

PART I – THE SCHEDULE
SECTION C – DESCRIPTION/SPECIFICATIONS/STATEMENT OF WORK

1.0 SCOPE

The scope of this contract is to provide a total of up to 7,000 5.56x45mm North Atlantic Treaty Organization (NATO) **personal defense weapons** (PDW) throughout the life of this contract to numerous Department of Homeland Security components. This Statement of Work delineates performance criteria and testing to be used for the evaluation of the firearm.

2.0 APPLICABLE DOCUMENTS

2.1 General. This Statement of Work lists all performance requirements for the acquisition of a DHS 5.56x45mm NATO **personal defense weapon**.

2.2 Government Documents. The following documents form a part of this document to the extent specified herein:

MIL-STD-810G: Department of Defense Test Method Standard for Environmental Engineering Considerations and Laboratory Tests

MIL-STD-1913: Dimensioning of Accessory Mounting Rail for Small Arms Weapons

2.3 Non-Government publications. The following documents form a part of this document to the extent specified herein:

ANSI/SAAMI Z299.4-1992: Voluntary Industry Performance Standards for Pressure & Velocity of Centerfire Rifle Sporting Ammunition for the Use of Commercial Manufacturers
Sporting Arms and Ammunition Manufacturer's Institute (SAAMI)
555 Danbury Road
Wilton, CT 06897

ANSI/ASQ Z1.4-2008: Sampling Procedures and Tables for Inspection by Attributes
American Society for Quality
600 North Plankinton Avenue
Milwaukee, Wisconsin 53203

ISO 9001:2008, Quality Management Systems Requirements
International Organization for Standardization
1, rue de Varembe, Case postale 56
CH-1211 Geneva 20, Switzerland

(Non-Governmental standards and other publications are normally available from the organizations that prepare or distribute the documents. These documents may also be available in or through libraries, Internet search, or other informational services).

2.4 Order of Precedence. In the event of a conflict between the text of this Statement of Work and the references cited herein, this solicitation/contract takes precedence.

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3.0 REQUIREMENTS AND TESTING STANDARDS

- 3.1 General. DHS and its components have a requirement for a 5.56x45mm NATO, select-fire firearm suitable for personal defense use in close quarters and/or when maximum concealment is required.

Only one specific nomenclature firearm from each Contractor shall be submitted for solicitation testing and considered for contract award.

- 3.2 Testing. The specifications that are subject to testing under this contract are set forth in Table I, Requirements Verification Test Matrix on page 4. The National Firearms and Tactical Training Unit (NFTTU) will conduct all testing; however, NFTTU reserves the right to use an outside laboratory to conduct performance verification if it deems necessary.

The awardee or awardees of the subject contract agrees to allow DHS to release testing data of their firearm samples to Federal agencies, Military, and law enforcement. Release of this data will be on a case-by-case basis and will only be forwarded after receipt of a request on official agency or department letterhead. Requests to DHS will state that the “Information is requested for official use only and will not be disseminated outside the requesting agency (i.e. Federal agencies, etc.) or department.

- 3.2.1 Solicitation Test. The solicitation testing will verify that initial firearm samples supplied by each competing Contractor meet the minimum requirements of this SOW. Contractor’s samples will then be rated on their ability to surpass all performance parameters in Table I, Requirements Verification Test Matrix, on page 4. Those performance characteristics listed under Basic Compliance criteria shall be certified by the Contractor, and/or evaluated by Non-Destructive Inspection (NDI) conducted by the NFTTU. Major performance characteristics are requirements that will be ascertained by functional testing of the firearms. Testing may be halted for any sample (and the associated samples rejected) if a firearm fails any Basic Compliance or Major requirement (as determined by NFTTU). Testing will be halted for any sample (and the associated samples rejected) if a firearm from that Contractor exhibits hazardous and/or unsafe attributes (as determined by NFTTU). All solicitation samples from awardee of the subject contract will become property of DHS/ICE NFTTU upon receipt and will not be returned. Samples from the unsuccessful offerors will be returned.

- 3.2.2 First Article Test (FAT). The specifications annotated for FAT in Table I will be verified for First Article samples received under the contract. All FAT samples must meet the requirements set forth in this solicitation and exhibit performance that is comparable to what was demonstrated during solicitation testing for all requirements during FAT. The Government reserves the right to decrease the amount of testing it performs under the FAT regime. All samples submitted pursuant to FAT will become property of DHS/ICE NFTTU upon receipt and will not be returned. The Government may invoke its right to demand the Contractor conduct a FAT for the following conditions:

- a. First twelve production samples after solicitation.
- b. Design change of the firearm or components.
- c. Design change of manufacturer's production process and/or equipment.
- d. Relocation of manufacturer’s production facility.
- e. Major firearm quality defects, recalls, and/or any other substandard performance issues.

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- f. Manufacturer changes supplier of critical components (barrel, receiver, internal mechanism parts that affect firing).
- g. A production lapse of six months or more.

The Government will be responsible for conducting a FAT if it is invoked for condition "a". The Contractor will be responsible (under Government supervision) for conducting the FAT for all other conditions and will be responsible for all associated expenses to include testing, shipping costs, administrative/processing costs, and any other expenses associated with FAT and/or firearm quality issues.

- 3.2.3 Limited Technical Inspection (LTI). The specifications annotated for LTI in Table I will be verified for each production sample received during the duration of the contract. All contract production samples must meet the requirements set forth in this solicitation and exhibit performance that is comparable to what was exhibited during solicitation testing for all requirements during LTI. The Government reserves the right to increase the amount of testing it performs under the LTI regime up to the full amount of testing set forth in the "Solicitation" column. The Government also reserves the right to decrease the amount of testing it performs under the LTI regime. Firearms will be inspected in their entirety for general compliance.
- 3.2.4 Retest FAT. Any retest of FAT requested by the Contractor will be at the Contractor's expense. ICE reserves the right to send representatives to observe the retest if testing is performed at the Contractor's location.

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Table I: Requirements Verification Test Matrix

	Performance Characteristic	Requirement Paragraph	Test Method	Solicitation	FAT	LTI
Basic Compliance	Quality System	3.3	4.2	X	X	
	Sample Size	3.5	4.3	X	X	
	Documentation	3.6	4.4	X	X	
	Supplemental Items	3.7	4.5	X	X	
	Action/Mechanism	3.9	4.6	X	X	X
	Fire Control Selector	3.10	4.7	X	X	X
	Trigger	3.11	4.8	X	X	
	Overall Length	3.12	4.9	X	X	
	Weight	3.13	4.10	X	X	
	Barrel	3.14	4.11	X	X	
	Caliber	3.15	4.12	X	X	X
	Pistol Grip	3.16	4.13	X	X	X
	Buttstock	3.17	4.14	X	X	X
	Forend	3.18	4.15	X	X	X
	Sling Attachments	3.19	4.16	X	X	X
Major	Finish	3.20	4.17	X	X	X
	Magazine	3.21	4.18	X	X	X
	Sights	3.22	4.19	X	X	X
	Reliability	3.24	4.20	X	X	
	Durability	3.25	4.21	X	X	
	High Temperature	3.26	4.22	X	X	
	Low Temperature	3.27	4.23	X	X	
	Salt Water Immersion	3.28	4.24	X	X	
	Sand & Dust	3.29	4.25	X	X	
Parts Interchange	3.30	4.26	X	X		
Drop Test	3.31	4.27	X	X		
Accuracy	3.32	4.28	X	X		

- 3.3 **Quality Management System (QMS)**. The manufacturer shall have a QMS in place that enables the organization to identify, measure, control and improve key manufacturing processes.
- 3.3.1 **Quality Control (QC)/Quality Assurance (QA)**. The Contractor shall provide a current QC/QA process synopsis including examples of their quality plans for the manufacturing of DHS firearms with their solicitation sample. Submission of a complete copy of the manufacturer's Quality Manual or a copy of the manufacturer's ISO certification would fulfill this requirement.
- 3.4 **Warranty**.
- 3.4.1 The Contractor shall warrant the firearm for at least one (1) year from the date of delivery of the firearm to the Government. The manufacturer shall repair or replace firearms due to defects in material or workmanship.
- 3.4.2 During the period of the warranty, the Government will ship defective item (s) back to the manufacturer's facility for repair or replacement. The Contractor shall be responsible for all return shipping charges.
- 3.5 **Sample Size**.
- 3.5.1 **Solicitation Test**. The sample size for the solicitation submittal shall be twelve (12) firearms and ten (10) magazines per firearm.

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3.5.2 First Article Test (FAT). The sample size for the FAT submittal shall be twelve (12) firearms and ten (10) magazines per firearm.

NOTE: Samples shall be delivered to: NFFTU, 320 East Chestnut Avenue, Altoona, Pennsylvania 16601.

- 3.6 Documentation. The following documentation shall be supplied with each firearm model submitted for solicitation (unless otherwise noted):
- Technical proposal containing the following (supplied with solicitation only):
 - Company profile for the Contractor
 - Description of manufacturing facilities and capabilities of the manufacturer
 - Description of proposed firearm (product data sheet)
 - Operators/User's Manual (one per firearm)
 - Technical Package
 - Parts list detailing all firearms components nomenclature
 - An exploded view drawing detailing the assembly of the firearm parts.
 - Engineering drawing package for all firearm components. The drawing package of awardee of the subject contract will be retained by the Government for source control through the contract period of performance and returned to the Contractor at the conclusion of the contract. Drawings submitted by unsuccessful offerors will be returned with the solicitation firearm samples. All engineering drawing package material will be treated as confidential and proprietary items. Drawing package shall be submitted as an electronic copy on disc.
 - Maintenance procedures detailing a preventative maintenance regimen for replacement or adjustment of parts and recommended solvents and lubricants. This will be the basis for the Contractor to determine the quantity of spare parts to supply with the firearm samples and will be adhered to during solicitation reliability/durability function fire testing.
 - Armorer's Overhaul/Rebuild Manual (supplied with FAT only). Six printed copies and one electronic copy on disc shall be provided. The manual shall detail all procedures and gaging requirements necessary for overhaul/repair of the firearm.
 - Copy of manufacturer's QC/QA process synopsis, Quality Manual, or ISO certificate as detailed in Section 3.3.1.
 - Certificate of Conformance (C of C) stating that the firearm samples meet all Statement of Work Basic Compliance requirements.
 - Certificate of Conformance (C of C) stating that the Contractor has function fired a minimum of 7,500 rounds of 5.56mm through a PDW sample with no Class 4 malfunctions (see Table II). The Contractor's test firearm shall be the same model as the solicitation sample submission.
 - Repair Parts Price List as detailed in Section 3.23.

NOTE: All Certificate of Conformance (C of C) shall be signed by a designated company official authorized to bind the company.

NOTE: All solicitation sample packaging and documentation sent with the samples shall clearly be identified with the Contractor's name and solicitation number.

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- 3.7 Supplemental Items. The following items shall be supplied with each firearm model submitted for solicitation and FAT testing:
- All potential spare parts (excluding trigger assembly, barrel, bolt, bolt carrier assembly, and receiver) needed to support reliability/durability testing outlined in Sections 3.23/3.24. The quantity of spare parts supplied by the Contractor should be based on the Contractor's recommended maintenance intervals for a 7,500 round test.
 - Two (2) sets of special tools, if needed, for complete disassemble/reassemble of the firearm.
- 3.8 Training. The Contractor shall provide armorer training within thirty days of contract award. Training shall be provided to no less than twelve (12) designated armorers, on-site at the NFFTU Altoona, PA location. Training duration shall be up to five (5) days in length and will cover all aspects of maintenance, repair, and overhaul/rebuild of the firearm. Training will include firearm design, operation, assembly/disassembly, maintenance, malfunctions, and gaging. The Contractor shall provide two (2) cut-away models of the firearm at the time of on-site training and these will become the property of the NFFTU.
- 3.9 Action/Mechanism.
- 3.9.1. The firearm shall be able to be operated by a left or right-handed user without permanent modification.
 - 3.9.2. The action shall be select-fire (capable of semi-automatic and automatic fire).
 - 3.9.3. The action shall fire from a closed bolt.
 - 3.9.4. The action shall be gas operated.
 - 3.9.5. The action shall have a bolt catch that automatically locks the bolt to the rear upon firing the last round in the magazine. The operator shall be able to manually use the bolt catch to lock the bolt to the rear with the magazine removed from the firearm. When the bolt catch is depressed the bolt shall return to battery position.
 - 3.9.6. The magazine catch shall securely retain the magazine in the magazine well. The magazine release shall be spring loaded and be designed to prevent inadvertent activation. The magazine release, when depressed, shall disengage the magazine catch and permit the magazine to fall free from the magazine well.
 - 3.9.7. The action shall possess a firing pin designed to prevent accidental discharges if the firearm is dropped.
 - 3.9.8. The firearm shall be designed in such a way that the operator can clear a malfunction using immediate action without the use of special tools.
 - 3.9.9. The firearm shall be able to be safely operated by a shooter wearing gloves.
 - 3.9.10. The action shall be capable of accepting all standard NATO STANAG 20 and 30 round M16 magazines (NSN 1005-00-921-5004) and Magpul 30 round PMAG (NSN 1005-01-576-5159). The magazine well shall be designed to allow easy insertion of a magazine.
 - 3.9.11. The receiver top shall be equipped with an integral MIL-STD-1913 Picatinny rail for mounting sights and other accessories.
 - 3.9.12. The firearm shall be capable of being field stripped without the use of special tools.

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- 3.9.13 The firearm shall be designed so that components cannot be readily assembled incorrectly or in reverse, thus rendering the firearm inoperable.
- 3.10 Fire Control Selector.
- 3.10.1 The fire control selector shall have three positions; safe, semi-automatic, and automatic. The selector shall have positions which are clearly labeled for the mode of fire.
- 3.10.2 The selector shall operate manually without binding from one position to another when the hammer is cocked.
- 3.10.3 The selector shall remain in place in each position under spring detent.
- 3.10.4 The selector shall be capable of being checked for position both visually and by feel.
- 3.10.5 The selector shall be movable between the mode of fire positions by the operator without moving the firing hand from the shooting position.
- 3.10.6 The selector shall be designed to allow for operation by left and right handed shooters with no parts changes or modification.
- 3.11 Trigger
- 3.11.1 The trigger shall return to its normal forward position under spring action after partial or complete trigger pull.
- 3.11.2 The trigger pull shall not be less than 5.5 pounds and not exceed 9.5 pounds.
- 3.12 Overall Length.
- 3.12.1 The overall length of the firearm shall not exceed 30 inches with the stock fully extended.
- 3.12.2 The overall length of the firearm shall not exceed 20 inches with the stock fully retracted and/or folded.
- 3.13 Weight. The unloaded weight of the firearm (without magazine) shall not exceed 7 pounds.
- 3.14 Barrel.
- 3.14.1 The barrel shall have a rifling twist rate of 1 in 7 inches.
- 3.14.2 The barrel bore and chamber shall have a corrosion resistant and wear resistant coating or treatment that is equal to or better than chrome plating.
- 3.14.3 The barrel shall be equipped with a flash suppressor and/or muzzle brake. The muzzle device will be rated on its ability to reduce muzzle signature. It is desired that the muzzle device effectively reduces muzzle rise during firing.
- 3.14.4 A minimum barrel length is not specified. It is desired that the barrel length be as long as possible while maintaining the overall length requirements of Section 3.12.
- 3.15 Caliber. The firearm shall be chambered for 5.56x45mm NATO.
- 3.16 Pistol Grip.
- 3.16.1 The pistol grip shall be a fixed, vertical pistol grip constructed of a durable material.
- 3.16.2 The pistol grip shall be designed for use by right or left handed shooters.

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3.17.1 The buttstock shall be easily adjustable for length of pull.

3.17.2 The buttstock shall be either collapsible or folding.

3.17.3 The firearm shall be fully operational with the buttstock either fully extended and/or collapsed/folded.

3.17.4 The buttstock, if a folding design, shall not readily move from the folded position.

3.17.5 The buttstock, whether collapsible or folding design, shall be able to be deployed using the non-firing hand without removing the firing hand from the pistol grip.

3.17.5 The butt plate shall either be serrated, checkered, or be manufactured from a non-slip material.

3.18 Forend.

3.18.1 The front forend shall incorporate MIL-STD 1913 Picatinny rails on the top, bottom, and both sides to accommodate the attachment of optics or accessories.

3.18.2 It is desired that the forend Picatinny rail sections be capable of being removed or added. If rail sections are removable, the sections shall be designed/constructed to not readily loosen.

3.18.3 The forend shall be constructed of durable, heat resistant material.

3.18.4 A one-piece monolithic forend/upper receiver is acceptable.

3.19 Sling Attachments.

3.19.1 The buttstock shall have slots capable of accepting a 1 ¼” wide sling and/or have the capability to mount a removable sling attachment.

3.20 Finish.

3.20.1 The external finish shall be a non-reflective black, dark grey, or dark earth color.

3.20.2 The firearm exterior and interior shall be protected with a durable corrosion resistant coating or made from durable corrosion resistant material.

3.20.3 The coating and materials shall be abrasive, impact, and chemical resistant equal to or greater than phosphated steel or anodized aluminum.

3.20.4 The interior and exterior surfaces shall be free of rough surfaces, voids, cracks or other manufacturing defects.

3.21 Magazine.

3.21.1 Magazines shall be compatible with standard NATO STANAG M16 design.

3.21.2 The magazine shall have a capacity to hold thirty (30) 5.56x45mm NATO rounds.

3.21.3 Two (2) magazines shall be supplied with each firearm shipped under contract.

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The front sight shall have a black or dark gray non-reflective finish. The front sight shall be capable of being removed and/or be a fold down design. The front sight post shall be protected.

3.22.2 Backup Rear Sight Assembly.

The rear sight shall have a black or dark gray non-reflective finish. The rear sight shall have at least one aperture of no less than 0.20 inches diameter. The rear sight shall be capable of being removed and/or be a fold down design. The rear sight shall be mounted at the rear of the receiver. The rear sight shall not interfere with the mounting of optics. The rear sight shall be adjustable for windage and from at least 100 to 300 yards/meters elevation.

3.23 Repair Parts.

3.23.1 The Contractor shall provide a price list (by nomenclature description) of all firearms components and assemblies to be used by DHS for repair and maintenance of the firearm throughout its anticipated service life. Pricing shall be good for a five (5) year period.

3.23.2 The awardee or awardees of the subject contract shall provide notice of design changes to any component and a First Article Test (FAT) will be required as outlined in Section 3.2.2.

3.24 Reliability.

3.24.1 Samples shall be tested with 4,000 rounds (per firearm). The firearms shall collectively exhibit no more than twenty (20) Class 1, nine (9) Class 2, or two (2) Class 3 malfunctions (see Table II). The firearms shall exhibit no Class 4 malfunctions. If any firearm experiences a Class 4 malfunction, testing of that Contractor's samples will be discontinued. The number/type of firearm attributed malfunctions and parts breakages shall be recorded and used to rate performance. Malfunction classes are listed in Table II. The Contractor shall supply a minimum of six (6) trained shooters to participate in solicitation reliability testing. A Contractor's representative shall be available during testing to assist NFFTU personnel with maintenance and firearm repairs (using supplied replacement parts). The headspace of each firearm shall be monitored throughout reliability testing. The bolt shall not fully close on the "field max" 1.4730 inch headspace gage (NSN 5220-00-070-7814). Testing shall be discontinued for a firearm if replacement parts are not available.

3.24.2 Cycles Completed - Reliability. Each firearm will be rated for its ability to complete 250 round firing cycles without repair or replacement of parts.

3.25 Durability.

3.25.1 Three (3) samples used during reliability shall be tested with an additional 3,500 rounds (per firearm). The firearms shall collectively exhibit no more than fifteen (15) Class 1, six (6) Class 2, or one (1) Class 3 malfunctions (see Table II). The firearms shall exhibit no Class 4 malfunctions. If any firearm experiences a Class 4 malfunction, testing of that Contractor's samples will be discontinued. The number/type of firearm attributed malfunctions and parts breakages shall be recorded and used to rate performance. The Contractor shall supply a minimum of three (3) trained shooters to participate in solicitation durability testing. A

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Contractors' representative can be available during testing to assist NFTTU personnel with maintenance and firearm repairs (using supplied replacement parts). The headspace of each firearm shall be monitored throughout durability testing. The bolt shall not fully close on the "field max" 1.4730 inch headspace gage (NSN 5220-00-070-7814). Testing shall be discontinued for a firearm if replacement parts are not available.

- 3.25.2 Cycles Completed - Durability. Each firearm will be rated for its ability to complete 250 round firing cycles without repair or replacement of parts. Rating will be cumulative based on the total of 30 cycles from reliability and durability.

NOTE: Contractor supplied shooters shall be familiar with the firearm's function and safety features as well as standard range safety practices.

NOTE: The total duration of the firearm reliability/durability testing will be a minimum of 5 weekdays. NFTTU will coordinate with each Contractor regarding testing schedule and location.

Table II: Malfunction and Type Allowance

Class	Type
1	Malfunction can be cleared by the operator within 10 seconds.
2	Malfunction that cannot be cleared by operator within 10 seconds; but can be cleared by operator with equipment immediately available to a law enforcement officer in the field (i.e., Leatherman-type tool or pocketknife).
3*	Malfunction not correctable by operator and requires a higher level of maintenance. This may include the replacement or repair of a part other than the barrel, bolt, action assembly, or receiver.
4	Catastrophic malfunction that requires replacement of the barrel, bolt, receiver, and/or anything that affects safe operation.

*Parts replacement(s) in accordance with the manufacturer's recommendation for preventative maintenance does not constitute a Class 3 malfunction.

- 3.26 High Temperature. Samples shall be tested with 60 rounds (per firearm), after temperature soaking of the firearm for 8 hours at 125°F. The number/type of firearm attributed malfunctions and parts breakages shall be recorded and used to rate performance. The firearm shall not exhibit any Class 4 malfunctions.
- 3.27 Low Temperature. Samples shall be tested with 60 rounds (per firearm), after temperature soaking of the firearm for 8 hours at -45°F. The number/type of firearm attributed malfunctions and parts breakages shall be recorded and used to rate performance. The firearm shall not exhibit any Class 4 malfunctions.
- 3.28 Salt Water Immersion. Samples shall be tested with 60 rounds (per firearm), after immersion in a 5% saline solution at a depth of 6 inches for one minute followed by 24 hours in an environmental chamber at 70°F and 70% humidity. The number/type of firearm attributed malfunctions and parts breakages shall be recorded and used to rate performance. The firearm shall not exhibit any Class 4 malfunctions.
- 3.29 Sand & Dust. Samples shall be tested with 60 rounds (per firearm), after being subjected to a blowing sand and dust environment in accordance with MIL-STD-810G. The number/type of firearm attributed malfunctions and parts breakages shall be recorded and used to rate performance. The firearm shall not exhibit any Class 4 malfunctions.
- 3.30 Parts Interchange. All firearm components subjected to disassembly shall be 100% interchangeable between firearms without additional fitting or alternation (excluding the bolt/barrel). Upon reassembly, the firearm shall be fully functional.

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3.31 Drop Test. The firearm shall be equipped with a discharge control mechanism that is designed to prevent the firearm from firing as a result of an impact, while the hammer is in the cocked position, with the safety off. Additionally, the firearm shall be serviceable and exhibit no major damage as the result of being dropped on a concrete pad from a height of three feet in the following orientations:

- a. Muzzle facing the concrete pad.
- b. Butt of stock down facing the concrete pad.
- c. Top of the receiver and barrel facing the concrete pad.

NOTE: Major damage is defined as damage that would result in the gun being unsafe to fire, discharging during testing, or malfunctioning during firing.

3.32 Accuracy.

3.32.1 Accuracy. Each firearm will be rated for its initial accuracy at 50 yards. The average extreme spread of five 5-shot groups shall be no greater than 2.5 inches.

4.0 VERIFICATION

- 4.1 Performance verification. Table I details all performance criteria. Except as otherwise specified, the Government reserves the right to perform any of the inspections and tests set forth in this Statement of Work, throughout the duration of the contract, where such inspections and tests are necessary to ensure that supplies and services conform to prescribed requirements.
- 4.2 Quality Management System. The Government will analyze the manufacturer's quality management system for basic compliance. If the Contractor is ISO 9001:2008 certified, they shall submit written proof of ISO certification from an accredited agency. NOTE: ISO certification is not required, but will suffice for compliance with 3.3. Additionally, Government personnel or a third-party representative may perform a QC system audit after contract award. If conducted, the audit will be performed at the Contractor's manufacturing facility.
- 4.3 Sample Size. All samples submitted will be visually inspected.
- 4.4 Documentation. All required documentation as listed in Section 3.6 shall accompany the sample and will be examined to verify compliance.
- 4.5 Supplemental Items. All items will be inspected to verify compliance.
- 4.6 Action/Mechanism. All samples submitted will be visually and physically examined to verify compliance.
- 4.7 Fire Control Selector. All samples submitted will be visually and physically examined to verify compliance. The safety mechanism of all samples submitted will be tested for compliance by actuating and checking for function every 250 rounds during the reliability/durability test phase.
- 4.8 Trigger. The trigger pull of all samples submitted will have the trigger pull measured by a calibrated Dvorak TriggerScan trigger pull tester. Initial and post reliability/durability trigger pull shall be measured and recorded on all samples. The average of three (3) trigger pulls per sample will be used to verify compliance.
- 4.9 Overall Length. All samples submitted will have the overall length measured with a steel ruler to verify compliance.

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- 4.10 Weight. All samples submitted will be weighed using an electronic scale to verify compliance.
- 4.11 Barrel. All samples submitted will have the barrel verified by physical inspection and the use of a bore scope. Barrel length will be measured from the face of the closed bolt to the barrel muzzle. A Phantom v7 high-speed camera will be utilized to detect visible muzzle flash emitted from the muzzle while firing. Five rounds of Lake City M855 5.56mm will be fired in a darkened range with the firearm mounted in a rest.
- 4.12 Caliber. All samples submitted will have the chamber dimensions verified by physical inspection and the use of certified headspace gages. Initial and post reliability/durability headspace shall be measured and recorded on all samples. The gage shall be inserted in the cleaned chamber and the bolt returned to the battery position. Only finger pressure shall be used to close the bolt. Maximum headspace: bolt shall not fully close.
- 4.13 Pistol Grip. All samples submitted will be visually and physically examined to verify compliance.
- 4.14 Buttstock. All samples submitted will be visually and physically examined to verify compliance.
- 4.15 Forend. All samples submitted will be visually and physically examined to verify compliance.
- 4.16 Sling Attachments. All samples submitted will be visually and physically examined to verify compliance.
- 4.17 Finish. All samples submitted will be visually and physically examined to verify compliance.
- 4.18 Magazine. All samples submitted will be visually and physically examined to verify compliance. The magazine shall be capable of holding thirty (30) 5.56x45mm NATO rounds.
- 4.19 Sights. All samples submitted will be visually and physically examined to verify compliance.
- 4.20 Reliability. Six (6) samples will undergo a 4,000 round (per firearm) reliability test in multiples of 250 round firing cycles. The following ammunition types will be utilized: Speer 24450 64 grain .223 Remington, Speer XM223SP1 62 grain .223 Remington, Federal XM223T3 62 grain .223 Remington, and Lake City M855 5.56mm. Ammunition will be supplied by DHS. The firing cycle shall be 60% automatic mode and 40% semi-automatic mode. Sustained rate of fire will be maintained throughout each cycle and each 250 round cycle will be fired within 5 minutes. The firearms will be cooled and cleaned after each firing cycle. A detailed inspection will be performed after every fourth (4th) firing cycle. All recommended maintenance procedures will be adhered to and parts will be changed at the Contractor recommended maintenance interval (using supplied replacement parts). All malfunctions will be analyzed by two (2) NFFTU armorers to determine the malfunction type/cause and malfunctions attributed to the firearm(s) will be recorded. Firearms experiencing a Class 3 malfunction will be repaired (using Contractor supplied replacement parts) and will continue testing. Non-destructive testing will be conducted on each firearm after completion of the reliability test. The key firearm components (barrel, bolt, and receiver) shall be free of cracks, seams and other defects. The headspace shall be measured using certified headspace gages.
- 4.21 Durability. Three (3) randomly selected samples used in the reliability test will undergo an additional 3,500 round (per firearm) durability test in multiples of 250 round firing cycles. The following ammunition types will be utilized: Speer 24450 64 grain .223 Remington, Speer XM223SP1 62 grain .223 Remington, Federal XM223T3 62 grain .223 Remington, and Lake City M855 5.56mm. The firing cycle shall be 60% automatic mode and 40% semi-automatic mode. Sustained rate of fire will be maintained throughout each cycle and each 250 round cycle will be fired within 5 minutes. All

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firing shall be from the shoulder. The firearms will be cooled and cleaned after each firing cycle. A detailed inspection will be performed after every second (2nd) firing cycle. All recommended maintenance procedures will be adhered to and parts will be changed at the Contractor's recommended maintenance interval (using supplied replacement parts). All malfunctions will be analyzed by two (2) NFFTU armorers to determine the malfunction type/cause and malfunctions attributed to the firearm(s) will be recorded. Firearms experiencing a Class 3 malfunction will be repaired (using supplied replacement parts) and will continue testing. Testing shall be discontinued for a firearm if replacement parts are not available. If any firearm experiences a Class 4 malfunction, testing of that Contractor's samples will be discontinued. Non-destructive testing will be conducted on each firearm after completion of the durability test. The key firearm components (barrel, bolt, and receiver) shall be free of cracks, seams and other defects. The headspace shall be measured using certified headspace gages.

- 4.22 High Temperature. Three (3) randomly selected samples will be temperature conditioned in an environmental chamber at $125 \pm 5^{\circ}\text{F}$ and 0% humidity for 8 hours. After 8 hours of temperature conditioning each firearm will be used to fire 60 rounds of ammunition within 2 minutes after removal from the environmental chamber. The ammunition used will also be temperature conditioned at 125°F for 8 hours. Any malfunction will be recorded and analyzed by NFFTU armorers.
- 4.23 Low Temperature. Three (3) randomly selected samples will be temperature conditioned in an environmental chamber at $-45 \pm 5^{\circ}\text{F}$ and 0% humidity for 8 hours. After 8 hours of temperature conditioning each firearm will be used to fire 60 rounds of ammunition within 2 minutes after removal from the environmental chamber. The ammunition used will also be temperature conditioned at -45°F for 8 hours. Any malfunction will be recorded and analyzed by NFFTU armorers.
- 4.24 Salt Water Immersion. Three (3) randomly selected samples will be immersed in 5% (by weight) saline solution at a depth of 6 inches for one minute. Upon removal from the saline solution, the firearms will be subjected to environmental conditioning at $70 \pm 5^{\circ}\text{F}$ and 70% humidity for 24 hours in an environmental conditioning chamber. After environmental conditioning, each firearm will be used to fire 60 rounds of ammunition within 2 minutes after removal from the environmental chamber. Any malfunction observed will be recorded and analyzed by NFFTU armorers.
- 4.25 Sand & Dust. Three (3) randomly selected samples will be subjected to blowing sand and dust per Method 510.5 detailed in MIL-STD-810G . After sand and dust conditioning, each firearm will be used to fire 60 rounds of ammunition. Any malfunction observed will be recorded and analyzed by NFFTU armorers.
- 4.26 Parts Interchange. Prior to reliability testing, an NFFTU armorer will disassemble all samples. All parts and assemblies, excluding barrels and bolts, will be sorted and placed in individual bins. All parts and assemblies will be inspected for burrs, sharp edges and workmanship. A second NFFTU armorer will reassemble the firearms using randomly selected components. Any components found not to be interchangeable and the need for any tools needed to disassemble/reassemble the firearm will be noted. A Contractors' representative can be available during parts interchange testing to assist NFFTU personnel with disassembly and assembly.
- 4.27 Drop Test. Three (3) randomly selected samples will undergo 3-foot drop testing onto a concrete pad. One firearm will be oriented to drop so as to land on the muzzle, one firearm will be oriented to drop so as to land on the butt of the firearm stock, and one firearm will be oriented to drop so as to land on the top of the barrel/receiver. Each firearm will contain a magazine loaded with dummy ammunition.

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A cartridge case containing a live primer will be in the chamber during the drop test. After drop testing, the firearms will undergo a LTI by NFFTU armorers and 5 rounds of ammunition will be fired in each firearm. Any discharges during drop testing and malfunctions during subsequent firing will be recorded and analyzed by NFFTU armorers.

- 4.28 Accuracy. Three (3) randomly selected samples will be subjected to initial accuracy testing. Accuracy will be evaluated at 50 yards by shooting five (5) 5-shot groups. The ammunition used for accuracy testing will be Speer 24450 64 grain .223 Remington. The firearm will be accuracy tested mounted in a machine rest that is designed to securely clamps the receiver top of Colt M4 type carbines. If the sample firearm is of such a design that the NFFTU machine rest cannot be utilized, the Contractor will be notified and will have an opportunity to supply one of their own design for use in accuracy testing. An Oehler optical target or equivalent system will be used to record the groups.

5.0 REPORTING REQUIREMENTS

The Contractor shall submit a monthly report providing the Contracting Officer (CO) and Contracting Officer's Representative (COR) status of all orders placed under the respective contracts by all DHS components to include; delivery order number; delivery order date, quantity for each Contract Line Item Number (CLIN); total delivery order obligation amount; and delivery order due date.

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Definitions

American National Standards Institute (ANSI) – Organization that oversees the development of voluntary consensus standards for products, services, processes, systems, and personnel in the United States.

Certificate of Conformance (C of C) – Contractor’s assurance that the equipment provided meets the contract’s specifications.

National Firearms Tactical Training Unit (NFTTU) – Organization responsible for the facilitation and execution of ICE law enforcement responsibilities by providing personnel with firearms, intermediate force weapons, protective equipment, training, logistical support and guidance that will testing to ensure that firearms, body armor, and ammunition carried by ICE agents – and officers and agents at other DHS components meet or exceed the highest level of standards.

Personal Defense Weapon (PDW) - 5.56x45mm NATO, select-fire firearm suitable for personal defense use in close quarters and/or when maximum concealment is required.

Quality Management System – Organizational structure, procedures, processes and resources needed to ensure the product manufactured meets the needs of the customer.

Sporting Arms and Ammunition Manufacturers Institute Inc. (SAAMI)– Organization of the United States leading manufacturers of firearms, and ammunition. Responsible for creating and publishing industry standars for safety, interchangeability, reliability, and quality.