

## Statement of Work

1. This program is seeking the following Commercial-off-the-shelf (COTS) surface dry suit variants: (1) Maritime Assault Suit System (MASS) and (2) Lightweight MASS (L-MASS); each consisting of an over-garment with neck ring or any other tension relief and ventilation system, repair kit and user manual, which can be used as a combat suit in maritime, land, airborne, shipboard, and transitional environments of the US Navy. To keep the user comfortable, the MASS and L-MASS shall provide the greatest degree of water vapor management and must be durable enough for rugged field use.
2. The MASS and L-MASS shall keep the operator dry in maritime and terrestrial extremes and all weather conditions without interfering with typical mission movements or compromising range of motion for activities including, but not limited to swimming, running, assault movements, and weapons manipulation. Both versions must be as lightweight as possible to meet associated service life, fit comfortably and must be able to keep the operator dry during surface swims and while immersed in 10 feet of water for 5 minutes without significant weight gain.
3. The MASS and L-MASS and all components and design features shall be compatible with individual equipment (load bearing equipment, body armor, headwear, hand wear and footwear/fins) used in combat operations and training.
4. The neck tension relief and ventilation system, neck and wrist gaskets shall be comfortable, shall not interfere with individual clothing or equipment and shall be adequately protected from weather conditions and physical damage.
5. The MASS and L-MASS must have front entry and relief zipper, integrated socks, non-fixed optional use internal suspender design, easily accessible and an adequate number of shoulder, thigh and calf pockets. The suits must be designed in a manner that reduces the effects of abrasion on key garment stress areas, be adequately quiet during typical mission movements with ease in donning and doffing.
6. The MASS and L-MASS shall be constructed with material meeting the following levels of minimum performance criteria:

**Table 1: Material Minimum Performance Criteria**

Material Property	MASS Target Requirement	L-MASS Target Requirement
Weight (ASTM D 3776)	< 9.0 oz/yd	< 6.0 oz/yd
Abrasion (ASTM D 3884)	> 7500 cycles	> 7500 cycles
Abrasion with Flex (ASTM D 3885)	> 1,000 cycles	> 1,000 cycles
Break Strength (ASTM D 5034)	> 250 lbs Warp and 180 lbs Fill	> 250 lbs Warp and 160 lbs Fill
Tear Strength (ASTM D 1424)	> 11.5 lbs Warp and 8.5 lbs Fill	> 5 lbs Warp and 3 lbs Fill
Resistance to the diffusion of water vapor (ISO 11092),	< 8.5 m <sup>2</sup> Pa/W (85x103m <sup>2</sup> mbar/W)	< 7.5 m <sup>2</sup> Pa/W (85x103m <sup>2</sup> mbar/W)
Garment Weight	< 5.0 lbs	< 4.0 lbs

All lots of materials used in the production of end items under this contract must be certified by the Government. Textile providers are responsible for assuring a sampling of each lot has been conducted and a DD 1222 has been submitted to the Government to annotate test results. Textile providers will provide a copy of the certified DD Form 1222 with each lot of material and will specifically state whether the lot of material has been certified for shipment to end item manufacturers. The Contractor is responsible for

ensuring a certified DD Form 1222 has been received for each lot of material and that all shipments can be tracked back to a DD Form 1222. A DD Form 1222 is required for all the following materials when utilized in the manufacture of end items to be delivered under this contract.

**Table 2. Material and Color**

<b>Material</b>	<b>Approved Color and Material Providers Desert</b>	<b>Approved Color and Material Providers Woodland</b>
Nyco	Bradford Dye Duro Industries Brittany Dye  Color: AOR #1	Bradford Dye Duro Industries Brittany Dye  Color: AOR #2
Cordura (1000d, 330d, 500d)	Bradford Dye Duro Industries  Color: AOR #1	Bradford Dye Duro Industries  Color: AOR #2
Nylon Webbing, ( $\frac{3}{4}$ ", 1", 1 $\frac{1}{2}$ ", 2" or 3")	Printed: Texcel (double sided AOR #1)  Solid Naricott: Navy SEAL Tan	Printed: Texcel (double sided AOR #2)  Solid Naricott: Navy SEAL Green
Nylon Binding Tape, (Tape, Plain Weave)	Texcel (AOR #1)	Texcel (AOR #2)
100% Nylon Hook and Loop, (1", 1.5", 2", or 4")	Velcro - Tan 248 YKK (Custom)	Velcro: Green C442 YKK #7704
Slider/Zipper Tape/Coil	K300, Z530	566 Cedar Green

Buttons and threads and other findings are at the discretion of the suppliers, but must complement the colors shown above.

7. Face fabric must be capable of being dyed with **AOR #1 and AOR #2** camouflage pattern dyes and pigments according to the Design Evaluation Form/Material and Performance Requirements according to the Material and Performance Section of this document.
8. The garment must have the following design characteristics:

**Table 3: Design Characteristics**

<b>Design Characteristics</b>	<b>Required/Desired</b>
Performance/ Environmental Condition of Use	Worn in maritime environment to include Over the Beach (OTB) Ops, surface swims, cast and recover operations from boats, ship assaults. Environmental conditions may consist of extreme cold/hot, high wind and sea spray, sand, rocks, surface swims including dives to 10 foot depth for no more than 5 minutes.
Materials	Lightweight, waterproof, breathable, durable, comfortable, and as quiet as possible.  Berry Amendment Compliant material

	Can be printing in the AOR #1 and AOR #2 patterns (Current qualified printers include Duro, Milliken, Bradford, Carlisle Finishing, Brittany Dye)
Collar Construction	Comfortable, durable, adjustable, non-restrictive, waterproof. While in garrison, need to have ability to relieve tension (on neck) for increased comfort and ventilation via neck ring/other means
Pocket Construction	Does not retain water, can be securely fastened shut (with one hand)
Pocket Location	Easily accessible shoulder, thigh, and calf pockets
Zipper(s) Construction	Lightweight, low profile, waterproof to 10 feet for 5 minutes, easy to operate
Zipper(s) Locations	Entry Zipper: Easy to don/doff capability Front Relief Zipper: Placement that allows User to relieve themselves
Cuffs & Sleeves Configuration	Comfortable, durable, adjustable, non-restrictive, waterproof.
Sock Configuration	Attached to pant. Will be worn under boot, needs to be comfortable, low profile, and waterproof
Unique Patterning (Venting features to expel heat, seam sizing, seam locations, gusseted underarms stretch side panels and articulated sleeves, reductions to uncomfortable pressure points, active design cut, reinforced shoulders, elbows or knees)	Ability to vent/expel heat in the inner thigh area with the ability to open and close quickly and easily, side stretch panels, articulated knees and elbows, reduction of uncomfortable pressure point areas.
Padding	Removable knee pads or ability to insert Government specified kneepads after award.  Reinforcements in key garment stress areas

9. MASS Suits submitted for Non-Warranted Services, not previously laundered by the Government, should be laundered prior to alterations in accordance with offeror shall insert the state in which they are legally bound state law requirement. A \$ offeror shall insert a dollar figure for this laundering fee; failure to respond/insert a dollar figure will result in "No charge" fee will be assessed for each suit required to be laundered.
10. The MASS shall have a standard operational life of at least three (3) years. The L-MASS shall have a standard operational life of at least one (1) year.
11. Both must be repairable and the contractor shall be capable of providing repair services for components typically damaged by routine wear and tear.