## Task ENG-2.1.4 Update R0112 Leading lights

**Task group leader:** (Sarah Robinson)

**Input papers:**

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| ENG20-3.1.1.9 | Review of Leading Lights and Lines documentation - Intersessional working (Task 2.1.4) |
| ENG20-3.1.1.9.1 | Design intensity and intensity ratio formulas |

**Comments:**

The task group worked through a revised working version of Guideline G1023 Design of Leading Lines. The two specific items left over from the intersessionl work were discussed.

**Key outcomes include:**

1. The group validated G-1148 Table 2 applicability for leading lines
2. The group concurred with removal of factor of 10 increase for Recommended Intensity calculation for leading lines as it was originally added to provide “better” signal with no sound technical basis. Removal lowers the minimum intensity yielding a larger decision space for the designer
3. The group reviewed the current method of evaluating intensity ratios at middle and end of useful segment. To provide greater benefit to the user, will incorporate factors to consider in balancing intensity ratios and a sample intensity ratio example as an appendix.
4. The group validated vertical difference angles and clarified terminology; need to revise Fig 7 for clarity.

**Output**:

ENG14-3.1.1.2 Revised G1023 on Design of Leading Lines\_TG Initial Review 10\_4\_25 V3.7

Action item

Travis Rasmussen is requested to develop a design process map to help user understand overall process.

Jorgen Royal Petersen is requested to attempt to draw digital drawings utilized in the existing guideline so they can be updated.

Travis Rasmussen is requested to add practical considerations to intensity ratio section and develop sample appendix.

Travis Rasmussen is requested to refine daymark sizing calculation methods and the practical considerations to decided which method utilized.

The task group is requested to finish revision of guideline methodology section and submit to ARM for approval.

The task group is requested to remove the sections of the current guideline related to the use of the leading lines spreadsheet and develop them into a tutorial. The tutorial and revised spreadsheet will be developed but not finalized until ENG and ARM Committees approve.

The task group will conduct monthly intersessional meetings at 1000 UTC to progress these objectives.