



Advanced Functional Fabrics of America

Design for Manufacturability Prototype Garment Demonstration

Request for Proposals (RFP)

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TABLE OF CONTENTS

1. Purpose and Program Overview	3
2. Program Objectives	3
3. Eligibility Requirements	3
4. Scope of Work	4
4.1 Task 1: Design Review	4
4.2 Task 2: Pre-Prototype Planning	4
4.3 Task 3: Prototype Fabrication	4
4.4 Task 4: Process Observation & Data Collection.....	4
4.5 Task 5: Inspection & Quality Assurance	5
4.6 Task 6: Manufacturability Assessment	5
4.7 Task 7: Future Cost & Pricing Analysis	5
5. Deliverables Summary	6
6. Furnished Information.....	6
7. Proposal Requirements	6
7.1 Capabilities and Technical Approach	6
7.2 Programmatic Proposal.....	7
7.3 Cost Proposal	7
7.4 Past Performance	7
7.5 Government Purpose Rights Acknowledgement	7
8. Proposal Submission Process and Formatting Guidelines	7
6. Schedule (Notional)	8
8. Evaluation Criteria	8
8.1 Criteria Weights.....	8
8.2 Technical Approach (40%).....	8
8.3 Programmatic Approach (20%).....	8
8.4 Cost/Price (25%)	8
8.5 Past Performance (15%).....	9
9. Inspection and Acceptance Criteria	9
9.1 General.....	9
9.2 Prototype Inspection Requirements.....	9
9.3 Documentation Requirements	9
9.4 AFFOA Inspection and Participation.....	9
9.5 Acceptance Criteria	9
9.6 Rejection and Rework	10
9.7 Final Acceptance.....	10
10. Administrative Notes & Questions.....	10

1. Purpose and Program Overview

Advanced Functional Fabrics of America, Inc. (AFFOA) seeks proposals from qualified domestic cut-and-sew manufacturers to execute a Prototype Garment Demonstration effort supporting the DOW Design for Manufacturability Business Case Analysis Project. This prototyping effort builds directly on the completed Commonality Recommendations Report, which identified priority combat uniforms and suggested design-for-commonality modifications.

The goal of this effort is to validate manufacturability, cost impacts, and scalability of selected design changes through the fabrication of physical prototypes and associated manufacturing analysis.

AFFOA is looking for partners currently producing or have recently produced one or more of the following combat uniform types:

- ACU / FR ACU = Army Combat Uniform / Fire Retardant Army Combat Uniform
- IHWCU = Improved Hot Weather Combat Uniform
- MCTCU = Marine Corps Tropical Combat Uniform
- NWU Type III = Navy Working Uniform Type III
- ACP = Advanced Combat Pant

AFFOA anticipates awarding one or more contracts to qualified industry partners.

2. Program Objectives

The objectives of this program are to:

- Fabricate prototype garments incorporating AFFOA-selected commonality recommendations.
- Evaluate the manufacturability of selected design changes under representative production conditions.
- Quantify the impact of the proposed changes on manufacturing complexity, labor content, setup and changeover requirements, and overall production efficiency.
- Assess the potential effects of the proposed changes on production scalability, automation readiness, and broader implementation across DOW combat uniform programs.
- Generate objective manufacturing data and industry feedback to support validation of the Commonality Recommendations Report and future DOW decision-making.

3. Eligibility Requirements

- Open to companies of any size with US manufacturing capabilities
- Compliance with Berry Amendment required
- Previous performance producing products under analysis
- Organizations are not required to be AFFOA members to submit a proposal or be awarded

4. Scope of Work

This project will include two sets of prototypes: 1) prototypes of a garment the proposer currently produces with commonality modifications, and 2) prototypes of a garment previously- or never-produced by the proposer with the same commonality modifications. Proposals can be submitted for coats, trousers, or both garment types.

Note: before the contract award, minor changes to the final design recommendations and patterns may be made. Changes may include minor modifications in pattern for fit, components, stitch specifications, and bartack specifications.

4.1 Task 1: Design Review

A Design Review will be conducted via teleconference within 15 days of contract award. AFFOA and the Contractor shall review the proposed garment designs, provide clarification, as required, and finalize the approach.

Design Review Objectives:

- Review designs and recommended modifications
- Identify clarifications and propose manufacturability adjustments
- Finalize prototype configuration and fabrication plan

4.2 Task 2: Pre-Prototype Planning

- Develop a detailed fabrication plan including:
 - Materials sourcing strategy
 - Labor and equipment requirements
 - Process flow and sequencing
- Identify risks and mitigation strategies

4.3 Task 3: Prototype Fabrication

- Fabricate 5 prototypes each of the currently produced product (jacket and/or trousers) with commonality modifications
- Fabricate 5 prototypes each of a corresponding product (jacket and/or trousers) not in production (different uniform type) with commonality modifications
- Prototypes should be made:
 - Utilizing best commercial manufacturing practices
 - Maintaining configuration control aligned with the approved design

Task 3 Deliverable: **10-20 prototype units**

4.4 Task 4: Process Observation & Data Collection

- Allow AFFOA to observe fabrication activities
- Collect and Document:
 - Process steps and workflows
 - Cycle times and labor inputs
 - Equipment utilization
 - Production efficiency

- Provide access to relevant production data as requested

Task 4 Deliverable: **Process Documentation** providing workflow and production data as outlined above

4.5 Task 5: *Inspection & Quality Assurance*

- Perform 100% inspection of finished prototypes
- Document defects, rework, and quality issues
- Provide inspection records to AFFOA

Task 5 Deliverable: **Inspection Records** for prototypes

4.6 Task 6: *Manufacturability Assessment*

- Develop manufacturability report, including:
 - Summary of the prototype fabrication process
 - Cost and time data including:
 - Comparison to the original process
 - Transition time between production lines
 - Identified challenges and bottlenecks
 - Recommended design or process improvements
 - Assessment of production feasibility
 - Efficiency estimate (SAM improvement)
 - Ramp-up times

Task 6 Deliverable: **Manufacturability Report** including information outlined above

4.7 Task 7: *Future Cost & Pricing Analysis*

PROJECTED COST: At the end of the prototype fabrication, the contractor shall delineate what they expect is a fair and reasonable price to produce and deliver the item at scale. **Note:** This is a separate cost estimate from the cost proposal in Section 5.3.

The volume scale should consider an estimated production quantity of 1,000 to 4,000 units per month. The total unit cost shall be broken down by line item into material, shipping and labor costs. The contractor shall include recommendations for cost reduction if and where applicable. This future costing is for planning purposes only and IS NOT a guarantee or obligation for future funding or follow-on contracts.

Objectives:

- Provide updated cost estimates based on prototype production, including:
 - Labor breakdown
 - Material costs
 - Estimated unit cost at scale
- Quantify projected cost reduction from design changes (cost baseline reference prior performance manufacturing)

Task 7 Deliverable: **Cost Model** addressing the information outlined above

5. Deliverables Summary

Below is a summary of deliverables aligned with the tasks in the scope of work above.

Task	Deliverable	Description
3	Prototypes	10-20 units incorporating design changes
4	Process Documentation	Workflow and production data
5	Inspection Records	Inspection records for Prototypes
6	Manufacturability Report	Process and feasibility analysis
7	Cost Model	Updated pricing estimates

6. Furnished Information

The following will be provided to awarded contractors:

- Current Product Descriptions and patterns
- Recommended design changes for commonality
 - Redlined patterns and Purchase Descriptions (as applicable)
 - PATTERNS: Patterns for use in prototyping will be provided in a DXF format for the Male-Medium-Regular.
 - PATTERN REVIEW. The awardee shall review the furnished patterns to determine if any clarifications are needed at the Design Review after contract award. The awardee shall document all pattern adjustments over the duration of the contract. Approved changes made to patterns must be supplied back to AFFOA in the same digital format as received from AFFOA.

7. Proposal Requirements

To respond to this RFP, AFFOA will provide access to the list of commonality recommendations by garment. Interested proposers should reach out to AFFOA at proposals@affoa.org to request the list of commonality recommendations.

Interested proposers shall submit a technical proposal and quote addressing the information outlined below and in Subsections 7.1-7.4.

To maintain a comparative analysis, the base materials for all clothing items shall meet the existing Purchase Descriptions identified. The contractor shall identify the risks to meeting the notional delivery schedule and how they will mitigate the risks. No detailed Technical Data Package will be furnished, so AFFOA shall rely on suppliers to fabricate the garments based upon their experience producing combat uniforms and utilize their best commercial production and inspection practices.

During the first 10 business days of the solicitation period, interested suppliers can request a teleconference to review the commonality recommendations via appointment for a maximum of 1 hour. The Government/AFFOA owns all data rights from this effort.

7.1 Capabilities and Technical Approach

- Capabilities and approach to prototype manufacturing

- Experience with exact or similar garments/products:
 - ACU / FR ACU = Army Combat Uniform / Fire Retardant Army Combat Uniform
 - IHWCU = Improved Hot Weather Combat Uniform
 - MCTCU = Marine Corps Tropical Combat Uniform
 - NWU Type III = Navy Working Uniform Type III
 - ACP = Advanced Combat Pant
- Approach to process documentation and data sharing

7.2 Programmatic Proposal

- Schedule and milestones
- Ability to procure necessary Berry Compliant materials for prototypes within delivery schedule
- Identified risks and proposed mitigations
- Staffing plan and facility(s) description

7.3 Cost Proposal

- Quote for scope of work and deliverables detailed in Section 4 and Section 5 above
- Labor, material, and overhead breakdown
- Prototype unit costs by type

7.4 Past Performance

- Relevant DOW or commercial experience
- Examples of similar prototyping and/or manufacturing efforts

7.5 Government Purpose Rights Acknowledgement

- Sign provided attestation form to acknowledge Government Purposes Rights

8. Proposal Submission Process and Formatting Guidelines

To submit a proposal, interested proposers shall email the required compiled documentation to proposals@affoa.org by July 17, 2026 at 8PM EDT.

Proposers must utilize the provided templates for the technical narrative (word) and cost proposal (excel) which can be found on the Opportunity Webpage here: <https://affoa.org/dfm-rfp>

To maintain consistency through submission, review, and approval processes, please follow these guidelines:

Font: Proposals must be prepared single spaced with either Times New Roman or Arial font, 11-point size minimum. A 10-point font size may be used in figures and tables.

Figures, Tables, Graphs, and Images: Figures and tables must be numbered and referenced in the text by that number. They should be of a size that is easily readable and may be in landscape orientation.

Page Limit: The main body of the proposal is limited to three (3) pages, not including the Cover Page, Table of Contents, and Appendices. Pages that exceed these guidelines may not be reviewed.

Page Numbering: Page numbers are requested, starting with the cover page.

6. Schedule (Notional)

Milestone	Timeline
RFP Release	Day 0
Proposal Due	Day 30
Award Notification	Day 45
Contract Executed	Day 60
Design Review	15 Days After Contract Execution
Prototype Delivery	90 Days After Contract Execution

8. Evaluation Criteria

Award(s) will be made using the best value tradeoff approach. Technical factors are more important than cost, but cost remains a critical consideration. See below for more information on evaluation criteria and weights.

8.1 Criteria Weights

Category	Weight
Technical Approach	40%
Programmatic Approach	20%
Cost/Price	25%
Past Performance	15%

8.2 Technical Approach (40%)

- Ability to execute prototype fabrication
- Understanding of manufacturability and cost drivers
- Data collection and reporting capability (manufacturability and cost analysis)

8.3 Programmatic Approach (20%)

- Schedule feasibility
- Risk identification and mitigation
- Production readiness

8.4 Cost/Price (25%)

- Cost realism and completeness
- Reasonableness of estimates

- Alignment with technical approach

8.5 Past Performance (15%)

- Relevant experience
- Demonstrated manufacturing capability
- Quality performance

9. Inspection and Acceptance Criteria

9.1 General

All deliverables shall be subject to inspection and acceptance by AFFOA (and/or DOW stakeholders, as applicable). Acceptance will be based on compliance with approved design configurations, and completeness of deliverables.

9.2 Prototype Inspection Requirements

The contractor shall:

- Conduct 100% inspection of all prototype garments prior to delivery
- Verify conformance to approved design specifications and configurations
- Ensure workmanship meets best commercial practices for military or performance apparel

Inspection shall include, at a minimum:

- Dimensional verification against provided patterns/specifications
- Seam integrity and construction quality
- Component integration (closures, trims, reinforcements)
- Labeling (if applicable)
- Overall functional completeness

9.3 Documentation Requirements

The contractor shall provide the following with each prototype delivery:

- Inspection records and checklists
- Summary of defects identified and corrective actions taken
- Final measured dimensions (if applicable)

9.4 AFFOA Inspection and Participation

AFFOA reserves the right to:

- Participate in in-process or final inspections at the contractor's facility
- Witness fabrication activities for data collection purposes
- Request additional documentation or clarification on inspection results

9.5 Acceptance Criteria

Deliverables will be accepted based on the following:

- Prototypes meet approved commonality design configuration
- No critical defects that impact function, durability, or intended use
- Minor defects are documented and do not affect usability

- Required documentation (inspection records, manufacturability reports, cost data) is complete and accurate

9.6 Rejection and Rework

AFFOA reserves the right to reject deliverables that:

- Deviate from approved commonality design configuration without authorization
- Exhibit significant quality defects
- Are incomplete or missing required documentation

Rejected items shall be corrected or replaced at no additional cost, within a mutually agreed timeframe.

9.7 Final Acceptance

Final acceptance will occur upon:

- Receipt and approval of all prototypes
- Approval of manufacturability reports
- Acceptance of cost and process documentation

10. Administrative Notes & Questions

AFFOA reserves the right to:

- Award one, multiple, or no contracts
- Request clarifications or revisions
- Modify scope based on program needs
- AFFOA/DOW retains data rights

AFFOA expects awarded contractors shall follow best commercial practices.

This RFP does not constitute a guarantee or commitment to future funding or procurement.

Interested proposers may submit questions regarding the RFP requirements, eligibility, submission procedures, and other administrative matters via email. Questions and responses that may be relevant to multiple participants may be shared through the RFP Opportunity Webpage or FAQs to ensure equal access to information. Questions should be sent to proposals@affoa.org and include "Design for Manufacturability RFP" in the subject line to facilitate timely processing.