
**Ships and marine technology —
Design, location and use of shipboard
safety signs, fire control plan signs,
safety notices and safety markings —**

Part 4:

**Escape plan signs used for general
emergency information**

Navires et technologie maritime — Conception, emplacement et utilisation des signaux de sécurité, signaux relatifs à la sécurité incendie, notices de sécurité et marquages de sécurité à bord des navires —

Partie 4: Signaux de plans d'évacuation pour information générale en cas d'urgence



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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 8, *Ships and marine technology*, Subcommittee SC 1, *Maritime safety*.

A list of all parts in the ISO 24409 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

The growth of international travel by ship has created a need to provide people travelling and working on board ships with signs and associated systems that communicate consistent and effective safety information. This document specifies a system of safety and fire control plan signs on ships and other marine installations that is generally consistent with standardized signs, with which many have gained familiarity in other applications.

As such, this document clarifies and supplements existing requirements set out in SOLAS regulation II-2, 13.7.2.2 and III,8.4,^[10] IMO resolution A.752 (18), 4.6^[8] and MSC /Circ.699.^[7] However, it is directly applicable to shipboard safety signs only, and does not deal with graphical symbols to be used on shipboard plans or documentation used for professionals.

This document spells out general design principles applicable to shipboard escape plan signs for escape and embarkation of people on board survival crafts, other than the ones who are involved to special safety actions. The signs are catalogued in ISO 24409-2, and their application on ships is specified in ISO 24409-3.

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Ships and marine technology — Design, location and use of shipboard safety signs, fire control plan signs, safety notices and safety markings —

Part 4:

Escape plan signs used for general emergency information

IMPORTANT — The electronic file of this document contains colours which are considered to be useful for the correct understanding of the document. Users should therefore consider printing this document using a colour printer.

1 Scope

This document establishes design principles for shipboard escape plan signs that contain information relevant to escape, embarkation, and fire safety, to be used for general information on board ships.

These plans are intended to be displayed as signs in cabins and public areas, such as required by regulations.

This document is not intended to cover the plans to be used by crew. The plans for crew are described in ISO 17631.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 3864-4:2011, *Graphical symbols — Safety colours and safety signs — Part 4: Colorimetric and photometric properties of safety sign materials*

ISO 7010, *Graphical symbols — Safety colours and safety signs — Registered safety signs*

ISO 15370, *Ships and marine technology — Low-location lighting (LLL) on passenger ships — Arrangement*

ISO 17398, *Safety colours and safety signs — Classification, performance and durability of safety signs*

ISO 24409-1, *Ships and marine technology — Design, location and use of shipboard safety signs, fire control plan signs, safety notices and safety markings — Part 1: Design principles*

ISO 24409-2, *Ships and marine technology — Design, location and use of shipboard safety signs, safety-related signs, safety notices and safety markings — Part 2: Catalogue*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>

3.1 escape plan sign
plan for passengers and crew illustrating the basic escape arrangements, indicating the “you are here” position, containing a safety notice with essential actions to be taken in an emergency and may display information required for embarkation on survival crafts and first aid intervention

Note 1 to entry: “Escape plan sign” has the same meaning as “simple mimic plan” referred to in SOLAS regulation II-2,13.7.2.2, the “illustrations and instructions” in SOLAS III,8.4, the “emergency instruction notices for passengers” referred in MSC/Circ.699, and the cabin placard referred to in IMO Resolution A.752(18).

3.2 escape plan sign detail
detailed representation of the area and deck marked in the overview and side view plan

3.3 phosphorescent sign
sign treated with material incorporating phosphors that, if excited by UV or visible radiation, store energy, which is emitted as light over a period of time

3.4 primary escape route
escape route which provides continuous fire shelter from the level of its origin to the appropriate embarkation deck, including the designated assembly station

3.5 safety instructions
general text header for escape plan signs, as referred to with the terms from regulations such as mimic signs and/or emergency instructions or emergency notices

3.6 secondary escape route
escape route which may be used as an alternative when the primary escape route is not available

4 Application and use

4.1 General

Escape plan signs shall be used in cabins and in public spaces. Escape plan signs used in cabins shall indicate from the “you are here” position the primary and the secondary escape routes to the designated assembly station. Escape plan signs used in public spaces shall give an overview of the ship’s assembly station and embarkation stations.

Escape plan signs shall be used as general safety information.

4.2 Preparation

Before applying the design principles, the essential elements to be shown on escape plan signs shall be determined based on the safety management procedures and ships facilities. The plans shall reflect the study of the following information verified by site visit:

- a) “as built” drawing(s) of the ship with key features as provided by the fire control plan, means of escape plan and lifesaving appliances plan (see ISO 17631 and/or the ship’s evacuation analyses, according to SOLAS regulation II-2, 13.3.2.7);
- b) evacuation planning documentation, any instructions given and how it is provided;
- c) fire safety manuals and procedures;
- d) identification of all escape routes and means of escape;

- e) location of emergency equipment, evacuation and embarkation aids;
- f) required actions to be taken in case of emergency and alarm signals;
- g) location of assembly stations, life jackets, life boats and life rafts;
- h) instructions of use of lifejackets.

The purpose of escape plan signs is to help people orient themselves in relation to the planned escape route to assembly stations and embarkation stations.

4.3 Content of the escape plan sign

An escape plan sign in a cabin shall display the ship's sideview and a plan view of the section where the cabin is located and the ship's assembly stations. The sideview shall indicate the primary and secondary escape route from the cabin where the sign is posted to the designated assembly station. The location of the cabin shall be indicated by the "you are here" marking. The plan view relevant to the section where the cabin is located shall indicate the primary and the secondary escape route to get to the designated assembly station or to the stairway to get to it.

In public spaces and in assembly stations, the escape plan signs shall show the ship's sideview and overall plan views. The ship's sideview shall show the position of all assembly stations with their identification letters. All decks where assembly stations are located are to be shown on the sign, as well as the position of survival crafts and relevant embarkation stations. Escape plan signs shall describe how the alarm signals are provided and the most appropriate actions to be taken in an emergency.

Escape plan signs shall include instructions on the purpose and use of the low-location lighting system as specified in ISO 15370.

Moreover, the signs shall also explain the meaning of means of escape symbols and safety symbols such as lifejackets, embarkation station or liferafts.

The escape plan sign shall be designed in accordance with the evacuation analyses of the ship or facility and shall address the specific needs of the occupants of the premises or part thereof (see [Figures A.1 to A.5](#) for examples).

The exact location of the user shall be shown with a "you are here" indication. The "you are here" position shall be specified by deck and position on the deck.

4.4 Scale

The scale of the escape plan sign is dependent on the size of the ship in relation to the format of the plan, the level of detail to be illustrated and the intended location of the escape plan sign. Escape plan signs do not have to be in a real scale. The elements in the drawing should be sufficient to improve comprehension of the displayed information.

Detailed elements such as stairs or corridors may be drawn to a larger scale to increase conspicuity or to accommodate the placement of safety signs on the escape plan sign. For a series of escape plan signs for the same ship, other than the ones to be posted in cabins, the same scale should be used. At an escape plan sign to be used in a public space, the plan view shall have the same scale as the side view. For specific areas of the ship, e.g. car decks or technical spaces, other scales may be used to recognize the extent of whole space.

4.5 Illumination

In order to achieve sufficient visibility and legibility, the vertical illumination on escape plan signs shall be not less than 50 lx provided by the normal lighting. Where emergency lighting is provided in case of failure of the normal lighting, the vertical illumination on escape plan signs comprising ordinary materials or phosphorescent materials shall be no less than 5 lx. Where emergency lighting is not provided in case of failure of the normal lighting, escape plan signs comprising phosphorescent

materials may be used. In all cases, the phosphorescent material shall be no less than classification C in accordance with ISO 17398.

In order to identify safety colours on the plans, the minimum value for the colour-rendering index, R_a , from a lamp shall be ≥ 40 . The luminaire shall not substantially subtract from this.

4.6 Design requirements

The following design requirements shall be met:

- a) The minimum size of an escape plan sign shall be 297 mm x 420 mm (A3). A tolerance of 5 % is acceptable.
- b) Escape plan signs shall be up to date, i.e. they shall reflect the general arrangement of the ship and of relevant safety equipment.
- c) The escape plan signs shall be properly oriented for each posted location in order to reflect the ship's arrangement, i.e. the orientation shall be related to the viewer so that locations on the left of the plan are to the viewer's left, and locations on the right of the plan are to the viewer's right. In transverse corridors or cabin walls, the front of the ship is always displayed to the right.
- d) Safe condition, lifesaving equipment and fire-fighting equipment indicated on the escape plan sign shall use safety signs that are the same as in their installed location on board and both shall conform to ISO 24409-2.
- e) Escape plan signs shall have a legend.
- f) Escape plan signs shall have a standardized header, including the words "safety instructions" in English and the intended language(s) in which the plan is used.
- g) Escape routes at the escape plan signs in cabins shall be marked by arrows according to [Figures 1 and 2](#).
- h) Escape plan signs can include a section showing and/or describing the method of donning lifejackets.
- i) Escape plan signs shall use colours in accordance with [6.6](#).

5 Size of plan elements

The following requirements shall be met.

- a) Information presented on escape plan signs shall be legible at the intended viewing distance. The minimum lettering height shall be 2 mm. Fonts should be chosen that maximize the legibility at the intended viewing distance.
- b) The minimum height of the header shall be at least 7 % of the smallest dimension of the escape plan sign and the height of its characters shall be at least 60 % of the height of the header. Examples are given in [Table 1](#).
- c) Safety signs shown on the plan shall have a minimum height of 7 mm.
- d) The line width for the graphical representation of the ship's structural bulkheads shall be at least 1,6 mm. Interior partition walls shall be represented by lines of a minimum width of 0,6 mm. If detailed elements are shown on the plan (e.g. stairs, shelves, windows), they shall be shown by lines of a minimum width of 0,15 mm.

In the representation of long escape corridors, architectural features or equipment should be a schematic that gives the user a sense of scale/distance.

Table 1 — Examples of the minimum height of header and characters

| Size of escape plan sign mm × mm | Height of escape plan sign mm | Height of header mm | Height of capital letter mm |
|-------------------------------------|----------------------------------|------------------------|--------------------------------|
| 420 × 297 (A3) (portrait) | 420 | 30 | 18 |
| 594 × 420 (A2) portrait | 594 | 42 | 26 |
| 297 × 420 (A3) (landscape) | 297 | 21 | 13 |
| 420 × 594 (A2) (landscape) | 420 | 30 | 18 |

6 Representation

6.1 Header

Every escape plan sign shall have a header with the text: safety instructions. For the header, upper- and lower-case letters may be used.

6.2 Escape plan detail

Escape plan signs in a cabin shall contain an escape plan detail of the relevant part or fire zone where the cabin is located. The escape plan detail shall incorporate:

- a) the floor plan of the relevant part of the ship and facility so that:
 - non-essential details are eliminated;
 - important elements are highlighted;
 - legibility and ease of comprehension are increased;
 - if possible, the plan is oriented to the position of the viewer, i.e. what is shown on the plan should reflect what is viewed by the viewer with reference to its position.
- b) primary and secondary escape routes, horizontal and vertical. Directional instructions shall be given from the specific “you are here” point, by the use of arrows as illustrated in [Figures 1](#) and [2](#);



Figure 1 — Arrow indicating the direction of movement of people for displaying the primary escape route



Figure 2 — Arrow indicating the direction of movement of people for displaying the secondary escape route

NOTE These figures are only for use on plans displaying the escape direction, not for use as a signboard.

- c) the point of location of the user (“you are here”);
- d) the location of stairs;

- e) for indicating the primary escape route to an assembly station via a staircase, the assembly station symbol with the supplementary 45° arrow sign as illustrated in [Figure 3](#) shall be used. For indicating the secondary escape route to an assembly station via a staircase, the emergency exit symbol with the supplementary 45° arrow sign as illustrated in [Figure 4](#) shall be used.



Figure 3 — Directional escape sign indicating primary escape direction to shipboard assembly station (ISO 7010-E032 and ISO 24409-2-MES001), stairs up (supplementary arrow sign)



Figure 4 — Directional escape sign indicating secondary emergency exit (ISO 7010-E002 and ISO 24409-2-MES003), stairs down (supplementary arrow sign)

- f) any specific evacuation provisions made available for people with disabilities;
g) the location of the lifts as an architectural feature.

Depending on the type of ship, or whether passengers have been trained in the use of firefighting and appropriate emergency procedures, the location and type of the first intervention fire equipment and emergency rescue equipment can be displayed (e.g. fire extinguishers, fire hoses, first aid equipment). If it is not possible to show the actual location of the safety signs because of the scale used, the safety signs may be shown separately with a leader line to indicate the correct location.

6.3 Lifejacket donning instructions

At an escape plan sign in a passenger ship the method of how to wear lifejackets shall be indicated on the sign, displayed in proximity to the escape plan sign, or displayed where the lifejackets are stowed. This can be done by a series of figures only, or by figures supplemented by explanatory text.

6.4 Legend

The legend shall appear on the escape plan sign and shall give the explanation of the LLL system, the meaning of the safety signs, graphical symbols and colour coding used on the escape plan sign. Examples are given in [Annex A](#), [Figures A.1](#) to [A.5](#).

6.5 Languages

The texts at the escape plan sign shall be drawn up in the language or languages required by the ship's flag state and in the English language.

6.6 Use of colours

6.6.1 Escape routes

Directional arrows shall be in safety green according to ISO 3864-4:2011. Escape routes shall be highlighted in light green that gives sufficient contrast to the arrows.

NOTE With phosphorescent materials, graphical methods such as halftone or hatching of the escape route can be used to render the escape route directional arrows visible in dark conditions.

6.6.2 Safety signs

The safety symbols used in escape plan signs shall be according to ISO 24409-2 as adopted by IMO in IMO resolution A.1116(30), ISO 7010 and according to the design principles in ISO 24409-1.

6.6.3 Point of location of the user

The point of location of the user shall be safety blue according to ISO 3864-4:2011.

6.6.4 Background colour

The colour of the background shall be the safety colour white or phosphorescent white according to ISO 3864-4:2011, Table 1.

6.6.5 Outline of structural elements

The colour of the outline of ship's structural elements shall be black.

6.6.6 Header

The header shall be in safety colour green and the text shall be in the contrast colour as given in ISO 3864-4:2011.

6.6.7 Text

The normal colour of the text shall be black. Other colours may be used for highlighting purposes.

7 Materials

Escape plan signs shall be made of materials and inks that are durable enough to resist the environmental influences at sea (e.g. light resistance and resistance to humidity) for the expected service life. If required, durability characteristics shall be measured by methods described in ISO 17398.

8 Installation and location

An escape plan sign in a cabin shall be installed directly on the back of a cabin door or on the wall on side of the door, in such a way the readability is guaranteed.

Escape plan signs in public areas shall be located so that they are conspicuous in their environment of use and sited to ensure they are accessible and readable to the intended user.

These signs shall be permanently fixed and are intended to be located:

- a) at all assembly stations in proximity of the assembly station identification signs;
- b) at positions where passengers and crew can learn the means of escape;
- c) at strategic points of the escape route, which can be:
 - on every deck at primary entry points
 - near lifts and stairs in main staircases
 - at appropriate training points, e.g. ships information desk, entrance of restaurants, mess room, central shopping areas, office area, etc;
 - at principal junctions and intersections.

9 Inspection and revision

Inspections of the escape plan signs shall be conducted at regular intervals, at least five annually in combination with the low-location lighting measurement inspection or after any renovation of the ship, to ensure they are legible, conspicuous, comprehensible and up to date in order to reflect the current on-board arrangement and evacuation procedures. With the same frequency, illuminating sources shall be checked to verify if they are producing at least the minimum illuminance required in [Clause 5](#). To this, the illuminance on the escape plan signs surface shall be measured at least in two signs of each deck under any different luminous conditions that may exist. The result of illuminance measurements shall be reported. Any missing or failed lamp and luminaire shall be noted for repair or replacement.

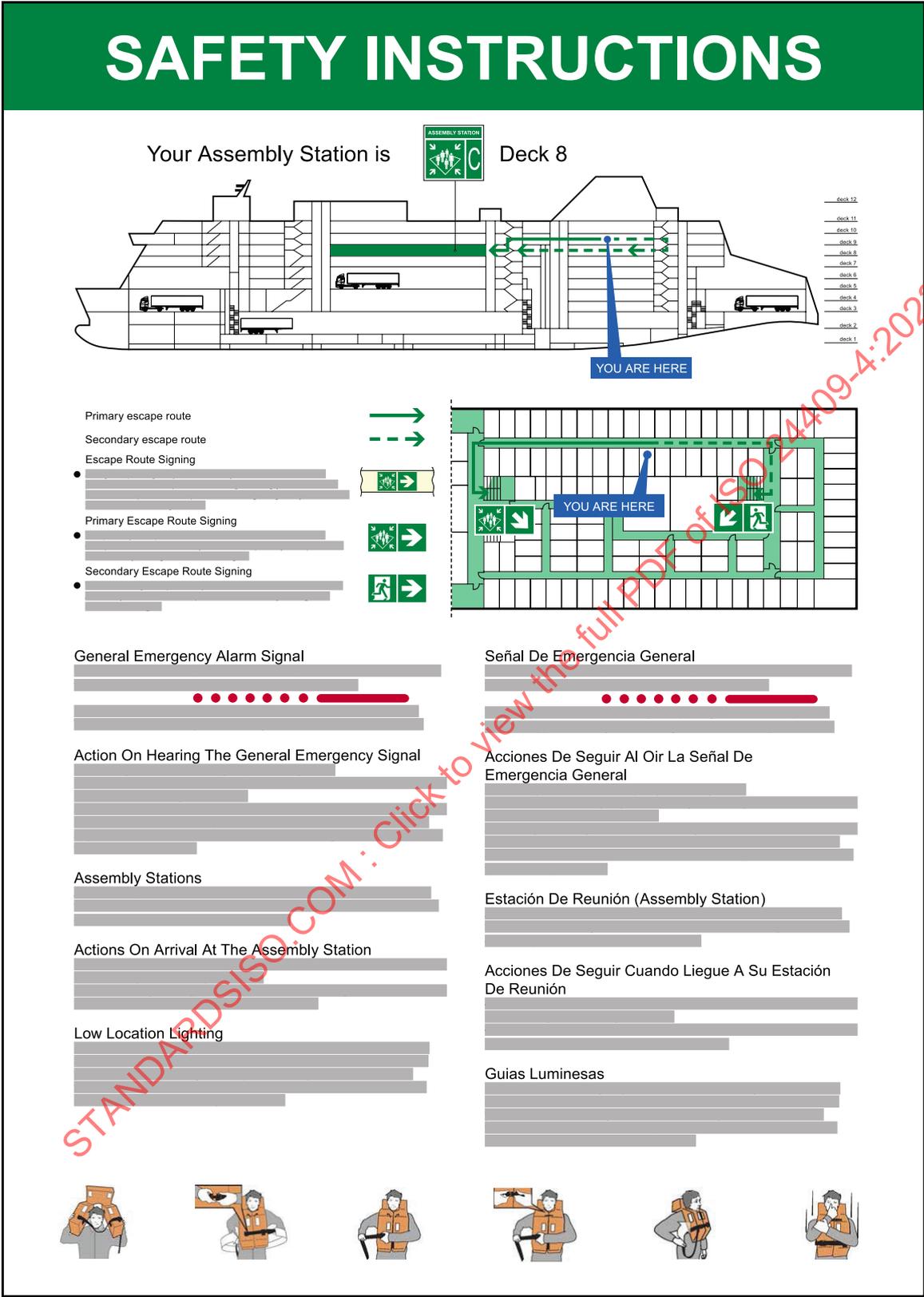
Any change of the ship's plan and position of assembly stations, lifejacket storages and escape routes, its emergency and fire safety procedures shall result in a review of the escape plan signs and, when necessary, revision to the escape plan signs.

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Annex A
(informative)

Examples of typical escape plan signs

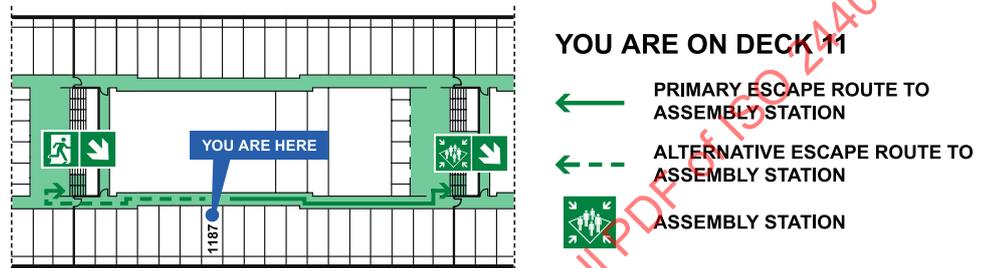
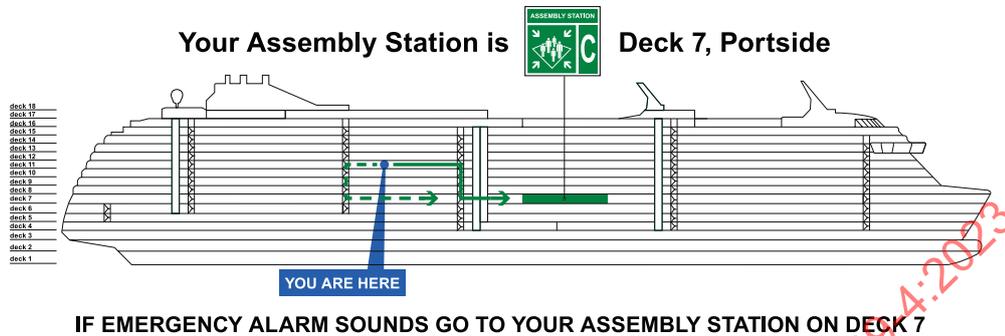
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Figure A.1 — Example of a bilingual cabin escape plan sign at a ro-ro ship

SAFETY INSTRUCTIONS



| EMERGENCY SIGNAL | ASSEMBLY STATION | ACTION ON ARRIVAL AT YOUR ASSEMBLY STATION |
|---|--|--|
| [Red dotted line] | [Green arrow with assembly station icon] | [Text] |
| [Green arrow with person icon] | [Green arrow with assembly station icon] | LIFEJACKET |
| [Green arrow with person and wheelchair icon] | [Green arrow with assembly station icon] | [Text] |

LOW LOCATION LIGHTING

How to wear your life jacket

- Don the life jacket by placing the yoke over your head and the belt around your body
- Connect buckle by pushing the two parts firmly together
- Pull the belt as tight as possible (aided by holding onto buckle)
- For additional security fasten the top buckle where possible. There is a whistle and light attached to the life jacket for attracting attention
- Tuck the excess belt behind jacket

Figure A.2 — Example of a cabin escape plan sign at a cruise ship