.306(b), (c) and (d). The Government further reserves the right to reject any or all offers if such action is in the Government's best interest.

The Government may limit the competitive range to only those Offerors with the most highly rated proposals and/or the most likely chance for award. The Contracting Officer will request final proposal revisions from all Offeror(s) remaining in the competitive range at the conclusion of discussions. Negotiations will be conducted to the extent deemed necessary by the Government. Therefore, Offerors are cautioned to submit their proposal on the basis of their most favorable terms to the Government, since the Government reserves the right to make an award without further negotiations or discussions.

#### **M.4 BASIS FOR AWARD**

The Government intends to award a contract resulting from this solicitation to the responsible offeror(s) whose proposal(s) represents the best value after evaluation in accordance with the factors and subfactors in the solicitation (see FAR 52.215-1(f)). “Best value” as defined in FAR Part 2, means the expected outcome of an acquisition that, in the Government’s estimation, provides the greatest overall benefit in response to the requirement.

The Government intends to award a single contract. However, the Government reserves the right to make no award, depending on the quality of the proposals received and the availability of funds. The Government may reject any proposal that is evaluated to be unrealistic in terms of program commitments, contract terms and conditions, or unrealistically high or low in price when compared to Government estimates, such that the proposal is deemed to reflect an inherent lack of competence or failure to comprehend the complexity and risks of the procurement herein.

#### **M.5 RELATIVE IMPORTANCE OF EVALUATION FACTORS**

The Government will conduct a tradeoff process in order to determine which Offeror represents the best value to the Government. In determining which proposal provides the best value to the Government, Technical Factor and Delivery Timing are significantly more important than Contractor Qualifications and Resources, Past Performance, and Price. Contractor Qualifications and Resources and Past Performance are more important than Price. When combined, Technical, Delivery Timing, Contractor Qualifications and Resources, and Past Performance are significantly more important than Price. Based upon the results of the integrated assessment of the technical, past performance, and price proposals, the Government may make an award to other than the lowest-priced offeror or the offeror with the highest technical rating if the source selection official determines that doing so represents the best value to the Government.

**A final rating of no less than “Acceptable” must be achieved for the overall Technical factor and no less than “Satisfactory Confidence” (or “Neutral Confidence” where there is no relevant past performance information available) for Past Performance in order for an award to be made.**

Best value for the Government will be determined by comparing differences in the non-price factors with differences in price to the Government. In making this comparison the Government is more concerned with obtaining superior technical or performance capabilities than with making an award at the lowest overall price to the Government. The Government will not make an award at a significantly higher overall price to the Government to achieve slightly superior technical or performance capabilities. The degree of importance of price as a factor could become greater depending upon the equality of the proposals for the non-price factors evaluated; where competing proposals are determined to be substantially equal for non-price factors, price would become the controlling factor. The Government may use various price analysis techniques in accordance with FAR 15.404-1 to ensure a fair and reasonable price including.

#### **M.6 MANDATORY MINIMUM ELEMENTS**

Each proposal must demonstrate the offeror’s ability to meet the specified requirements outlined in Sections C of the RFP.

Offerors should note certain elements within the RFP have been identified as **Mandatory** which the Offeror must demonstrate can be met, at a minimum, before it may be considered for award. If Offers received do not demonstrate an ability to meet the mandatory minimum elements summarized below, the Government will reject the proposal from further consideration. The mandatory minimum elements that shall be met are as follows:

**Factor 1 – Technical:**

- Subfactor 1 – Materials Requirement (C.3.1)
- Subfactor 2 - Environmental and Safety Requirements (C.2.2)

**A final rating of no less than “Acceptable” must be achieved for all mandatory minimum elements identified above. Failure to meet the mandatory minimum for any specified element is cause for rejection of the proposal as technically unacceptable.**

**M.7 EVALUATION APPROACH**

The Government will evaluate each proposal strictly in accordance with its content and will not assume that performance will include areas omitted from the offeror's proposal. The Government will evaluate the completeness of the offer based on the documentation provided. The evaluation will assess the strengths and weaknesses offered by each offeror as they relate to the requirements contained in the solicitation. Each proposal will be evaluated based on how well the offeror has complied with the requirements specified in Section L and M of the solicitation, as represented by the contents of the offeror's proposal, and against the evaluation factors. The evaluation factors are as follows, in descending order of importance.

Factor 1 – Technical

- Subfactor 1 – Materials Requirements (C.3.1) (*Mandatory*)
- Subfactor 2 – Environmental and Safety Requirements (C.3.2) (*Mandatory*)
- Subfactor 3 – Functional Requirements (C.3.3)
- Subfactor 4 – Performance Requirements (C.3.4)
- Subfactor 5 – Design Requirements (C.3.5)
- Subfactor 6 – Support Systems/Materials (C.3.6)
- Subfactor 7 – Services (C.3.7)
- Subfactor 8 – Options (C.4)

Factor 2 – Delivery Schedule (F.6)

Factor 3 – Contractor Qualifications and Resources (C.3.6 and C.3.8)

Factor 4 – Past Performance

Factor 5 – Cost

The Government will assess the extent to which the offeror’s proposal possesses clear understanding of the technical areas delineated in the solicitation and the offeror’s overall approach for accomplishing the technical requirements of the effort. The Government will also

assess the degree to which an offeror's proposed technical approach meets or exceeds the requirements of the solicitation. This assessment will account for risk of disruption of schedule, increased cost or degradation of performance, the need for increased Government oversight, or the likelihood of unsuccessful contract performance. Risk will be assessed as an inherent part of the Technical factor and within each of the Technical subfactors.

The Technical Factor 1 is divided into the following subfactors:

- Subfactor 1 – Materials (C.3.1)
- Subfactor 2 – Environmental and Safety (C.3.2)
- Subfactor 3 – Functional (C.3.3)
- Subfactor 4 – Performance (C.3.4)
- Subfactor 5 – Design (C.3.5)
- Subfactor 6 – Support Systems/Materials (C.3.6)
- Subfactor 7 – Services (C.3.7)
- Subfactor 8 – Options (C.4)

Subfactors 1 and 2 are mandatory requirements. Factors 3 – 8 are listed in descending order of importance.

#### **FACTOR 2 – DELIVERY SCHEDULE (Section F.6)**

The Government will evaluate how the Offeror's proposal will meet or exceed BEP's desired delivery targets as described in Section F.6 of the RFP. Furthermore, the evaluation will consider how the Offeror plans to handle work site challenges such as unscheduled work stoppages, and oversight from the highest levels of the Government to ensure adherence to the BEP delivery targets. All Elements are of equal importance.

#### **FACTOR 3 – CONTRACTOR QUALIFICATIONS AND RESOURCES (C.3.6 and C.3.8)**

The Government will evaluate how the Offeror's proposed contractor qualifications and resources meet or exceed BEP's requirements as described in C.3.6., C.3.8. and Section L.4.2 of the solicitation. All Elements are of equal importance.

#### **FACTOR 4 - PAST PERFORMANCE**

An Offeror's description of its past performance, questionnaires completed by their clients, and information developed by the Government, will be used to develop a performance relevancy and confidence level. The Government will evaluate the offeror's record of past and current performance to ascertain the probability of successfully performing the required efforts of the SOW. The Past Performance evaluation establishes a performance relevancy and confidence assessment by combining the ratings.

Past performance will be evaluated to determine the Offeror's performance relevancy and confidence for the subject solicitation. Past performance will be evaluated on how well the Offeror, as well as any proposed major subcontractors, performed the contracts/work referenced

in the Offeror’s proposal. Past performance will also evaluate overall contract/work performance as it relates to quality, schedule, management and cost control.

The Government will give consideration to relevant past performance over the past five (5) years. Relevant past performance is considered to be federal, state, and local government or commercial contracts/work performed or being performed that were/are similar in size, scope, and complexity in nature to the current acquisition. The Government shall make the determination as to the relevance of an Offeror’s past performance. Past Performance information shall be gathered from Government references identified by the Offeror.

The Government reserves the right to obtain past performance information from any and all sources including Contractor Performance Assessment Reporting System (CPARS), Past Performance Information Retrieval System (PPIRS), and sources outside the Government, regardless of whether such information has been referenced or provided by the Offeror. The Government also reserves the right to contact references and points of contact provided by the Offeror and otherwise verify statements and representations made in the Offeror’s proposal. The Government will determine which past performance data is most relevant. Past performance information obtained independently of the Offeror’s proposal may be more relevant than past performance information submitted by the Offeror. It is incumbent upon the Offeror to explain the relevance of the references provided. Offerors are reminded that while the Government may elect to consider data obtained from other sources, the burden of providing thorough and complete past performance source data, including the return of questionnaires, rests with the Offerors.

In the case of an Offeror, together with any proposed major subcontractors, without a record of relevant past performance or past performance information is not available, a Neutral rating and an Unknown Confidence rating will be assigned to the Past Performance Factor. In conducting a performance relevancy assessment, an offeror will be assigned one of the ratings below:

<b>Evaluation Factor 4: Past Performance Relevancy Ratings</b>	
<b>Rating</b>	<b>Description</b>
<b>Very Relevant</b>	Present/past performance effort involved <u>essentially the same scope</u> and magnitude of effort and complexities this solicitation requires.
<b>Relevant</b>	Present/past performance effort involved <u>similar scope</u> and magnitude of effort and complexities this solicitation requires.
<b>Somewhat Relevant</b>	Present/past performance effort involved <u>some of the scope</u> and magnitude of effort and complexities this solicitation requires.
<b>Not Relevant</b>	Present/past performance effort involved <u>little or none of the scope</u> and magnitude of effort and complexities this solicitation requires.
<b>Neutral</b>	No recent/relevant past performance record is available, a meaningful assessment rating cannot be assigned.

<b>Evaluation Factor 4: Past Performance Confidence Ratings</b>	
<b>Rating</b>	<b>Description</b>

<b>Substantial Confidence</b>	Based on the offeror’s recent/relevant performance record, the Government has a <u>high expectation</u> that the offeror will successfully perform the required effort.
<b>Satisfactory Confidence</b>	Based on the offeror’s recent/relevant performance record, the Government has a <u>reasonable expectation</u> that the offeror will successfully perform the required effort.
<b>Limited Confidence</b>	Based on the offeror’s recent/relevant performance record, the Government has a <u>low expectation</u> that the offeror will successfully perform the required effort.
<b>No Confidence</b>	Based on the offeror’s recent/relevant performance record, the Government has <u>no expectation</u> that the offeror will successfully perform the required effort.
<b>Unknown Confidence</b>	No recent/relevant performance record is available or the offeror’s performance record is so sparse that <u>no meaningful confidence</u> assessment rating can be reasonably assigned.

**Factor 5 – PRICE**

Adjectival ratings will not be used to evaluate an offeror’s proposed price volume.

The price volume will be evaluated for fairness, reasonableness, and completeness in order to make a fair and reasonable determination. An assessment that the proposal is not fair and reasonable or complete will result in the offer being considered unacceptable for award.

**Fairness and Reasonableness:** The price that will be evaluated is the Offeror’s “total proposed price”. The techniques and procedures described under FAR 15.404-1(b) Price Analysis will be the primary means of assessing price reasonableness. For a price to be fair and reasonable, it must represent a price to the Government that a prudent person would pay in the conduct of competitive business assuming reasonable economy and efficiency. Cost Analysis evaluation techniques described under FAR 15.404-1(c) through (g), as determined appropriate, may also be performed in further determining the reasonableness of the price.

**Completeness:** Price proposals shall be evaluated for completeness by assessing the responsiveness of the proposed price; by assessing the level of detail the Offeror provided price data for all requirements in the SOW and assessing the traceability of the price. For the price data to be complete, the Offeror must provide all the data necessary to support traceability of the offer.

[END OF SECTION]

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