

# Executive Summary

The Submersible Support Vessel (SSV) is a vessel designed to support the expansion of special mission capabilities through support of the Dry Combat Submersible (DCS). The DCS is a small underwater vehicle that can transport operators to the site of a mission inaccessible by larger underwater assets, at a higher speed than an open diver system, in a protected, dry environment that increases operator mission endurance. The current DCS is too large to be carried by a submarine and requires a surface vessel to support operations. Presently, the United States Navy uses contracted vessels to support testing and training of undersea vehicles, however these vessels are adapted from commercial offshore supply vessels and lack dedicated support capabilities for the DCS and other underwater vehicles.

The SSV is based on a commercial offshore supply vessel design that meets American Bureau of Shipping (ABS) classification requirements. The key feature of the SSV is a 16-meter long, 8-meter wide moon pool at the center of the ship that allows for launch and recovery of the DCS, SEAL Delivery Vehicles, or unmanned vehicles. The moon pool has two doors at the bottom that are closed during transit and open during launch operations. A secondary means of launch and recovery is provided by the ship's topside deck crane. While many mission and life support systems are organic to the ship, the SSV also provides a substantial upgrade in user-configured area to customize storage of containerized mission specific cargo while maintaining ample personnel living and support space. A commercial diesel-electric power plant powers the ship. Two azimuthal thrusters at the rear of the ship provide propulsion, assisted by one drop-down azimuthal bow thruster that also provides dynamic positioning during launch and recovery operations.

The Submersible Support Vessel is a capable and feasible design. It provides a modern, capable platform to support the sponsor needs. This platform provides the Navy with an organic option to meet special mission capabilities without the need for outside contracts.