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| Data Item DescriptionLighting Layout and CalculationsDID T-306 |
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Approvals

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| --- | --- | --- | --- | --- |
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Revisions Record

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# PURPOSE of DID

 The purpose of this DID is to define the requirements for the interior and exterior lighting arrangement drawing and associated calculations for the OOSV.

# ATTACHMENT and APPLICABLE REFERENCES

Attachments: N/A

References: DID T-601 General Arrangement Drawing

 DID T-301 Electrical Load Analysis

 DID M-013 Design Drawings

 DID M-016 Design Report

 Engineering Maturity Management Plan (VSY-A02.02-0013)

# PREPARARATION INSTRUCTIONS

## Format

The Lighting Arrangement shall be developed to identify the normal, emergency and transitional lighting provided on the vessel. The Lighting Arrangement drawing shall be an AutoCAD Drawing and Design Review Drawing in accordance with the requirements of DID M-013 Design Drawings. The associated lighting calculations for each compartment must be delivered in Microsoft Excel format, and must include a summary table on the first sheet containing,

1. a complete list of compartments;
2. the illuminance requirements for each compartment as agreed with Canada;
3. a “Pass” or “Fail” criteria based on the lighting arrangement provided; and,
4. a brief statement for compartments that have failed to meet the illuminance requirements.

## Requirements

Basic Design Development/Adaptation (BDD):

During Basic Design the Supplier must submit a DID M-016 Design Report. The report shall include a list of every space and the recommended illumination level for every compartment or space, including the working area, for Canada’s agreement. The agreed illumination level will form the basis for the calculations to be done in Functional Design. The lighting levels for every space must be determined through collaboration with Canada and must include:

1. All interior spaces
2. All exterior working areas, including over the side working areas and boat deployment locations
3. Emergency and embarkation lights
4. The maximum, minimum, average calculated values for spaces and working areas. These values will be verified in the build phase.

Functional Design (FD):

The Supplier shall develop a technical procurement specification for lighting fixtures that must be reviewed by Canada prior to issue. Once a vendor has been selected, the Contactor and the lighting vendor shall develop a preliminary lighting layout arrangement and lighting calculation for Canada’s approval prior to proceeding into detailed design. The preliminary lighting arrangement and lighting calculation must have a complete table of all fixtures to be installed on the ship.

Prior to the final submission of the lighting arrangement, the Supplier shall hold a final design review with Canada using the 3D model for final approval on the lighting arrangement. The Supplier shall update lighting arrangement and lighting calculation to reflect comments provided by Canada.

A lighting arrangement and lighting calculation must be submitted to Canada at the end of Functional Design that represents the engineered lighting system at the design maturity corresponding to Exit Gate 4 of the Engineering Maturity Management Plan.

Production Design (PD):

A lighting arrangement and lighting calculation must be submitted to Canada at the end of Production Design that represents the engineered lighting system at the design maturity corresponding to Exit Gate 5 of the Engineering Maturity Management Plan.