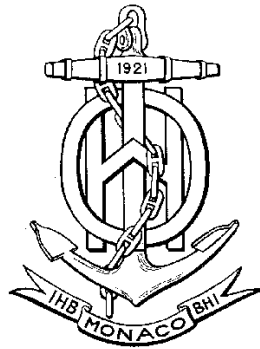


INTERNATIONAL HYDROGRAPHIC ORGANIZATION



Special Publication No. 52, Appendix 2

COLOUR & SYMBOL SPECIFICATIONS FOR ECDIS

Edition 4.2 – March 2004

and its Annex A

IHO ECDIS PRESENTATION LIBRARY

Edition 3.3 – March 2004

becoming

Edition 3.4 – January 2008 by application of this document

C & S MAINTENANCE DOCUMENT

Number 5 – July 2007 (updated January 2008)

IMMEDIATE AMENDMENT 5

DEFERRED AMENDMENT 7

**Published by the
International Hydrographic Bureau**

4, Quai Antoine 1er
B.P. 445 - MC 98011 MONACO Cedex
Principauté de Monaco
Telefax: (377) 93 10 81 40
E-mail: info@ihb.mc
Web-site: www.iho.shom.fr

Page intentionally left blank

Introduction

Amendments to S-52 Appendix 2 affect primarily the ECDIS manufacturers, though the mariners will benefit from the improvements made. The procedures for amending S-52 Appendix 2 include both immediate and deferred amendments. Definitions and procedures for these amendments are given in S-52 App.2 "Colour & Symbol Specifications for ECDIS" (C&S Specs), section 1.2.4.1, but are as follows:

An amendment in general may be of the following two different types:

- a deferred amendment may contain either:
 - (a) clarifications and deferred correction items, or
 - (b) extension items, which are distributed separately.
- an immediate amendment which contains only items to be applied urgently,

A deferred amendment is not included in any S-52 Appendix 2 document until the new edition which is identified as bringing the deferred amendments into force. However OEMs may apply such deferred amendments at any time after their publication and do not have to wait for the implementation date of the new edition.

An immediate amendment is issued only in exceptional cases. It applies solely to corrections and extensions which directly affect safety of navigation. Immediate amendments have to be implemented to ECDIS under production and in the field at the earliest opportunity. An immediate amendment to the C&S Specs or Presentation Library (PresLib) changes the Edition number. It applies only to corrections, which must not depend on any deferred amendment.

The item number of each amendment item gives the edition number of the C&S Specs or the PresLib to which the amendment item applies. This Edition number will change once an immediate amendment is applied, but does not change for a deferred amendment.

At the end of each immediate amendment, there is a reminder of the current Edition number after the amendment is applied.

Page intentionally left blank

S-52 APP. 2 – DEFERRED AMENDMENT 7**July 2007****NOTES**

1. These amendments are intended to remind users of S-52 Appendix 2 of the changes approved at meetings CSMWG 15, 16 and 17 and to point out how these changes affect C&S Specifications Edition 4.2 and PresLib Edition 3.3 in detail.
2. CHANGE HISTORY OF S-52 APP.2 FROM CSMWG SPECS 4.0 --> 4.2 AND PRESLIB 3.0-->3.3 FROM 1997 TO 2007

'MD' stands for IHO Maintenance Document; 'IA' stands for Immediate Amendment; and 'DA' stands for Deferred Amendment:

Colours & Symbols Specifications (S-52 Appendix 2)

- Edition 4.0 (July 1997) + MD1 IA i01 --> Edition 4.1 (January 1999)
- Edition 4.1 + MD2 DA d02 + MD4 DA d6 --> Edition 4.2 (March 2004)
- Edition 4.2 + MD5 DA d7 → Edition 4.3 (January 2008)

Presentation Library (Annex A to S-52 Appendix 2)

- Edition 3.0 (July 1997) + MD1 IA i01 → Edition 3.1 (January 1999)
- Edition 3.1 + MD 3 IA i04 --> Edition 3.2 (May 2000)
- Edition 3.2 + MD2 DA d02 + MD3 DA d05 + MD4 DA d6 → Edition 3.3 (2004)
- Edition 3.3 + MD5 IA i5 + MD5 DA d7 → Edition 3.4 (2008)
- Digital versions:
 - PRSLIB03.dai (July 1997),
 - PSLB03_1.dai (December 1998),
 - PSLB03_2.dai (May 2000),
 - PSLB03_3.dai (March 2004).
- Temporary digital files: PSTY03_0.dai (June 1999), PSTY3_2b.dai (October 2001) (see amendment d05.cl.005)
- Paper based description of symbols:
 - Addendum to Part I, Users' Manual (2003)
 - Addendum to Part I, Users' Manual (2007)
 - Addendum to Part I, Users' Manual (2008), Edition 3.4

Edition 4.2 of the CSMWG Specs and Edition 3.3 of the PresLib, issued in March 2004, brought all outstanding deferred amendments to Editions 4.1 of the CSMWG Specs (issued January 1999) and 3.2 of the PresLib (issued May 2000) into effect. Edition 4.3 of the CSMWG Specs does not contain substantial changes compared to the preceding version with the exception of the reference to Edition 3.4 of the PresLib, which was triggered by the introduction of new objects, object attributes and attribute values in S-57 Supplement No. 1, issued in January 2007. Edition 4.3 of the PresLib itself is to be set in force in conjunction with the S-57 Supplement No. 1 by 1. January **2008**.

Note that although this MD5 is published in July 2007, OEMs have until 1 January 2008 to fully implement ALL of these amendments.

Since the first issue of MD5 in July 2007 minor mistakes have been identified and corrected by means of this issue dated from January 2008 for the following amendments:

<u>Item No.PL03.3.i5.ad.1</u>	Addition of symbols for new objects Symbolisation of ARCSLN, ASLXIS, NEWOBJ, RESARE (ESSA and PSSA)	p. 9
<u>Item No. PL03.3.d7.co.6</u>	Correction to PresLib CSP Revised CSPs OBSTRN06 and WRECKS04 to portray depths over dangers	p. 27
<u>Item No.PL03.3.d7.co.7</u>	Correction to PresLib CSP Visualization of two ‘no sector’ lights at the same location	p. 45
<u>Item No. PL03.3.d7.co.10</u>	Correction to PresLib Look-up table Revised Look-up table for LNDARE point and line features to display OBJNAM	p. 49
<u>Item No.PL03.3.d7.co.12</u>	Correction to PresLib Look-up table Revised Look-up table entry for UNSARE objects	p. 50
<u>Item No.PL03.3.d7.ad.13</u>	Addition to PresLib symbolisation DGPS reference stations	p. 50
<u>Item No.PL03.3.d7.ad.15</u>	Addition to PresLib symbol description (Users’ Manual Addendum) AIS symbology	p. 52
<u>Item No. PL03.3.d7.co.16</u>	Correction to PresLib symbol description (Users’ Manual Addendum) AIS symbology_	p. 52

INDEX OF ITEMS IN IMMEDIATE AMENDMENT 5

<u>Item No.PL03.3.i5.ad.1</u>	Addition of symbols for new objects Symbolisation of ARCSLN, ASLXIS, NEWOBJ, RESARE (ESSA and PSSA)	p. 9
<u>Item No.PL03.3.i5.ad.2</u>	Addition to PresLib CSP Symbolisation of object of the class “NEWOBJ”	p. 21

INDEX OF ITEMS IN DEFERRED AMENDMENT 7

<u>Item No.CS04.2.d7.co.1</u>	Correction to PresLib Part 1 (Users' Manual), section 8.1, second paragraph Display of any valid attribute information for unknown objects	p. 22
<u>Item No.CS04.2.d7.co.2</u>	Correction to PresLib Part 1 (Users' Manual), Glossary Display of unknown objects	p. 22
<u>Item No.CS04.2.d7.co.3</u>	Correction to PresLib section 12.2.2 (subsection 4.2, paragraph 4) Typographical error to display scale	p. 23
<u>Item No.PL03.3.d7.co.4</u>	Correction to PresLib CSP Depth contour procedure	p. 23
<u>Item No.PL03.3.d7.co.5</u>	Correction to PresLib CSP Safety contour procedure	p. 25
<u>Item No.PL03.3.d7.co.6</u>	Correction to PresLib CSP Revised CSPs OBSTRN06 and WRECKS04 to portray depths over dangers	p. 27
<u>Item No.PL03.3.d7.co.7</u>	Correction to PresLib CSP Visualization of two 'no sector' lights at the same location	p. 45
<u>Item No.PL03.3.d7.co.8</u>	Correction to PresLib CSP Visualization of all around lights	p. 47
<u>Item No.PL03.3.d7.co.9</u>	Correction to PresLib Look-up table Look-up table entry for tideway	p. 49
<u>Item No.PL03.3.d7.co.10</u>	Correction to PresLib Look-up table Revised Look-up table for LNDARE point and line features to display OBJNAM	p. 49
<u>Item No.PL03.3.d7.co.11</u>	Correction to PresLib Look-up table Revised Look-up table entry for rivers	p. 50
<u>Item No.PL03.3.d7.co.12</u>	Correction to PresLib Look-up table Revised Look-up table entry for UNSARE objects	p. 50
<u>Item No.PL03.3.d7.ad. 13</u>	Addition to PresLib symbolisation DGPS reference stations	p. 50
<u>Item No.PL03.3.d7.ad.14</u>	Addition to PresLib symbol description (Users' Manual Addendum) DGPS reference station symbol	p. 51
<u>Item No.PL03.3.d7.ad.15</u>	Addition to PresLib symbol description (Users' Manual Addendum) AIS symbology	p. 52

<u>Item No. PL03.3.d7.co.16</u>	Correction to PresLib symbol description (Users' Manual Addendum) AIS symbology	p. 54
<u>Item No. PL03.3.d7.co.17</u>	Correction to Preslib 3.3 Deletion of single unit complex line style	p. 60
<u>Item No. PL03.3.d7.co.18</u>	Correction to Preslib 3.3 Reference of Addendum to Users' Manual	p. 61
<u>Item No. PL03.3.d7.co.19</u>	Correction to Preslib 3.3 Definition of Linestyles	p. 62
<u>Item No. PL03.3.d7.co.20</u>	Correction to Preslib 3.3 Placing of numerical values of planned tracks	p. 63
<u>Item No. PL03.3.d7.co.21</u>	Correction to Preslib 3.3 Substitute example for empty look-up table entry	p. 64

S-52 APP. 2 – IMMEDIATE AMENDMENT 5

*Throughout this amendment changes to the CSMWG Specs. and the PresLib. are indicated by ~~strike through~~ text for deletions and **bold text** for additions.*

Item No.PL03.3.i5.ad.1 Addition of symbols for new S-57 Supplement Number 1 (Edition 3.1.1)
features

Symbolisation of RESARE (ESSA and PSSA), ARCSLN, ASLXIS, NEWOBJ

According to the enhancements of the ENC Product Specification by S-57 Supplement No. 1 issued in January 2007, ESSAs and PSSAs must be encoded as individual objects of class RESARE. The following entries into the look up tables for ESSAs and PSSAs are introduced as immediate amendment to the Presentation Library. They apply to both plain and symbolized boundaries.

Lookup table entry ESSA

11.3 Look-up Table Listing for Object Type Area 'A'
"RESARE", "CATREA27", "SY(ESSARE01);LC(ESSARE01)", "5", "S", "STANDARD", "26010"

Lookup table entry PSSA

11.3 Look-up Table Listing for Object Type Area 'A'
"RESARE", "CATREA28", "SY(PSSARE01);LC(ESSARE01)", "5", "S", "STANDARD", "26010"

Presentation example of ESSA and PSSA

These new look up table entries for ESSA and PSSA would result into the display presentation as shown in Fig. 1. The symbol definition to be added to the PresLib is shown in Fig. 1 A, Fig. 1 B and Fig. 1 C.

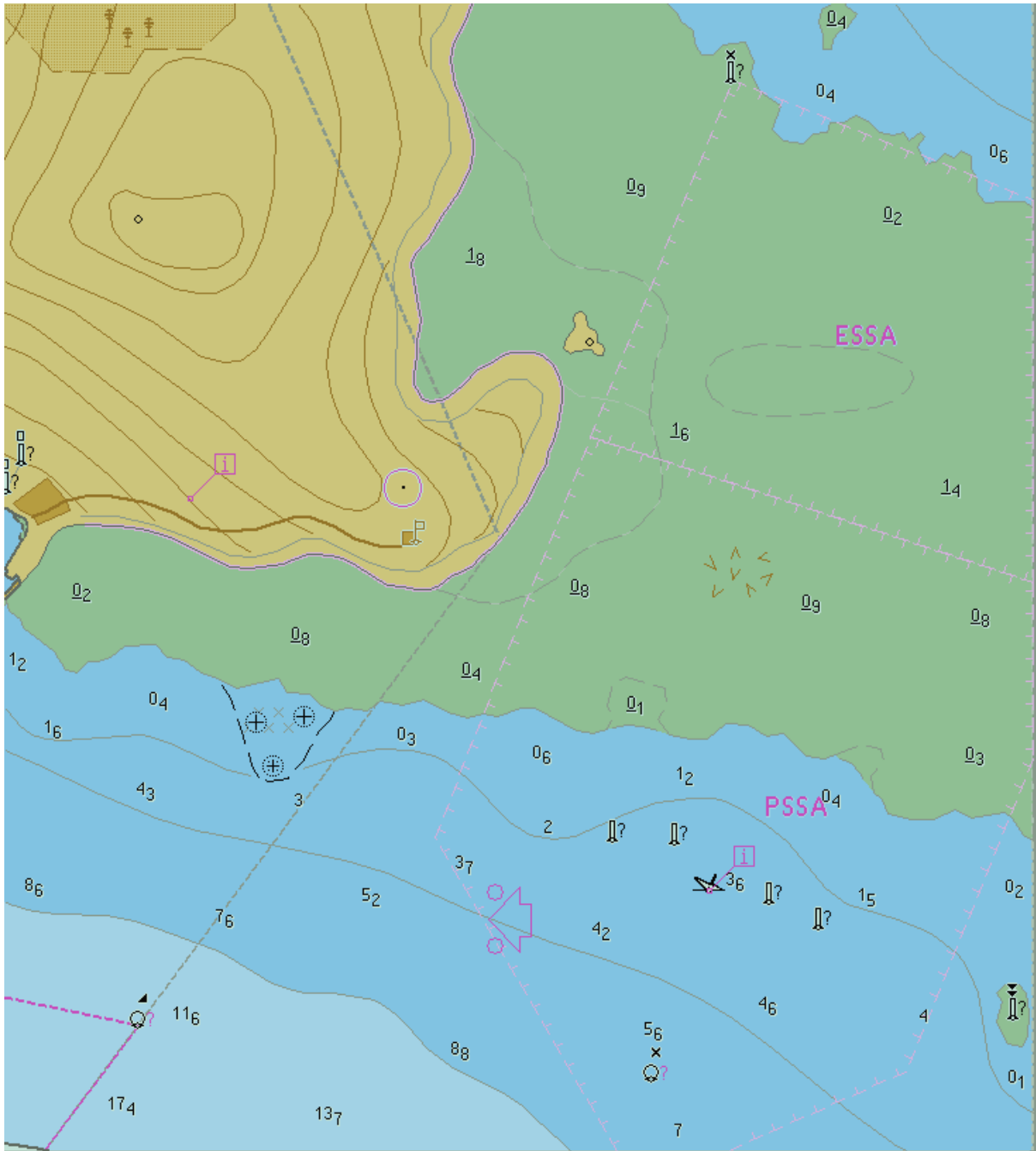


Fig 1. ESSA and PSSA (Centred Symbol and Boundary) at day light display

Symbol definition PSSA

Symbol Name:	SY(PSSARE01)	RN:519
--------------	--------------	--------

Symbol Explanation: PSSA - centred symbol

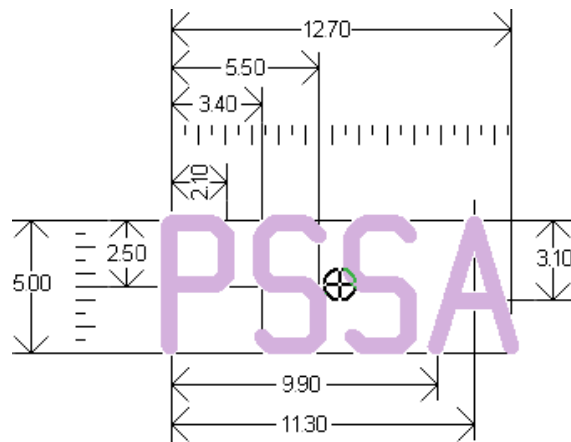
Look up table affected: CSP

Pivot Point Column: 6.35

Pivot Point Row: 6.35

Width of Bounding Box: 12.70

Height of Bounding Box: 5.00



Symbol Colours: CHMGF

Comments: Line weight 0.6 mm

Examples on ENC: N/A

References:

S57 E3.1.1	INT 1	
RESARE, CATREA 28	N22	<div style="background-color: #FF00FF; padding: 2px; display: inline-block;">PSSA</div> <div style="background-color: #FF00FF; padding: 2px; display: inline-block;">PSSA</div>

Figure 1 A: Symbol definition of centred Symbol for PSSA (Addition to Users' Manual Addendum)

Symbol definition ESSA

Symbol Name:	SY(ESSARE01)	RN: 523
--------------	--------------	---------

Symbol Explanation: ESSA - centred symbol

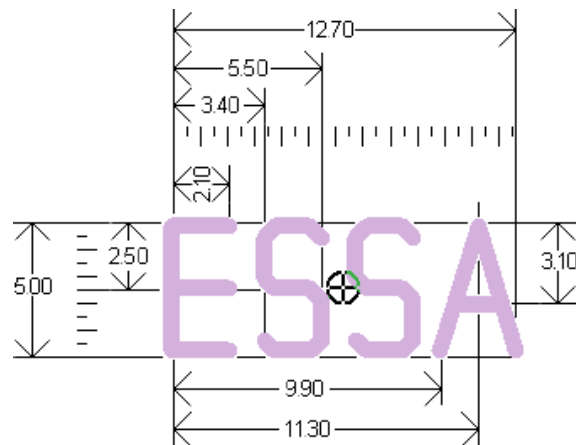
Look up table affected: CSP

Pivot Point Column: 6.35

Pivot Point Row: 6.35

Width of Bounding Box: 12.70

Height of Bounding Box: 5.00



Symbol Colours: CHMGF

Comments: Line weight 0.6 mm

Examples on ENC: N/A

References:

S57 E3.1.1	INT 1	
RESARE, CATREA 27	N22	

Figure 1 B: Symbol definition of centred Symbol for ESSA (Addition to Users' Manual Addendum)

Boundary symbol definition PSSA/ESSA

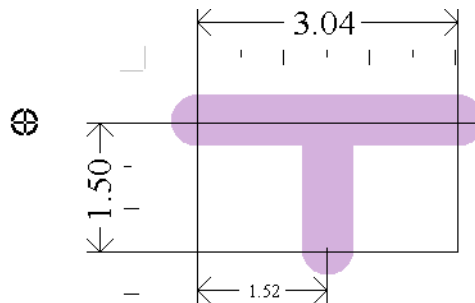
Symbol Name:	LC(ESSARE01)	RN: 524
--------------	--------------	---------

Symbol Explanation: boundary of an ESSA or PSSA

Look up table affected: area symbols with symbolized boundaries

Pivot Point Column: -2.00
Pivot Point Row: 0.00

Width of Bounding Box: 3.00
Height of Bounding Box: 1.50



Symbol Colours: CHMGF

Comments: Line weight 0.3 mm

Examples on ENC: N/A

References:

S57 E3.1.1	INT 1	
RESARE, CATREA 27 or 28	N22	

Figure 1 C: Symbol definition of boundary of PSSA/ESSA (Addition to Users' Manual Addendum)

Presentation of Archipelagic Sea Lanes (ASL)

The proposal for the display of ASL on ECDIS follows the IHO Chart Specification for ASLs (M-4, B-435.10) and revised BSH INT1 (M 17) November 2005 for paper charts. The resulting look up table entry reads as follows:

Archipelagic Sea Lane Axis

11.2 Look-up Table Listing for Object Type Line 'L'

"ASLXIS", "", "LS(DASH,2,CHMGF)", "5", "S", "STANDARD", "26260"

Archipelagic Sea Lane

11.3 Look-up Table Listing for Object Type Area 'A'

"ARCSLN", "", "LC(ARCSLN01)", "5", "S", "STANDARD", "26260"

Presentation example of ASL

These new look up table entries for ASL would result into the display presentation as shown in Fig. 2. The symbol definition to be added to the PresLib is shown in Fig. 2 A.

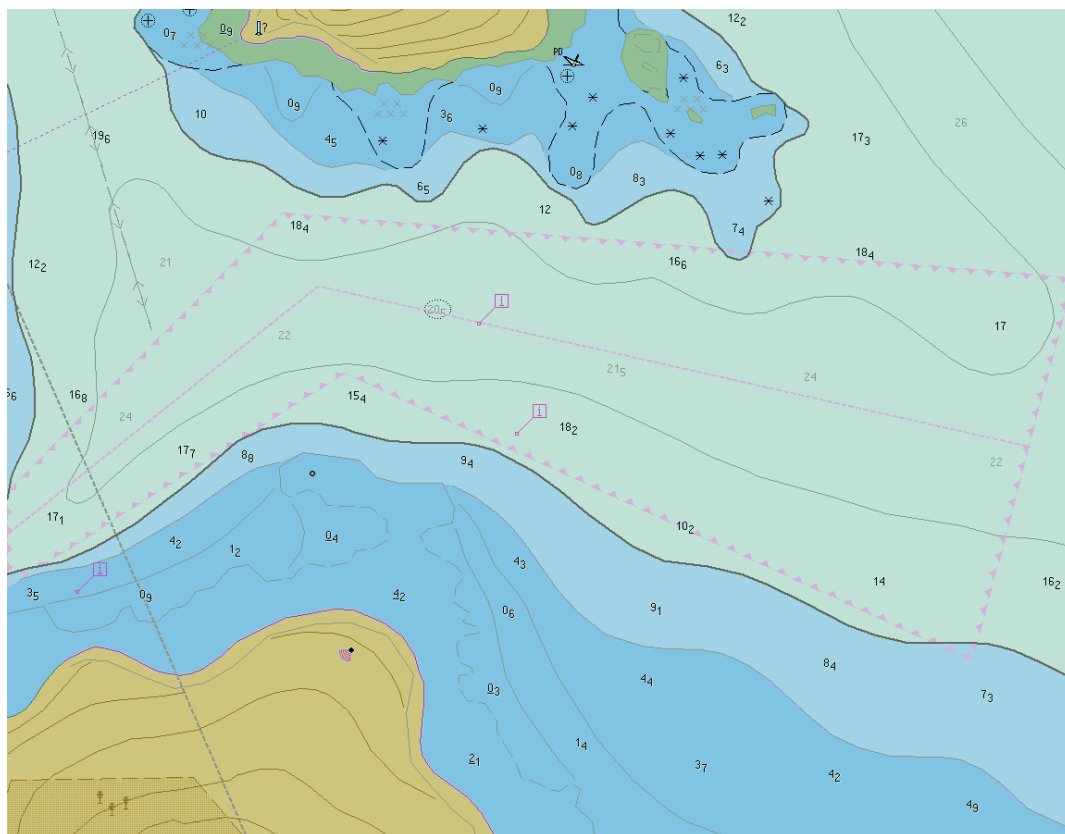


Fig. 2 ASL symbolisation (Boundary and Axis Line) at day light display

symbol definition ASL

Symbol Name:	LC(ARC SLN01)	RN: 520
--------------	-----------------------	---------

Symbol Explanation: boundary of archipelagic sea lane

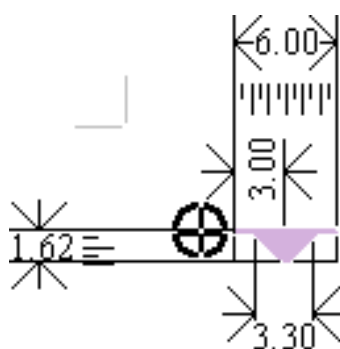
Look up table affected: area symbols with plain boundaries
area symbols with symbolized boundaries

Pivot Point Column: -2.00

Pivot Point Row: 0.00

Width of Bounding Box: 6.00

Height of Bounding Box: 1.62



Symbol Colours: CHMGF

Comments: Line weight 0.3 mm

Examples on ENC: N/A

References:


S57 E3.1.1	INT 1	
ARC SLN	M17	

Figure 2 A: Symbol definition of boundary of archipelagic sea lane (Addition to Users' Manual Addendum)

8.3.3.11 Presentation of New Object NEWOBJ

For the presentation of objects of class NEWOBJ two alternative presentation options are provided by the PresLib which do not rule each other out. On the contrary, both solutions cover different options of application.

8.3.3.11a Default symbol for NEWOBJ

Because there may be very little information available (beside the values of the attributes INFORM and/or TXTDSC), a well known attention grabbing symbol seems to be appropriate as the default symbolisation. To distinguish a new object symbol from the standard “Non ENC object” symbol (magenta question mark), an exclamation mark shaped in a magenta filled circle has been developed. The new symbol is named ‘NEWOBJ01’. This symbol is called by Look-up table entries to be found under 11.1, 11.2 and 11.3.

The entries into the look up tables for new objects of point, line and area type are as follows:

11.1 Look-Up Table Listing for Object Type Point 'P'

11.1.1 Look-up Table for paper chart point symbolization

"NEWOBJ", "", "SY(NEWOBJ01)", "6", "S", "STANDARD", "21020"

11.1.2 Look-up Table for simplified point symbolisation

"NEWOBJ", "", "SY(NEWOBJ01)", "6", "S", "STANDARD", "21020"

11.2 Look-up Table Listing for Object Type Line 'L'

"NEWOBJ", "", "LC(NEWOBJ01)", "6", "S", "STANDARD", "21020"

11.3 Look-up Table Listing for Object Type Area 'A'

11.3.1 Look-up Table for areas with symbolized boundaries

"NEWOBJ", "", "SY(NEWOBJ01);LS(DASH,2,CHMGD)", "6", "S", "STANDARD", "21020"

11.3.2 Look-up Table for areas with plain boundaries

"NEWOBJ", "", "SY(NEWOBJ01);LS(DASH,2,CHMGD)", "6", "S", "STANDARD", "21020"

Presentation examples of New Objects - default symbolization

These new look up table entries for NEWOBJ according to this approach would result in the display presentation as shown in Fig. 3. The symbol definition to be added to the PresLib is shown in Fig. 3 A and Fig 3 B.

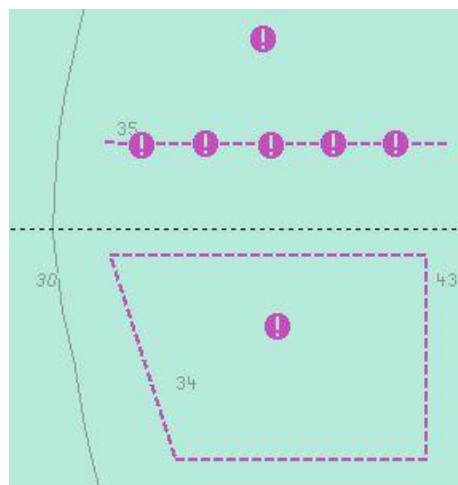


Fig. 3 NEWOBJ (New object)

Default Symbol Definition NEWOBJ

Symbol Name:	SY(NEWOBJ01)	RN: 522
--------------	--------------	---------

Symbol Explanation: new object

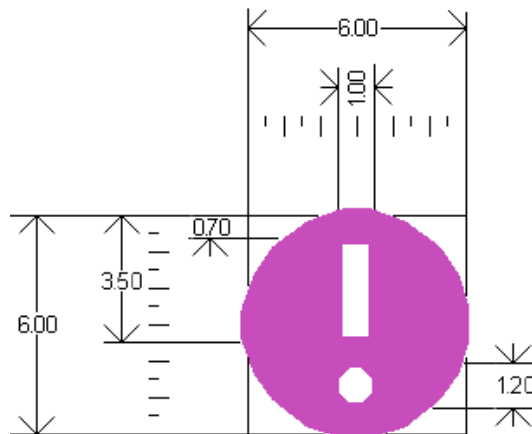
Look up table affected: paper chart point symbols
area symbols with plain boundaries
simplified point symbols
area symbols with symbolized boundaries

Pivot Point Column: 3.00

Pivot Point Row: 3.00

Width of Bounding Box: 6.00

Height of Bounding Box: 6.00



Symbol Colours: CHMGD

Comments: Line weight 0.3 mm

Examples on ENC: N/A

References:

S57 E3.1.1	INT 1
NEWOBJ	N/A

Figure 3 A: Default Symbol definition of new object symbol (Addition to Users' Manual Addendum)

Default Boundary Definition NEWOBJ

Symbol Name:

LC(NEWOBJ01)

RN: 521

Symbol Explanation: new object

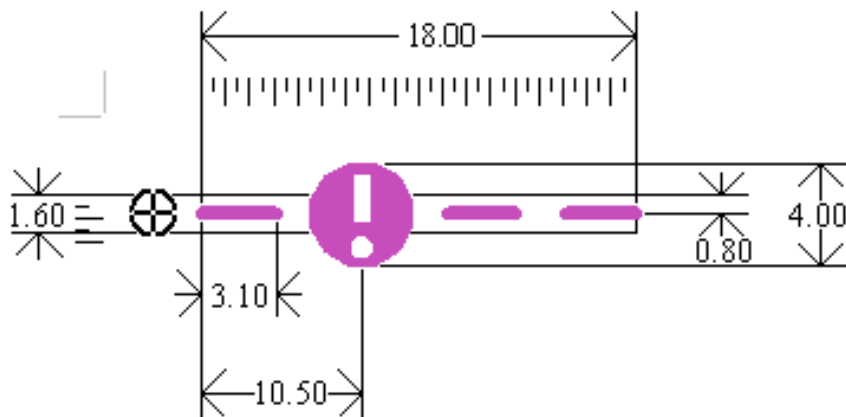
Look up table affected: line symbols

Pivot Point Column: -2.00

Pivot Point Row: 0.00

Width of Bounding Box: 20.00

Height of Bounding Box: 1.60



Symbol Colours:



CHMGD

Comments:

Line weight 0.6 mm

Examples on ENC:

N/A

References:

S57 E3.1.1	INT 1	
NEWOBJ	N/A	

Figure 3 B: Default symbol definition of boundary of new object symbol (Addition to Users' Manual Addendum)

8.3.3.11b Encoded symbolization for NEWOBJ

The 'New Object' feature object class has been supplemented to the S-57 object catalogue in order to cater for possible future requirements specified by the IMO and that affect safety of navigation which cannot adequately be encoded by any existing object class. It must not be used unless approved by the Transfer Standard Maintenance and Application Development Working Group (TSMAD) and the Colours and Symbols Maintenance Working Group (CSMWG) and issued as an ENC Encoding Bulletin.

As stated for the use of NEWOBJ01 to depict the NEWOBJ, its visualisation is a generic one, which means that the symbol is not self-explanatory but has been designed to grab attention. The user must select the pick report if he wants to learn more about the nature and designation of this object. To visualise such objects in a more meaningful way, the concept of cartographic objects from earlier editions of S-57 (Version 2.0) and the S-52 PresLib has been re-introduced. This "encoded symbolisation is given as second alternative option to visualise NEWOBJ. This method effectively binds a direct call of a symbol by its dedicated PresLib symbol name to the encoded object. This call is activated by a new optional attribute called symbol instruction (SYMINS). If this new attribute is populated with a valid symbol name (to be taken from the PresLib, Edition 3.4 Addendum), the specified symbol will be displayed on ECDIS. If this new attribute is not populated, or populated with an invalid symbol name, the default symbology as described under 8.3.3.11a will be displayed by default. This approach provides encoders with an option to select the symbol they consider best reflects the nature of the feature.

If it is required to encode a new object specified by the IMO and that affects safety of navigation which cannot adequately be encoded by any existing S-57 E3.1 object class, it must be done using the feature object class NEWOBJ. The 'New Object' feature object class must only be used in conjunction with an Encoding Bulletin issued by the IHO. The Bulletin will provide the specifics on how to use the object class for a particular application. The 'New Object' feature object class must not be used under any other circumstances.

Geo Object: New Object (NEWOBJ)

Attributes: CLSDEF CLSNAM COLOUR COLPAT CONDTN CONRAD CONVIS DATEND
DATSTA NATION NOBJNM OBJNAM PEREND PERSTA RESTRN STATUS
WATLEV INFORM NINFOM NTXTDS SYMINS TXTDSC

Remarks:

- When approved for use, the attribute CLSDEF must be defined in the data itself and is the detailed definition of all objects comprising the new object class. It is comparable to the definition section of an existing object class in the object catalogue. All objects that belong to the same object class (CLSNAM) must use an identical definition and this definition must also be used for the proposal to the S-100 feature data dictionary manager.
- When approved for use, the attribute CLSNAM must also be defined in the data itself and contains the descriptive name of the object class. For an object class that is defined in an existing object catalogue, this is the name of the object class e.g. 'Depth Area'. CLSNAM must not be used for the common name of the real world object. Common names must be encoded by use of OBJNAM and or NOBJNM. CLSNAM is a generic name to categorize all objects of one class and therefore all objects that belong to the same object class must have an identical CLSNAM. The value used for CLSNAM must also be used for the new feature object class when it is proposed to the S-100 feature data dictionary manager.
- At least one of INFORM or TXTDSC is mandatory, not both. INFORM is used to describe the feature for ECDIS systems that are not yet E3.1.1 compatible, as was done for the new attribute values for S-57 E3.1. For consistency, when one or both of these attributes is used, the text must commence with the approved object class name (CLSNAM) of the feature, such as 'Archipelagic Sea Lane'.
- This object class has default symbology in the S-52 Presentation Library Edition 3.4 (and later editions), however for features that are considered to affect safety of navigation, an existing symbol must be approved by TSMAD and CSMWG from the S-52 Symbol Library, in

order to portray the feature more accurately on an ECDIS. If the attribute SYMINS is populated with a valid symbol instruction, this will override the default symbology. Note that there are separate symbol names for point, simple and complex lines, area and text symbology.

- A corresponding Encoding Bulletin will provide the specific attribute values (strings) and instructions on how to use the object class for a particular application. This object class must not be used without an ENC Encoding Bulletin issued by the IHO on the authority of TSMAD/CSMWG.
- In addition to the issue of the Encoding Bulletin, a new feature object class proposal (and new attributes if necessary) must also be made to the S-100 feature data dictionary manager. For future editions of the product specification, the new object class will be considered for inclusion in the object catalogue.

The entries into the look up tables for new objects of point, line and area type are as follows:

- 11.1 Look-Up Table Listing for Object Type Point 'P'
- 11.1.1 Look-up Table for paper chart point symbolization
"NEWOBJ","SYMINS","CS(SYMINS01)","6","S","STANDARD","21020"
- 11.1.2 Look-up Table for simplified point symbolisation
"NEWOBJ","SYMINS","CS(SYMINS01)","6","S","STANDARD","21020"
- 11.2 Look-up Table Listing for Object Type Line 'L'
- "NEWOBJ","SYMINS","CS(SYMINS01)","6","S","STANDARD","21020"
- 11.3 Look-up Table Listing for Object Type Area 'A'
- 11.3.1 Look-up Table for areas with symbolized boundaries
"NEWOBJ","SYMINS","CS(SYMINS01)","6","S","STANDARD","21020"
- 11.3.2 Look-up Table for areas with plain boundaries
"NEWOBJ","SYMINS","CS(SYMINS01)","6","S","STANDARD","21020"

The following is an example of how SYMINS may be used using an existing look up table entry.

```
// example of SYMINS attribute for NEWOBJ of type area
// symbolize the area with a 50 % transparent colour fill using RESBL
// and a 2 pixels wide, dashed outline in CHBLK
```

SYMINS="AC(RESBL,2);LS(DASH,2,CHBLK)"

```
// example of SYMINS attribute for NEWOBJ of type line
// symbolize the line 3 pixels wide, dotted, in CHMGD
```

SYMINS="LS(DOTT,3,CHMGD)"

```
// example of SYMINS attribute for NEWOBJ of type line
// symbolize the line with the complex linestyle FERYRT01
```

SYMINS="LC(FERYRT01)"

```
// example of SYMINS attribute for NEWOBJ of type point
// symbolize the point with symbol CHINFO06
```

SYMINS="SY(CHINFO06)"

Item No.PL03.3.i5.ad.2 Addition to PresLib CSP
Symbolisation of object of the class “NEWOBJ”

SYMINS01	
Conditional Symbology Procedure for symbolization of objects of the class "NEWOBJ".	
Get the object which is calling this procedure.	
Get the value of the attribute "SYMINS".	
<p>Perform the symbolization instructions which are stored in the value of the attribute "SYMINS". If any of the symbolization instructions is a call to the CSP "SYMINS01", skip it and continue with the next instruction. This check is to prevent recursive calls.</p>	
<div> <div></div> <div>Symbolization is finished. Exit procedure.</div> </div>	

*End of immediate amendment applying to Edition 3.3 – March 2004
becoming Edition 3.4 – January 2008 by application of this amendment*

S-52 APP. 2 – DEFERRED AMENDMENT 7

Throughout this amendment changes to the CSMWG Specs. and the PresLib. are indicated by ~~strike through~~ text for deletions and **bold text** for additions.

Item No. CS04.2.d7.co.1 Correction to PresLib Part1 (Users' Manual), section 8.1, second paragraph **Display of any valid attribute information for unknown objects**

S-52 Presentation Library Edition 3.3, Part 1, section 8.1, second paragraph:

Feature objects must be of an officially adopted object class. If feature objects are of proprietary (non-~~ENC~~) classes **(i.e. not included in S-57 Product Specifications for ENC)** they will be treated as members of unknown object classes. There will be no appropriate entry in the look-up tables **but even in that case they must** be presented on the ECDIS screen **in accordance with 8.3.3.7a below.** ~~Instead of~~ **The occurrence of such an object should be recorded during transformation from ENC to SENC as an anomaly** ~~should be a message on the interface and the unknown objects should show up~~ **be displayed as by means of '?'-symbols.**

8.3.3.7a Symbolizing an object of unknown / unidentified non-ENC object class

If there is no look-up table line matching the object at all, the look-up table is incomplete or the object is of an unknown object class. If this happens, a caution should be shown on the mariners' interface and a '?'-symbol ('QUESMRK1'-symbol, pattern or line style) should be shown as fail-safe presentation, which on cursor **inquiry of attributes INFORM and or TXTDSC would display text and if possible explaining** the object in the SENC. **All standard S-57 attributes permitted for ENCs that have been populated, must also be available for cursor enquiry.** For an area use SY(QUESMRK1) as a centred symbol and for the areas with symbolized boundaries use LC(QUESMRK1) to symbolize the boundary. Display priority is 5, over radar, IMO category is 'standard', and viewing group is 21010.

8.3.3.7b Symbolizing an object with unknown / unidentified non-ENC attributes or non-ENC attribute values

Closely following sections 8.3.3.2 and 8.3.3.3 in detail will result in a fail-safe symbolization of the object by the default symbolization for that object class." **For a non-ENC attribute, apply default symbology for the valid object class. For a non-ENC attribute value, apply default symbology for the valid object class/attribute combination. INFORM and or TXTDSC attributes (and any other valid ENC-attributes that have been populated) must be available to the mariner in every case by Pick Reports.**

Item No. CS04.2.d7.co.2 Correction to PresLib Part 1 (Users' Manual), Glossary **Display of unknown objects**

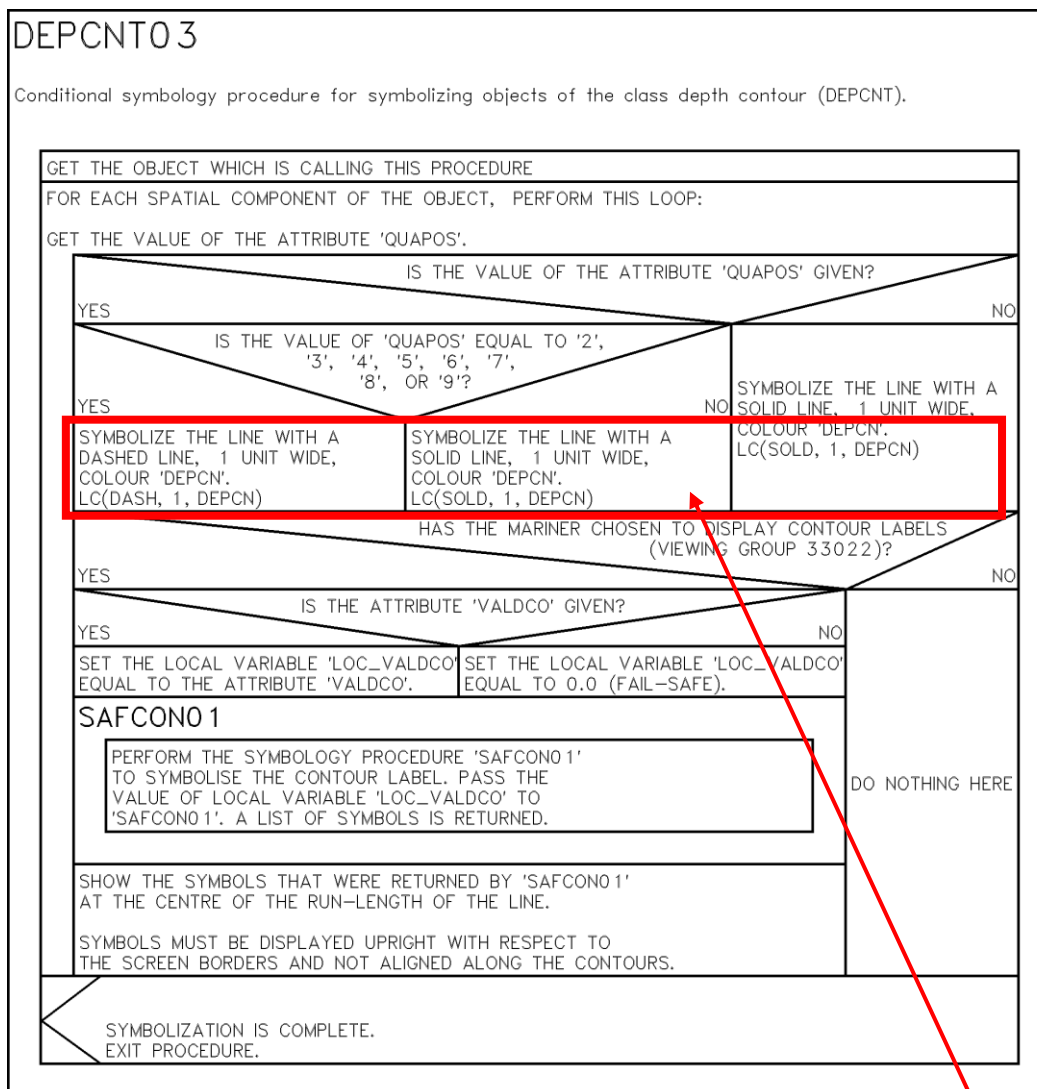
17. Glossary

Unknown Object:	If an object-class is not listed in the look-up table, the ECDIS should advice the mariner that an unknown object exists in the display area, and symbolize all such objects with '?'.
------------------------	---

Item No. CS04.2.d7.co.3 Correction to PresLib section 12.2.2 (subsection 4.2, paragraph 4)
Typographical error to display scale

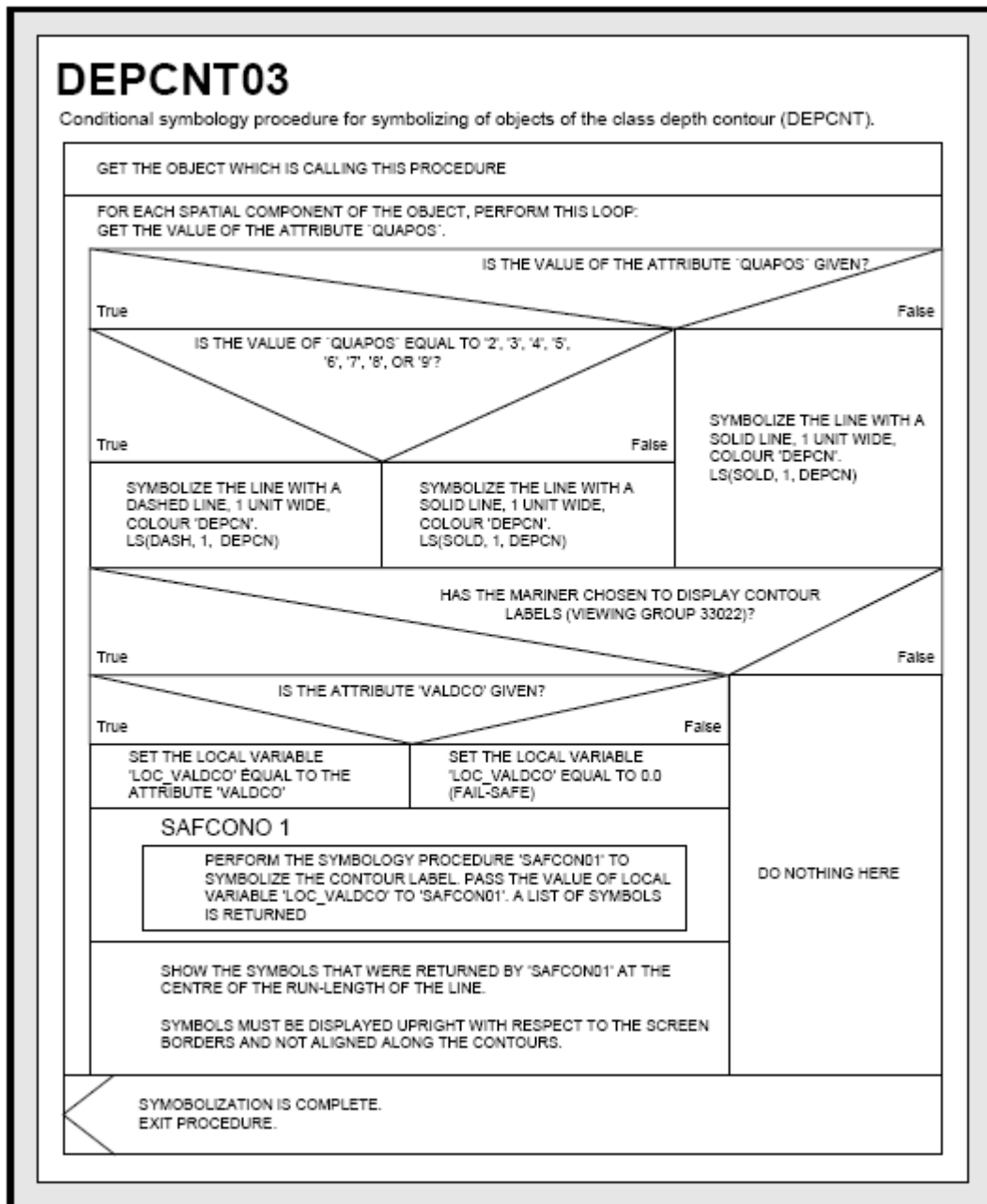
Note that in this situation the pattern AP(OVERSC01) should ONLY be shown on the area compiled from the smaller scale ENC. If the area from the larger scale ENC is also overscale, this should be indicated by the "overscale indication" of sub-section 4.1 above. The pattern AP(OVERSC01) should not be shown on the part of the display taken from the larger scale ENC. For example if the display scale of the situation in figure 7 was 1/3,500 the area of compilation scale 1/12,500 would have an overscale indication of X 3.6 but would have no pattern AP(OVERSC01).

Item No. PL03.3.d7.co.4 Correction to PresLib CSP
Depth Contour Procedure



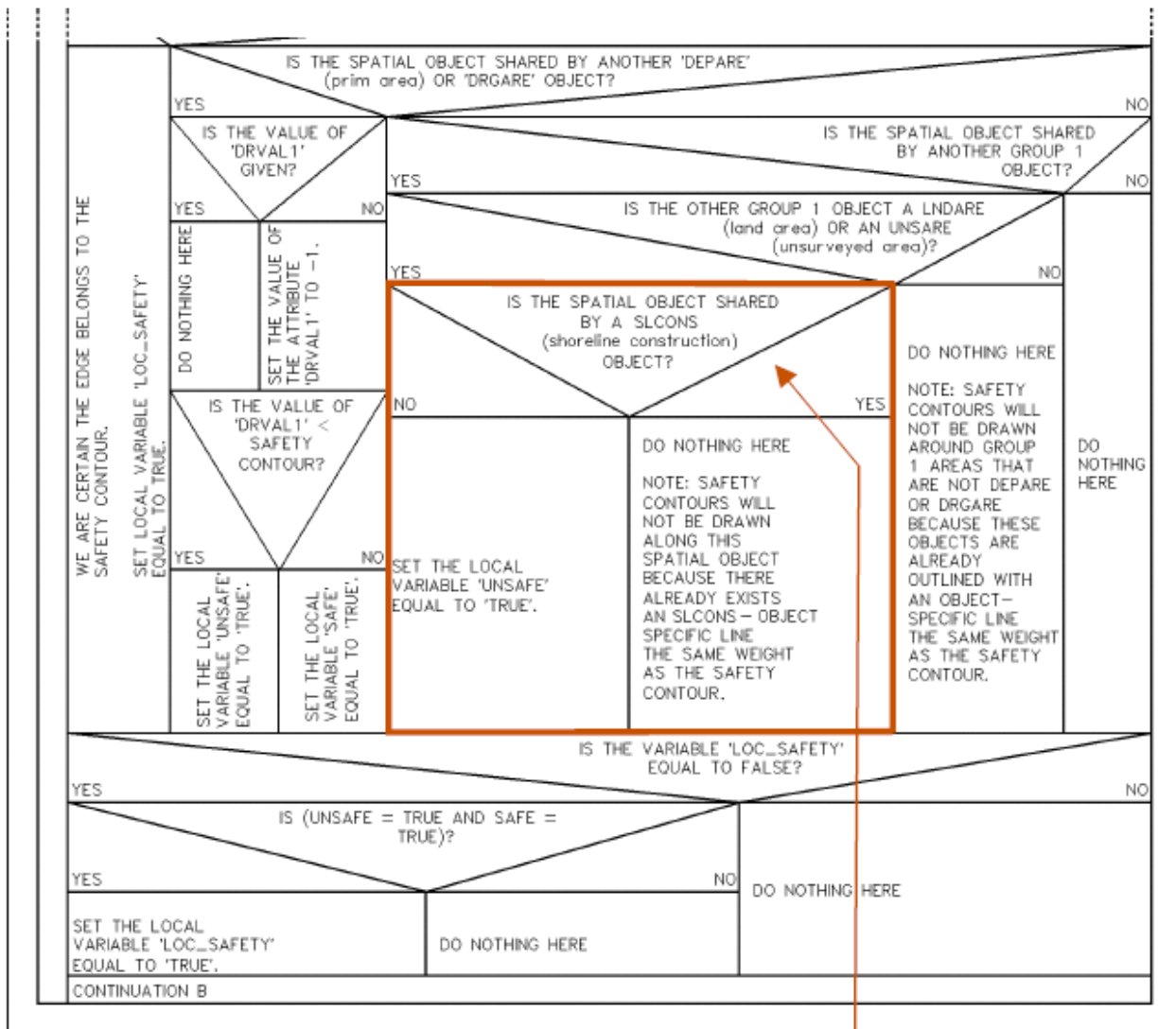
Required modification of this conditional branch: The portrayal instruction "LC" must be replaced by the portrayal instruction "LS".

The diagram DEPCNT03 below corrects the PresLib and substitutes DEPCNT03 of PL 3.3:



Item No.PL03.3.d7.co.5 Correction to PresLib CSP
Safety contour detection method

Conditional symbology procedure DEPA02 CONTINUATION A :

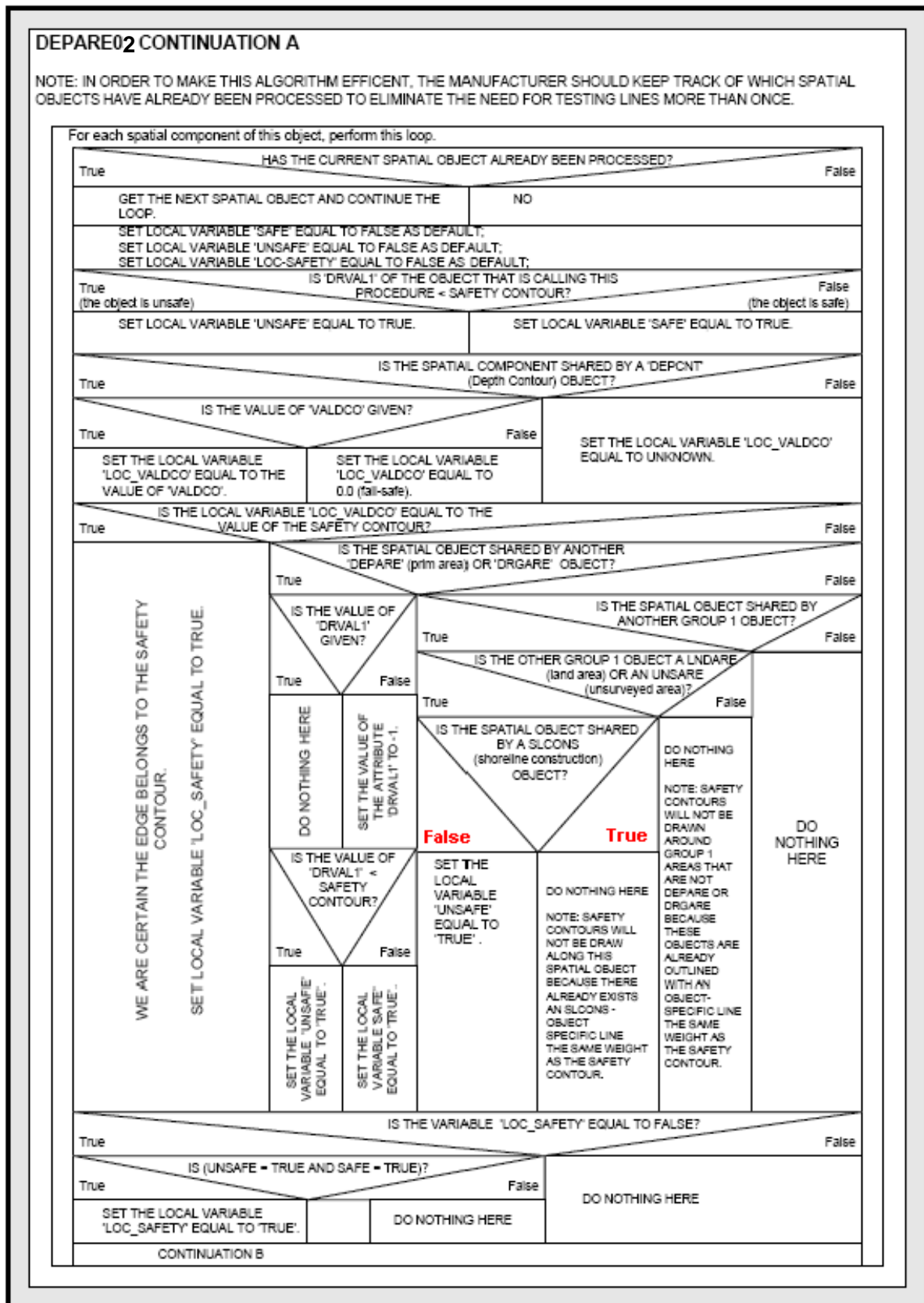


Modification of this conditional branch: If there are no SLCONS objects which are sharing the same edge, then the answer is NO and the local variable 'UNSAFE' is set to 'TRUE'.

The old additional checking for sharing of RIVERS, LAKARE, CANALS or DOCARE is not necessary because this edge is shared by LNDARE or UNSARE and therefore the condition is definitely 'unsafe' in this case.

If there is a SLCONS object sharing the same edge, then the answer is YES and this edge will not be displayed as part of the safety contour, but will be displayed by the conditional symbology procedure 'SLCONS03' which always belongs to the DISPLAY BASE category.

The diagram DEPARE02 CONTINUATION A below corrects the PresLib and substitutes DEPARE CONTINUATION A of PL 3.3:



Item No. PL03.3.d7.co.6 Correction to PresLib CSP
Revised CSPs OBSTRN06 and WRECKS04 to portray depths over dangers

1. PURPOSE

This development is required as a result of action item 37 of the minutes of the 16th meeting of the IHO Colours and Symbols Maintenance Working Group (CSMWG) held in Monaco in 2006. It is aimed at visualizing the values of soundings belonging to a wreck or another obstruction lying on the sea bed, by modifying the relevant Conditional Symbology Procedures (CSPs)

At present when the mariner selects viewing group 33010 (soundings) the display shows only the depths of the soundings in object class SOUNDG. To see the depths over rocks, wrecks or obstructions as well, the mariner must make cursor-picks of the objects individually. Or he can select viewing group 34050 (non-dangerous rocks, wrecks and obstructions) for display, but this would bring in all such objects whether they had a sounding value or not and so cause clutter.

This amendment sets up a new viewing group 34051 (non-dangerous rocks, wrecks and obstructions which have a VALSOU attribute), and CSPs OBSTRNnn and WRECKSnn have been revised to assign all non-dangerous rocks, wrecks and obstructions which have a VALSOU attribute to this group. Also, because at present these CSPs only display depths of less than 20 meters they have been revised to display all depths. The sounding will always be shown whenever the objects in this group are on the display

Note however that Isolated Dangers to ownship (rocks, wrecks and obstructions whose depth is less than the safety contour and which lie in water deeper than the safety contour) will continue to be symbolized only with the "Isolated Danger" symbol SY(ISODGR01), whose shape was not designed for showing a depth value clearly.

The revised versions of CSPs OBSTRNnn and WRECKSnn are included in this amendment together with a revision to the Viewing Groups and a discussion on displaying the depth over Isolated Dangers.

2. NEW VIEWING GROUP

A new viewing group (34051) for non-dangerous rocks (UWTROC), wrecks (WRECKS) and obstructions (OBSTRN) which have a VALSOU attribute has been added.

Update to section 13.2 VIEWING GROUPS for Other Chart Information:

J, K, L SEABED, OBSTRUCTIONS, PIPELINES	
34000	Seabed Information: rocks, wrecks & obstns, pipes & cables
34010	nature of seabed (SBDARE)
34020	spring (SPRING), sea weed (WEDKLP)
34030	Na
34040	fish haven (FSHHAV), fishing stakes, etc. (FSHFAC)
34050	rocks (UWTROC), wrecks (WRECKS), obstructions (OBSTNS), which are not a danger to own-ship's navigation (these are all Display Base if a danger to own-ship)
34051	non-dangerous rocks (UWTROC), wrecks (WRECKS) and obstructions (OBSTRN) which have a VALSOU attribute and are not a danger to own-ship's navigation (these objects are all Display Base if a danger to own-ship)
34060	Na
34070	submarine cable (CBLSUB), submarine pipeline (PIPSOL)

By means of this new viewing group, the Mariner can view all of the obstructions and wrecks lying on the sea bed that have the attribute VALSOU set, along with soundings, by choosing the viewing group 34051 and 33010 (soundings). If viewing group 34050 is not selected, then those obstructions and wrecks lying on the seafloor which do not have the attribute VALSOU set will not be displayed.

The following entries into the look up tables for obstructions and wrecks are modified or added to the Presentation Library.

11.1 Look-Up Table Listing for Object Type Point 'P'

11.1.1 Look-up Table for paper chart point symbolization

"OBSTRN","","CS(~~OBSTRN05~~OBSTRN06)","4","O","OTHER","34050"
 "OBSTRN","CATOBS7VALSOU","SY(FOULGND1)","4","O","OTHER","34051"
 "OBSTRN","CATOBS8VALSOU","SY(FLTTHAZ02)","4","O","OTHER","34051"
 "OBSTRN","CATOBS9VALSOU","SY(ACHARE02)","4","O","OTHER","34051"
 "OBSTRN","CATOBS10VALSOU","SY(FLTTHAZ02)","4","O","OTHER","34051"

 "WRECKS","","CS(~~WRECKS03~~WRECKS04)","4","O","OTHER","34050"
 "WRECKS","CATWRK3VALSOU","SY(FOULGND1)","4","O","OTHER","34051"

11.1.2 Look-up Table for simplified point symbolisation

"OBSTRN","","CS(~~OBSTRN05~~OBSTRN06)","4","O","OTHER","34050"
 "OBSTRN","CATOBS7VALSOU","SY(FOULGND1)","4","O","OTHER","34051"
 "OBSTRN","CATOBS8VALSOU","SY(FLTTHAZ02)","4","O","OTHER","34051"
 "OBSTRN","CATOBS9VALSOU","SY(ACHARE02)","4","O","OTHER","34051"
 "OBSTRN","CATOBS10VALSOU","SY(FLTTHAZ02)","4","O","OTHER","34051"

 "WRECKS","","CS(~~WRECKS03~~WRECKS04)","4","O","OTHER","34050"
 "WRECKS","CATWRK3VALSOU","SY(FOULGND1)","4","O","OTHER","34051"

11.2 Look-up Table Listing for Object Type Line 'L'

"OBSTRN","","CS(~~OBSTRN05~~OBSTRN06)","4","O","OTHER","34050"

11.3 Look-up Table Listing for Object Type Area 'A'

11.3.1 Look-up Table for areas with symbolized boundaries

"OBSTRN","","CS(~~OBSTRN05~~OBSTRN06)","4","S","OTHER","34050"
 "OBSTRN","CATOBS7VALSOU","SY(FOULGND1);LC(NAVARE51)","4","S","OTHER","34051"

 "WRECKS","","CS(~~WRECKS03~~WRECKS04)","4","S","OTHER","34050"
 "WRECKS","CATWRK3VALSOU","LC(NAVARE51)","4","S","OTHER","34051"

11.3.2 Look-up Table for areas with plain boundaries

"OBSTRN","","CS(~~OBSTRN05~~OBSTRN06)","4","S","OTHER","34050"
 "OBSTRN","CATOBS7VALSOU","SY(FOULGND1);LS(DASH,1,CHGRD)","4","S","OTHER","34051"

 "WRECKS","","CS(~~WRECKS03~~WRECKS04)","4","S","OTHER","34050"
 "WRECKS","CATWRK3VALSOU","LS(DASH,1,CHBLK)","4","S","OTHER","34051"

3. REVISED CSPs OBSTRN06 and WRECKS04

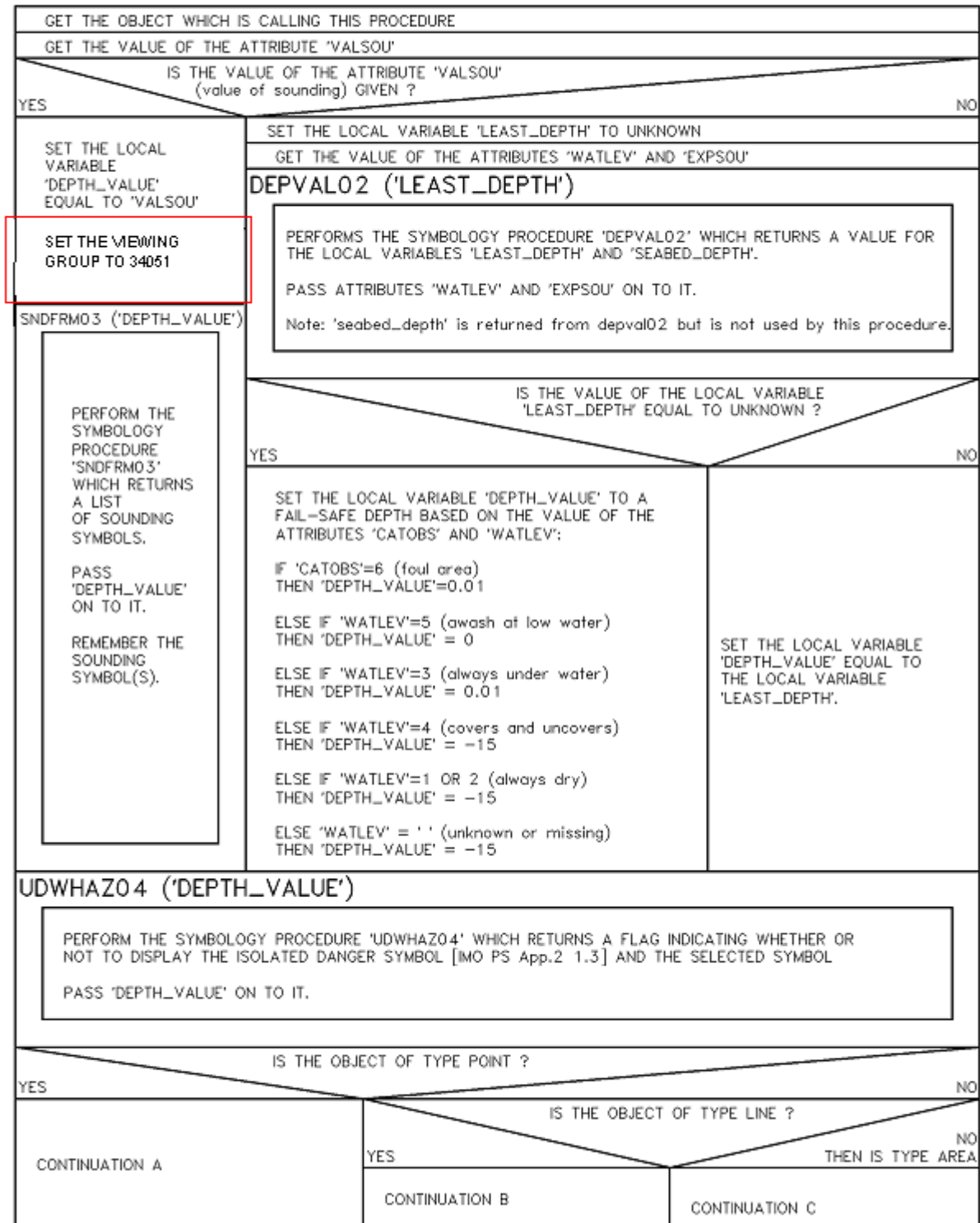
The versions with the changes marked are given immediately below. The un-marked versions are given at the end of this amendment.

12.2.9 Conditional Symbology Procedure 'OBSTRN06'

Applies to:	S-57 Object Class "obstruction" (OBSTRN) S-57 Object Class "under water rock" (UWTROC)
Spatial Object(s):	Point, Line, Area.
Attribute(s) used:	"value of sounding" (VALSOU) "water level" (WATLEV) "exposure of sounding" (EXPSOU)
Parameter(s):	Object to be symbolized from SENC
Defaults:	Display Priority given by look-up table OVERRADAR priority given by look-up table Display Category given by look-up table Viewing Group given by look-up table Area Color fill from underlying 'DEPARE' or 'UNSARE'
Remarks:	<p>Obstructions or isolated underwater dangers of depths less than the safety contour which lie within the safe waters defined by the safety contour are to be presented by a specific isolated danger symbol and put in IMO category "DISPLAY BASE" (see IMO Performance Standard for ECDIS, App.2, 1.3). This task is performed by the most recent edition of sub-procedure UDWHAZnn which is called by this symbology procedure. Objects of the class "under water rock" are handled by this routine as well to ensure a consistent symbolization of isolated dangers on the seabed.</p> <p>The current UDWHAZnn also allows the mariner the option of displaying isolated dangers in the waters between the safety contour and the zero metre line.</p> <p>In the case that the value of attribute VALSOU for this object is unknown, the most recent edition of sub-procedure DEPVALnn is called. This will provide a default 'least_depth' from the DRVAL1 of the underlying depth area on condition that the value of attribute EXPSOU is not 2 (shoaler than the depth area), and the value of attribute WATLEV is 3 (always underwater).</p>

OBSTRN06

Conditional symbology procedure for symbolizing objects of the class obstruction (OBSTRN) and underwater rock (UWTROC).



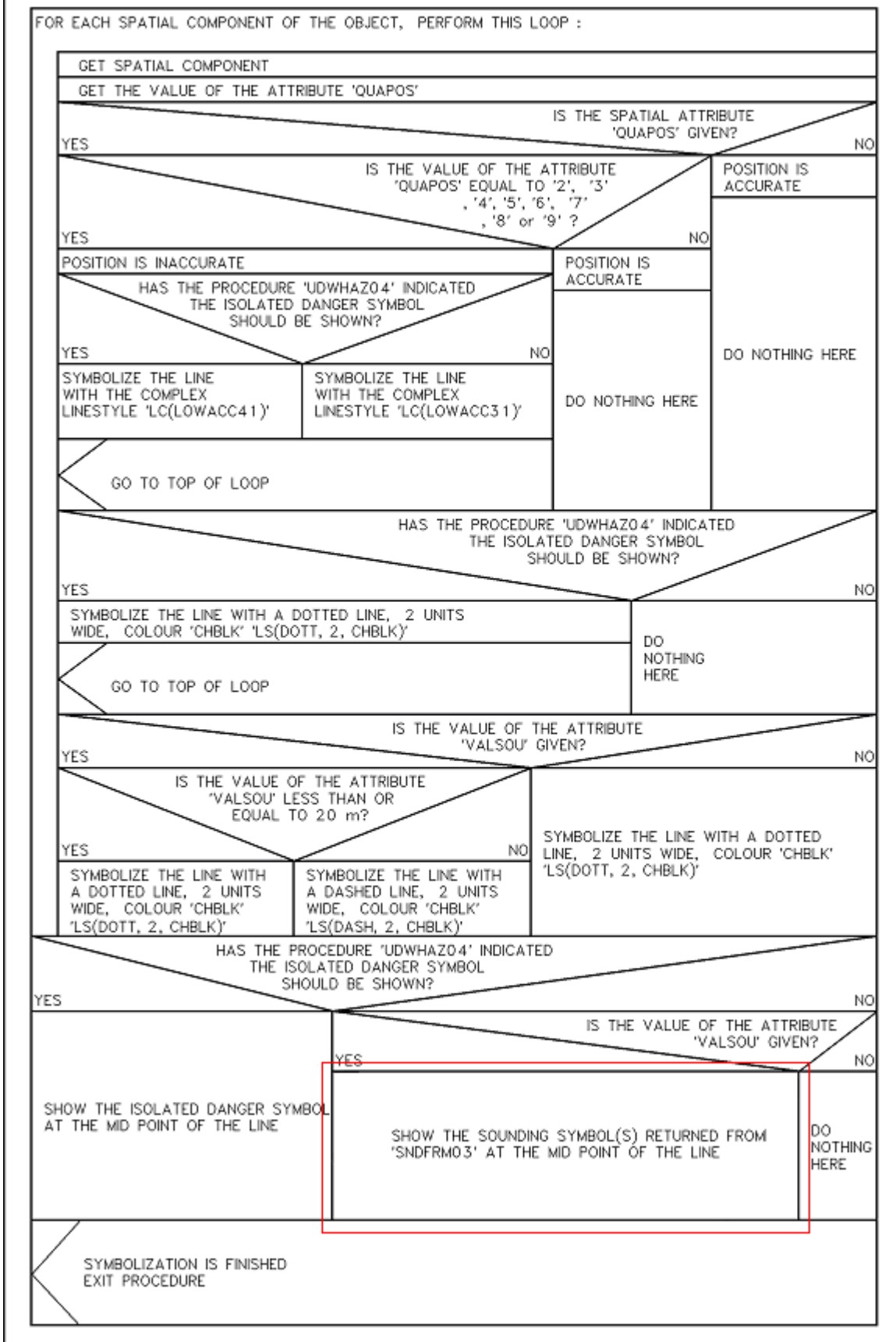
OBSTRN06 Continuation A

Point objects, underwater rocks (UWTROC) and obstructions (OBSTRN)

QUAPNT02	
PERFORM THE SYMBOLOGY PROCEDURE 'QUAPNT02' WHICH RETURNS A FLAG INDICATING WHETHER OR NOT TO DISPLAY THE LOW ACCURACY SYMBOL AND RETURNS THE SELECTED SYMBOL	
HAS THE PROCEDURE 'UDWHAZ04' INDICATED THE ISOLATED DANGER SYMBOL SHOULD BE SHOWN?	
YES	NO
SHOW THE SYMBOL SELECTED BY 'UDWHAZ04' AT THE CALLING OBJECTS LOCATION	
IF SO INDICATED BY THE PROCEDURE 'QUAPNT02', SHOW THE RETURNED LOW ACCURACY SYMBOL AT THE CALLING OBJECT'S LOCATION	
DO NOTHING HERE	
SYMBOLIZATION IS FINISHED EXIT PROCEDURE	
SET THE LOCAL VARIABLE 'SOUNDING' TO FALSE TO INDICATE THAT SOUNDING SYMBOL(S) RETURNED FROM 'SHDFRMD3' SHOULD NOT BE DRAWN	
IS THE VALUE OF THE ATTRIBUTE 'VALSOU' GIVEN?	
YES	NO
IS THE VALUE OF THE ATTRIBUTE 'VALSOU' LESS THAN OR EQUAL TO 20 METRES? (Definition of "dangerous" in M4-422.5)	
YES	NO
IS THE CALLING OBJECT OF THE TYPE 'UWTROC'?	
YES	NO
CALLING OBJECT MUST BE OF THE TYPE 'OBSTRN'.	
SELECT THE APPROPRIATE SYMBOL AND DECIDE IF THE SOUNDING SHOULD BE SHOWN.	
IF 'WATLEV'=3 (always submerged), THEN SELECT 'SY(DANGER01)' AND 'SOUNDING'=TRUE ELSE IF 'WATLEV'=4 (covers and uncovers) THEN SELECT 'SY(UWTROCD4)' AND 'SOUNDING'=FALSE ELSE IF 'WATLEV'=5 (awash) THEN SELECT 'SY(UWTROCD4)' AND 'SOUNDING'=FALSE ELSE (DEFAULT) SELECT 'SY(DANGER01)' AND 'SOUNDING'=TRUE	
CALLING OBJECT MUST BE OF THE TYPE 'OBSTRN'. IF 'CATOBS'=6 (foul area), THEN SELECT 'SY(DANGER01)' AND 'SOUNDING'=TRUE ELSE IF 'WATLEV'=1 (partly submerged at HW) OR 2 (always dry), THEN SELECT 'SY(OBSTRN11)' AND 'SOUNDING'=FALSE ELSE IF 'WATLEV'=3 (always submerged) THEN SELECT 'SY(DANGER01)' AND 'SOUNDING'=TRUE ELSE IF 'WATLEV'=4 (covers and uncovers) OR 5 (awash) THEN SELECT 'SY(DANGER03)' AND 'SOUNDING'=TRUE ELSE (DEFAULT) SELECT 'SY(DANGER01)' AND 'SOUNDING'=TRUE	
SELECT 'SY(DANGER02)' AND 'SOUNDING'=TRUE IF 'WATLEV'=5 (always submerged), THEN SELECT 'SY(UWTROCD3)' ELSE (DEFAULT) SELECT 'SY(UWTROCD4)'	
CALLING OBJECT MUST BE OF THE TYPE 'OBSTRN'.	
IF 'CATOBS'=6 (foul area), THEN SELECT 'SY(OBSTRN01)' ELSE IF 'WATLEV'=1 (partly submerged at HW) OR 2 (always dry), THEN SELECT 'SY(OBSTRN11)' ELSE IF 'WATLEV'=3 (always submerged), THEN SELECT 'SY(OBSTRN01)' ELSE IF 'WATLEV'=4 (covers and uncovers) OR 5 (awash) THEN SELECT 'SY(OBSTRN03)' ELSE (DEFAULT) SELECT 'SY(OBSTRN01)'	
SHOW THE SELECTED SYMBOL AND THE SOUNDING SYMBOL(S) (IF REQUIRED - returned from SHDFRMD3) AT THE CALLING OBJECT'S LOCATION	
IF SO INDICATED BY THE PROCEDURE 'QUAPNT02', SHOW THE RETURNED LOW ACCURACY SYMBOL AT THE CALLING OBJECT'S LOCATION	
SYMBOLIZATION IS FINISHED EXIT PROCEDURE	

OBSTRN06 Continuation B

Line objects, obstructions (OBSTRN)

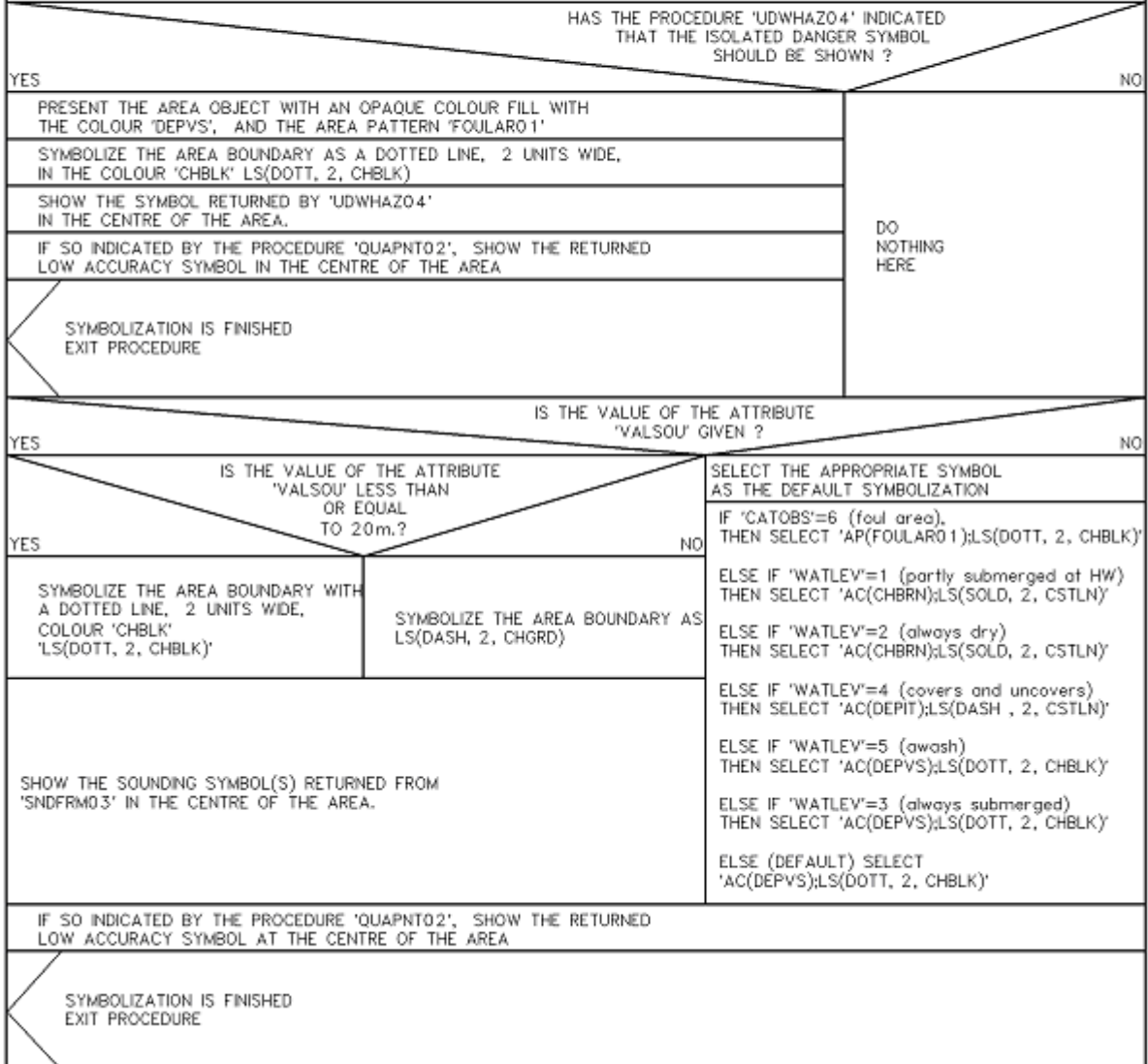


OBSTRN06 Continuation C

Area objects, obstructions (OBSTRN)

QUAPNT02

PERFORM THE SYMBOLOGY PROCEDURE 'QUAPNT02' WHICH RETURNS A FLAG INDICATING WHETHER OR NOT TO DISPLAY THE LOW ACCURACY SYMBOL AND RETURNS THE SELECTED SYMBOL



12.2.27 Conditional Symbology Procedure 'WRECKS04'

Applies to: S-57 Object Class "wrecks" (WRECKS)

Spatial Object(s): Point, Area

Attribute(s) used: "value of sounding" (VALSOU)
 "category of wreck" (CATWRK)
 "water level" (WATLEV)

Parameter(s): Object to be symbolized from SENC

Defaults: Display Priority given by look-up table
 OVERRADAR priority given by look-up table
 Display Category given by look-up table
 Viewing Group given by look-up table
 Area colour fill from underlying DEPRE or UNSARE

Remarks: Wrecks of depths less than the safety contour which lie within the safe waters defined by the safety contour are to be presented by a specific isolated danger symbol and put in IMO category "DISPLAY BASE" (see App.2, 1.3, of the IMO Performance Standards for ECDIS). This task is performed by the sub-procedure "UDWHAZnn" which is called by this symbology procedure.

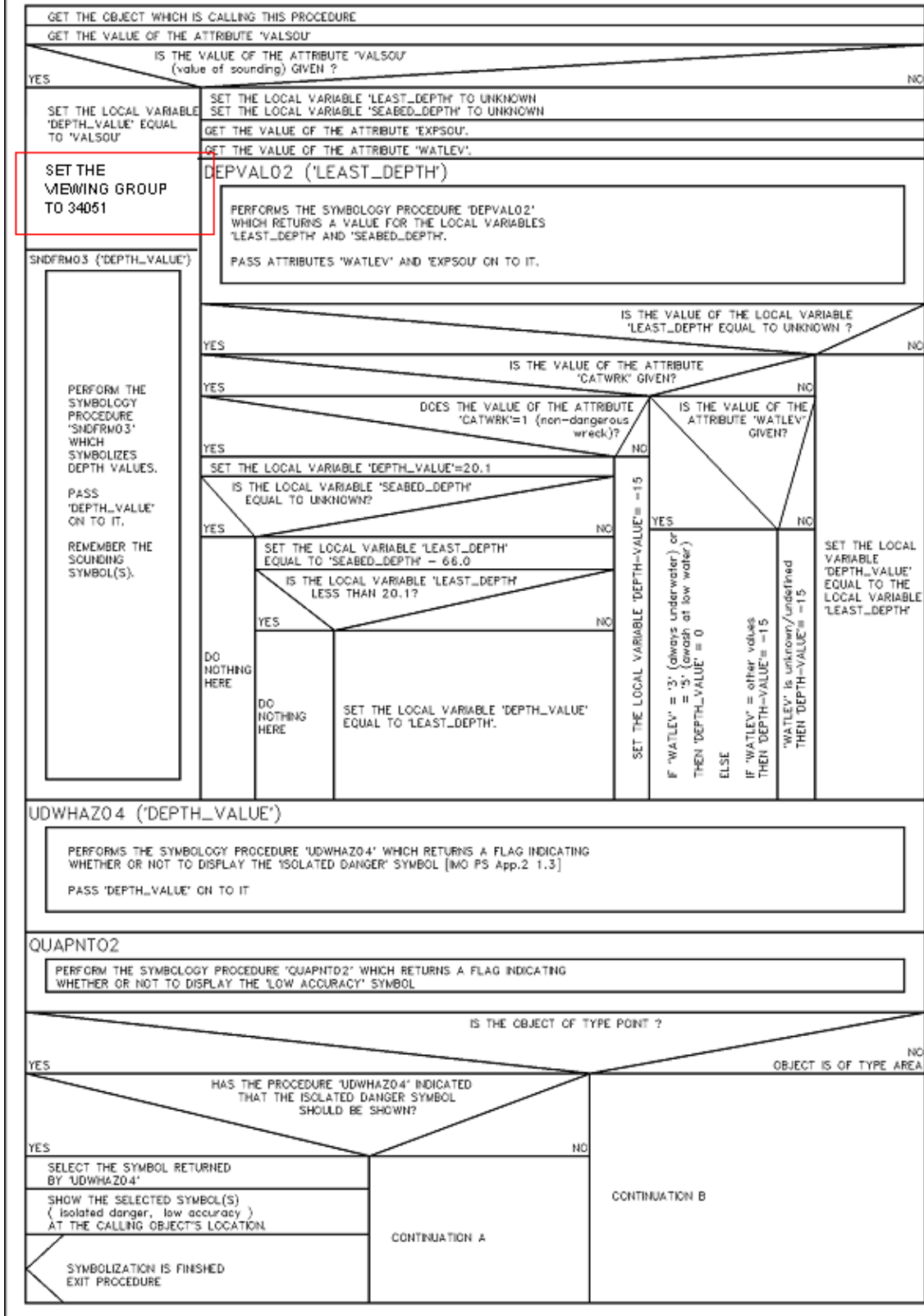
CSP "UDWHAZ" also allows the mariner the option of displaying isolated dangers in the waters between the safety contour and the zero meter line.

In the case that the value of attribute VALSOU for the wreck is unknown, sub-procedure "DEPVAL" is called. This will provide as default 'LEAST_DEPTH' the DRVAL1 of the underlying depth area, but only on condition that the value of attribute EXPSOU is not 2 (shoaler than the depth area), and the value of attribute WATLEV is 3 (always underwater).

For the case that a wreck of unknown VALSOU lies in deep water, sub-procedure 'DEPVAL' also provides the DRVAL1 of the underlying depth area as the 'SEABED_DEPTH' for use in calculating a 'safe clearance depth' over the wreck in accordance with IHO publication M-4 appendix to specification B-422.7.

WRECK504

Conditional symbology procedure for symbolizing objects of the class wrecks (WRECK5).



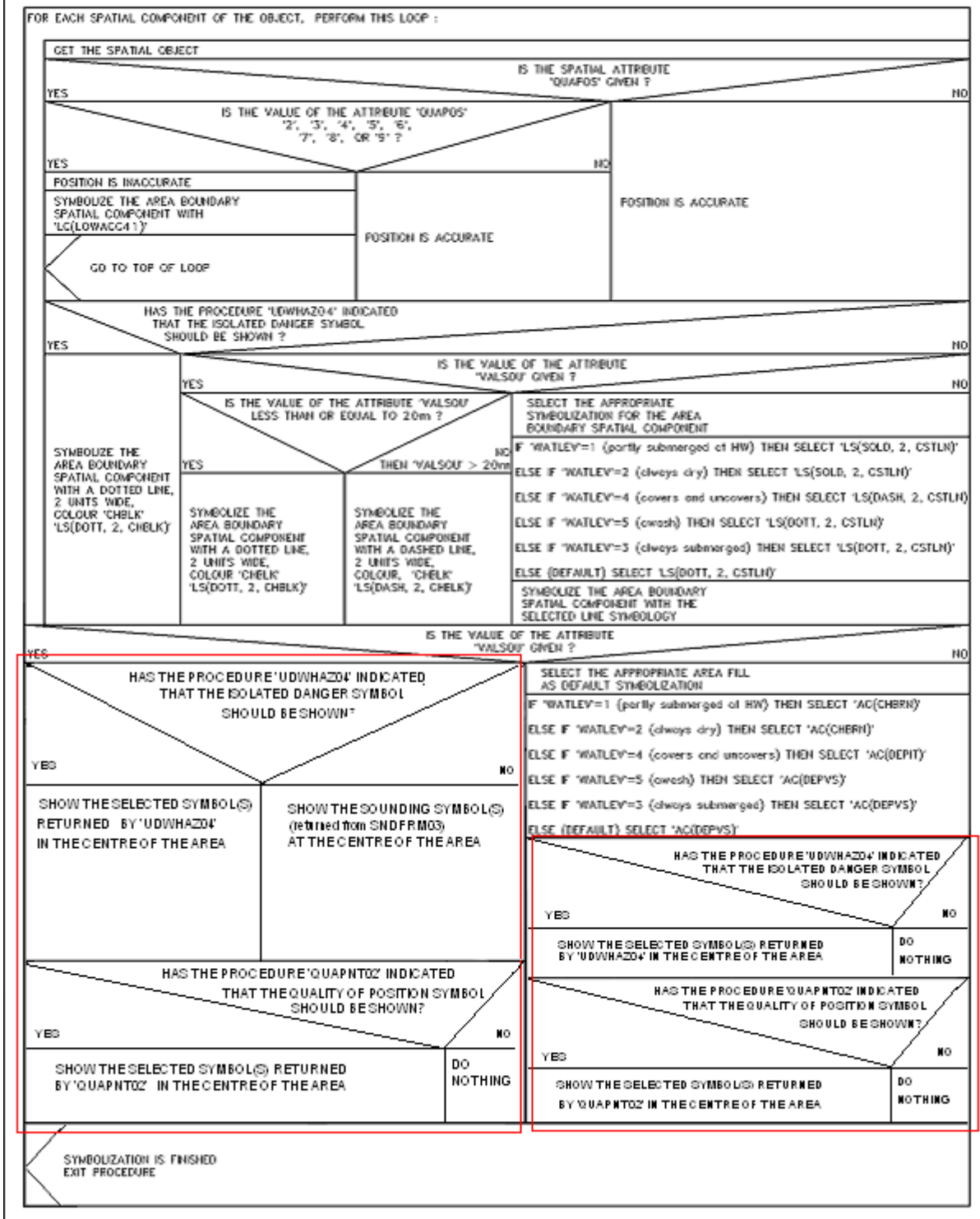
WRECKSD04 Continuation A

Point objects, wrecks (WRECKSD)

IS THE VALUE OF THE ATTRIBUTE "VALSD04" GIVEN ?		YES	NO
IS THE VALUE OF THE ATTRIBUTE "VALSD04" LESS THAN OR EQUAL TO 20m ?		YES	NO
SELECT "SY(DANGER01)"	SELECT "SY(DANGER02)"	SELECT THE APPROPRIATE SYMBOL : IF "CATWRK"=1 (non-dangerous wreck) AND "WATLEV"=3 (always submerged), THEN SELECT "SY(WRECKSD04)" ELSE IF "CATWRK"=2 (dangerous wreck) AND "WATLEV"=3 (always submerged), THEN SELECT "SY(WRECKSD05)" ELSE IF "CATWRK"=4 (wreck showing mast/masts) THEN SELECT "SY(WRECKSD01)" ELSE IF "CATWRK"=5 (wreck showing any portion of hull or superstructure) THEN SELECT "SY(WRECKSD01)" ELSE IF "WATLEV"=1 (partly submerged at HW) THEN SELECT "SY(WRECKSD01)" ELSE IF "WATLEV"=2 (always dry) THEN SELECT "SY(WRECKSD01)" ELSE IF "WATLEV"=5 (awash) THEN SELECT "SY(WRECKSD01)" ELSE IF "WATLEV"=4 (covers and uncovers) THEN SELECT "SY(WRECKSD01)" ELSE (DEFAULT) SELECT "SY(WRECKSD05)" SHOW THE SELECTED SYMBOL(S) (wreck, low accuracy) AT THE CALLING OBJECT'S LOCATION	
SHOW THE SELECTED SYMBOL(S) (danger, low accuracy) AT THE CALLING OBJECT'S LOCATION			
SHOW THE SOUNDING SYMBOL(S) (returned from SHDFRM03) ON TOP AT THE CALLING OBJECT'S LOCATION			
DO NOTHING HERE			
SYMBOLIZATION IS FINISHED EXIT PROCEDURE			

WRECKSO4 Continuation B

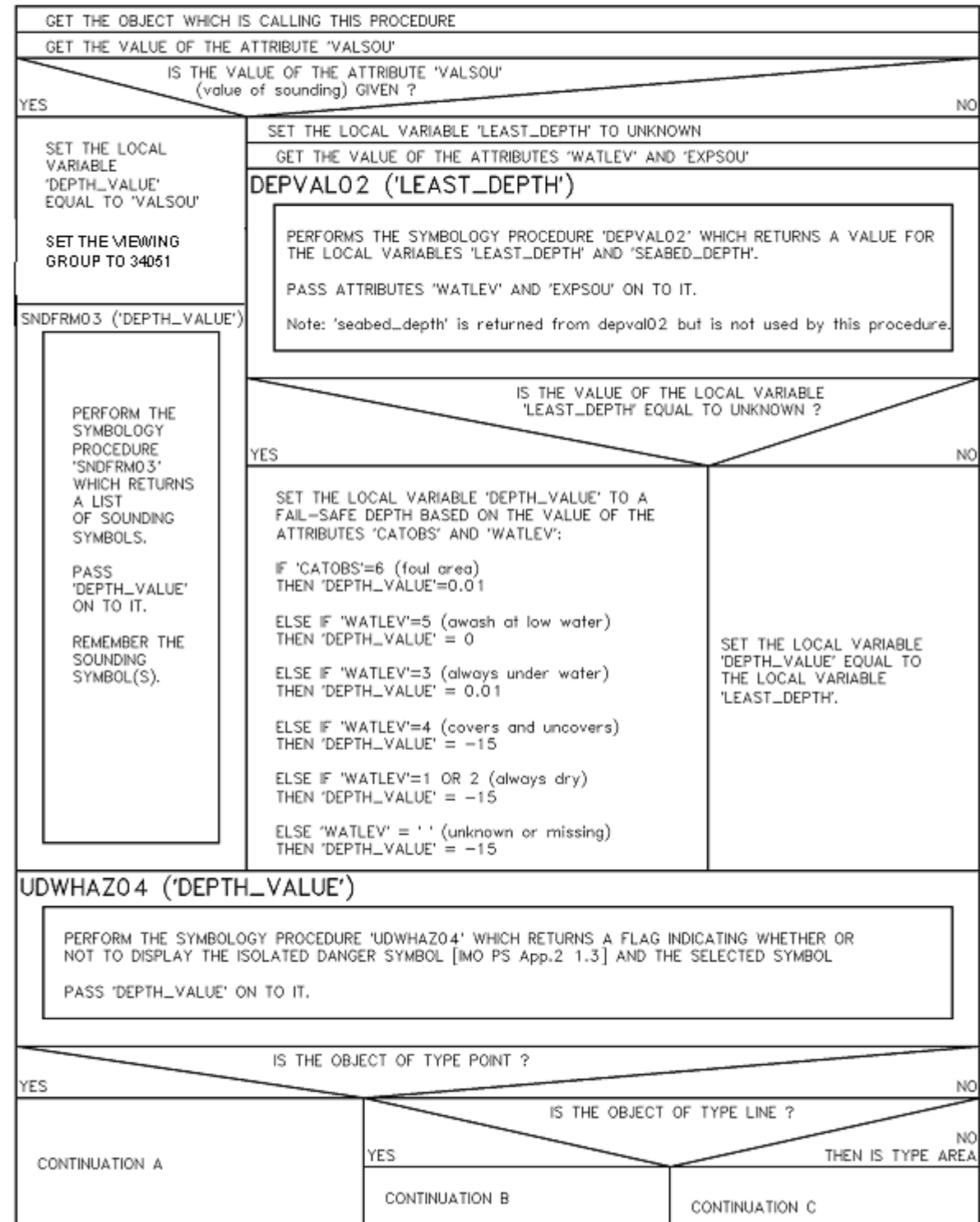
Area objects, wrecks (WRECKS)



UN-MARKED VERSIONS OF THE CSPs FOLLOW

OBSTRN06

Conditional symbology procedure for symbolizing objects of the class obstruction (OBSTRN) and underwater rock (UWTROC).



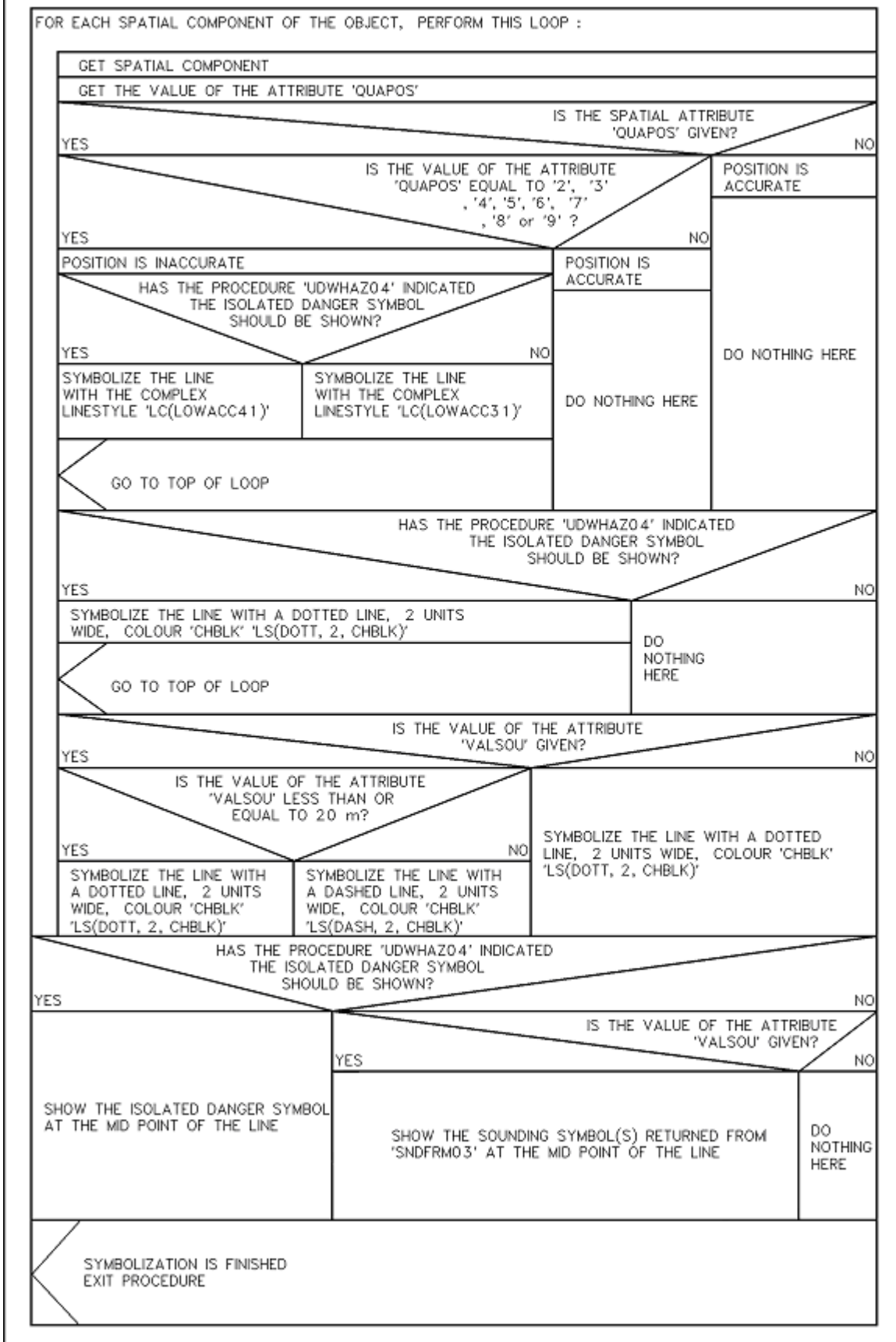
OBSTRN06 Continuation A

Point objects, underwater rocks (UWTROC) and obstructions (OBSTRN)

QUAPNT02			
PERFORM THE 'SYMBOLGY' PROCEDURE 'QUAPNT02' WHICH RETURNS A FLAG INDICATING WHETHER OR NOT TO DISPLAY THE LOW ACCURACY SYMBOL AND RETURNS THE SELECTED SYMBOL			
HAS THE PROCEDURE 'UDWHAZ04' INDICATED THE ISOLATED DANGER SYMBOL SHOULD BE SHOWN?			
YES		NO	
SHOW THE SYMBOL SELECTED BY 'UDWHAZ04' AT THE CALLING OBJECT'S LOCATION		DO NOTHING HERE	
IF SO INDICATED BY THE PROCEDURE 'QUAPNT02', SHOW THE RETURNED LOW ACCURACY SYMBOL AT THE CALLING OBJECT'S LOCATION			
SYMBOLIZATION IS FINISHED EXIT PROCEDURE			
SET THE LOCAL VARIABLE 'SOUNDING' TO FALSE TO INDICATE THAT SOUNDING SYMBOL(S) RETURNED FROM 'SNDFRMD3' SHOULD NOT BE DRAWN			
IS THE VALUE OF THE ATTRIBUTE 'VALSOU' GIVEN?			
YES		NO	
IS THE VALUE OF THE ATTRIBUTE 'VALSOU' LESS THAN OR EQUAL TO 20 METRES? (Definition of "dangerous" in M4-422.5)		IS THE CALLING OBJECT OF THE TYPE 'UWTROC'?	
YES		NO	
IS THE CALLING OBJECT OF THE TYPE 'UWTROC'?		YES	
YES		NO	
SELECT THE APPROPRIATE SYMBOL AND DECIDE IF THE SOUNDING SHOULD BE SHOWN.		CALLING OBJECT MUST BE OF THE TYPE 'OBSTRN'.	
IF 'WATLEV'=3 (always submerged), THEN SELECT 'SY(DANGERD1)' AND 'SOUNDING'=TRUE		IF 'CATCBS'=6 (foul area), THEN SELECT 'SY(OBSTRND1)'	
ELSE IF 'WATLEV'=4 (covers and uncovers) THEN SELECT 'SY(UWTROCD4)' AND 'SOUNDING'=FALSE		ELSE IF 'WATLEV'=1 (partly submerged at HW) OR 2 (always dry), THEN SELECT 'SY(OBSTRN11)'	
ELSE IF 'WATLEV'=5 (awash) THEN SELECT 'SY(UWTROCD4)' AND 'SOUNDING'=FALSE		ELSE IF 'WATLEV'=3 (always submerged), THEN SELECT 'SY(OBSTRND1)'	
ELSE (DEFAULT) SELECT 'SY(DANGERD1)' AND 'SOUNDING'=TRUE		ELSE IF 'WATLEV'=4 (covers and uncovers) OR 5 (awash) THEN SELECT 'SY(OBSTRND3)'	
		ELSE (DEFAULT) SELECT 'SY(OBSTRND1)'	
SHOW THE SELECTED SYMBOL AND THE SOUNDING SYMBOL(S) (IF REQUIRED - returned from SNDFRMD3) AT THE CALLING OBJECT'S LOCATION			
IF SO INDICATED BY THE PROCEDURE 'QUAPNT02', SHOW THE RETURNED LOW ACCURACY SYMBOL AT THE CALLING OBJECT'S LOCATION			
SYMBOLIZATION IS FINISHED EXIT PROCEDURE			

OBSTRN06 Continuation B

Line objects, obstructions (OBSTRN)

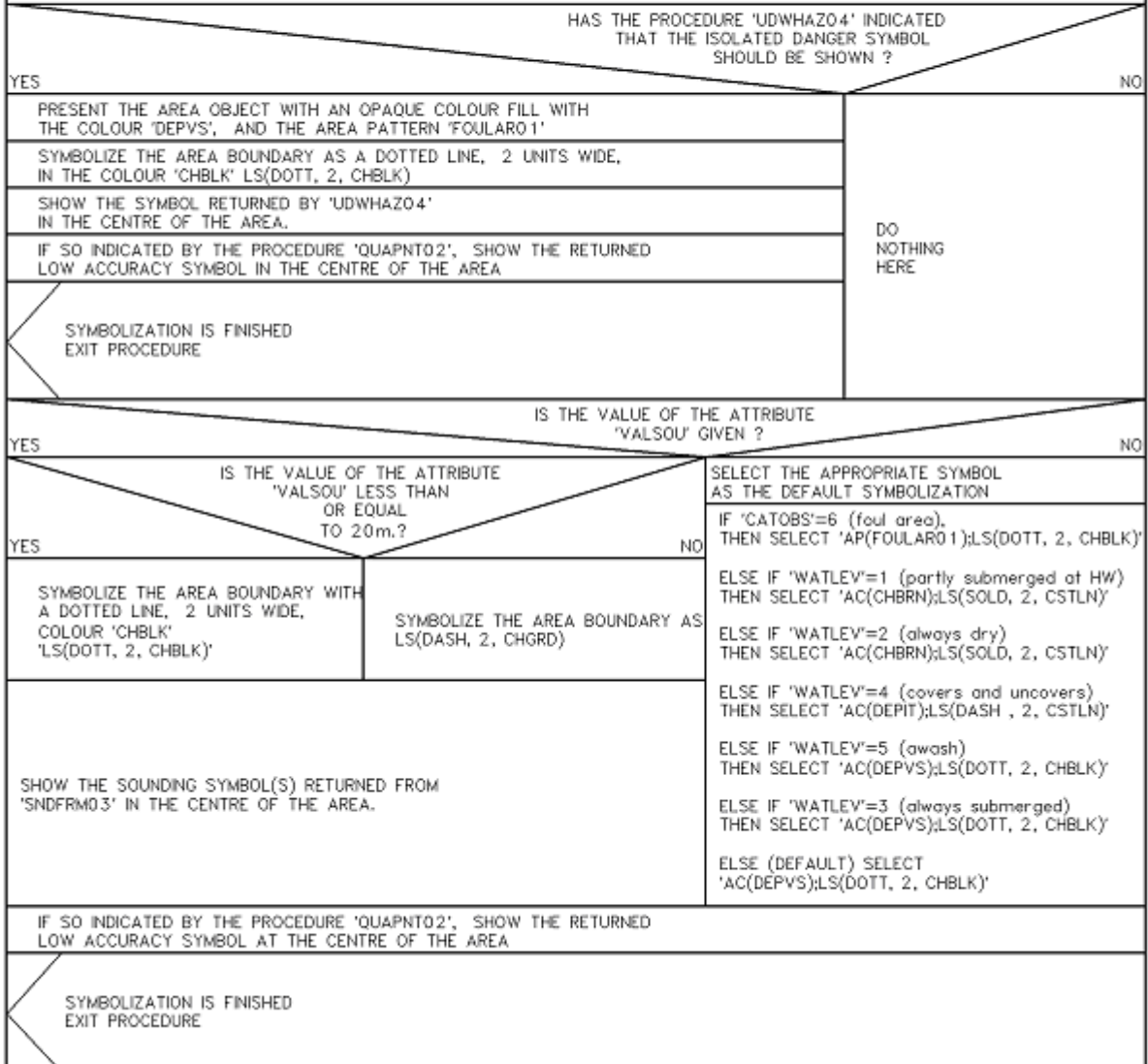


OBSTRN06 Continuation C

Area objects, obstructions (OBSTRN)

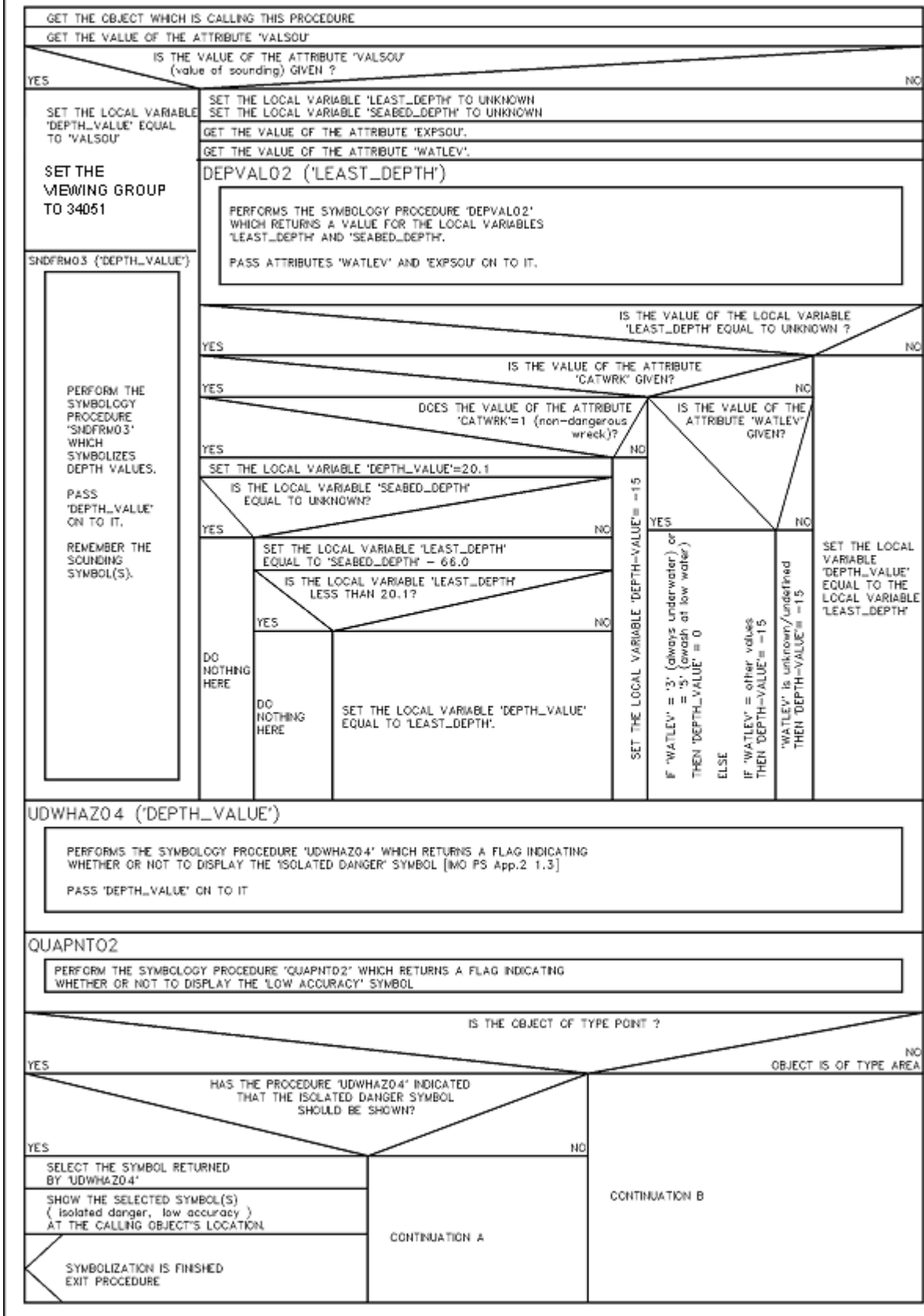
QUAPNT02

PERFORM THE SYMBOLOGY PROCEDURE 'QUAPNT02' WHICH RETURNS A FLAG INDICATING WHETHER OR NOT TO DISPLAY THE LOW ACCURACY SYMBOL AND RETURNS THE SELECTED SYMBOL



WRECKSO4

Conditional symbology procedure for symbolizing objects of the class wrecks (WRECKS).



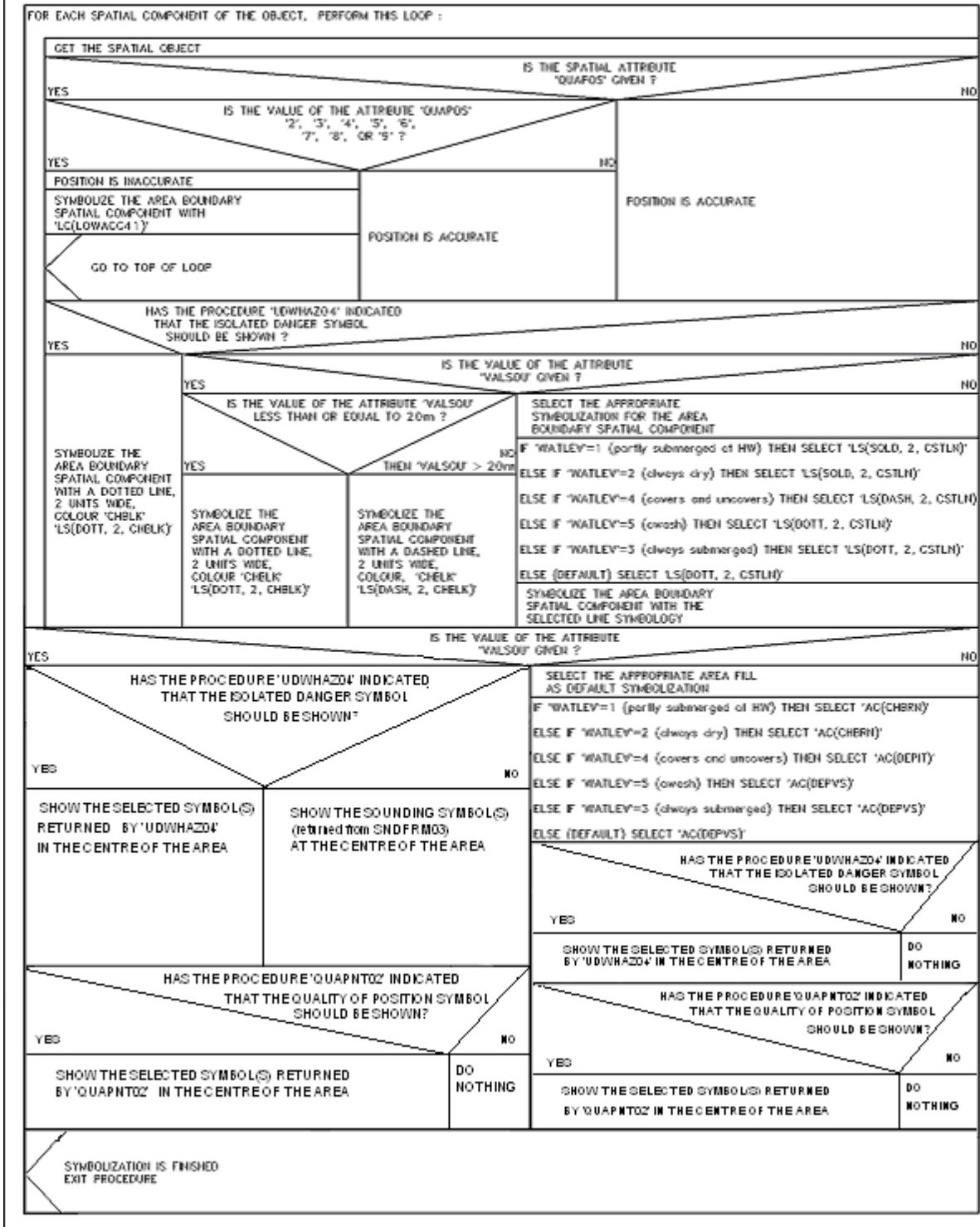
WRECKS04 Continuation A

Point objects, wrecks (WRECKS)

IS THE VALUE OF THE ATTRIBUTE 'VALSOU' GIVEN ?		YES	NO
IS THE VALUE OF THE ATTRIBUTE 'VALSOU' LESS THAN OR EQUAL TO 20m ?		YES	NO
THEN 'VALSOU' > 20m		SELECT 'SY(DANGER01)'	SELECT 'SY(DANGER02)'
SHOW THE SELECTED SYMBOL(S) (danger, low accuracy) AT THE CALLING OBJECT'S LOCATION		SELECT THE APPROPRIATE SYMBOL :	
SHOW THE SOUNDING SYMBOL(S) (returned from SNDFRM03) ON TOP AT THE CALLING OBJECT'S LOCATION		IF 'CATWRK'=1 (non-dangerous wreck) AND 'WATLEV'=3 (always submerged), THEN SELECT 'SY(WRECKS04)'	
DO		ELSE IF 'CATWRK'=2 (dangerous wreck) AND 'WATLEV'=3 (always submerged), THEN SELECT 'SY(WRECKS05)'	
NOTHING		ELSE IF 'CATWRK'=4 (wreck showing mast/masts) THEN SELECT 'SY(WRECKS01)'	
HERE		ELSE IF 'CATWRK'=5 (wreck showing any portion of hull or superstructure) THEN SELECT 'SY(WRECKS01)'	
		ELSE IF 'WATLEV'=1 (partly submerged at HW) THEN SELECT 'SY(WRECKS01)'	
		ELSE IF 'WATLEV'=2 (always dry) THEN SELECT 'SY(WRECKS01)'	
		ELSE IF 'WATLEV'=5 (awash) THEN SELECT 'SY(WRECKS01)'	
		ELSE IF 'WATLEV'=4 (covers and uncovers) THEN SELECT 'SY(WRECKS01)'	
		ELSE (DEFAULT) SELECT 'SY(WRECKS05)'	
		SHOW THE SELECTED SYMBOL(S) (wreck, low accuracy) AT THE CALLING OBJECT'S LOCATION	
SYMBOLIZATION IS FINISHED EXIT PROCEDURE			

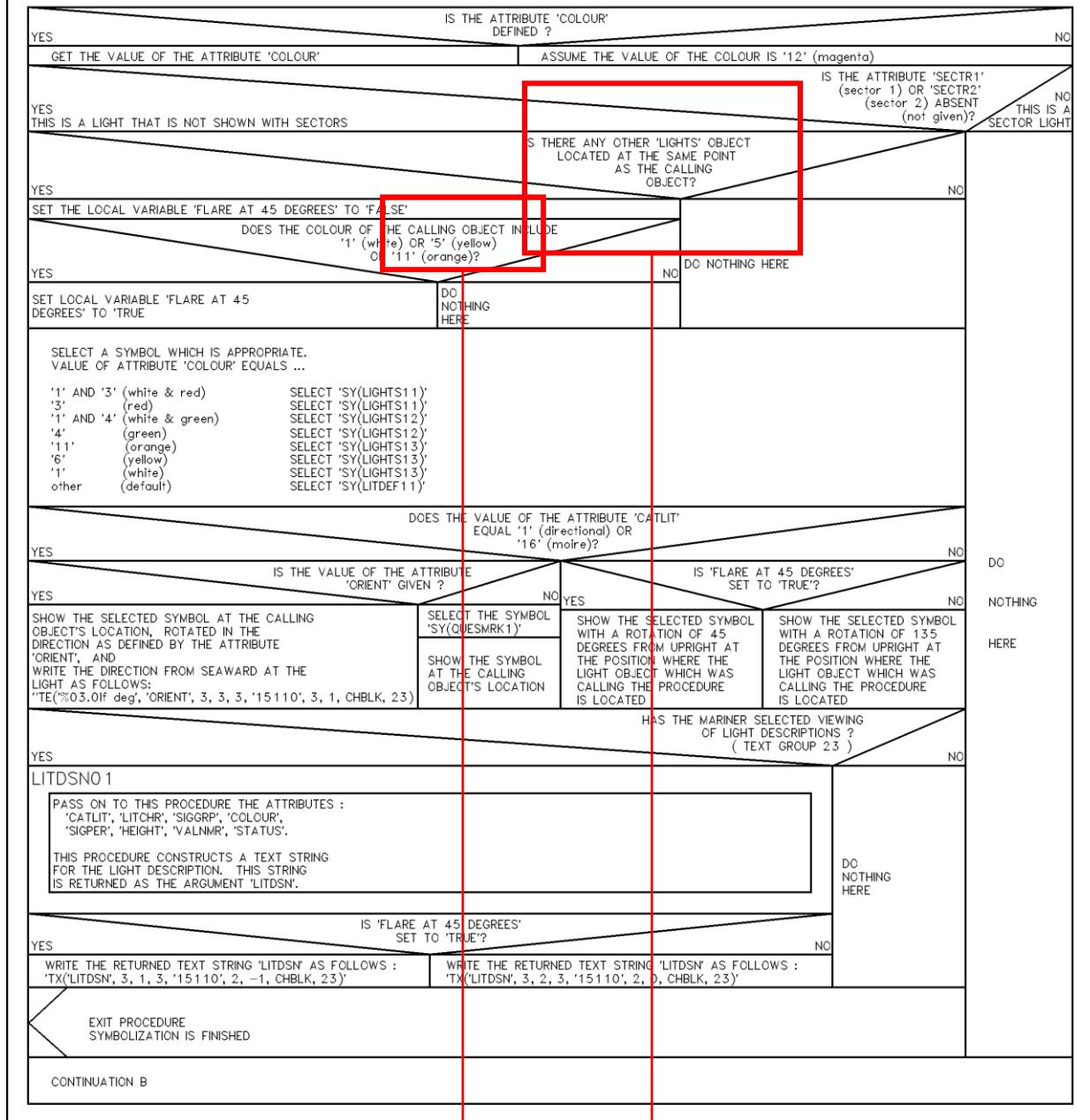
WRECKS04 Continuation B

Area objects, wrecks (WRECKS)



Item No. PL03.3.d7.co.7 Correction to PresLib CSP
Visualization of two 'no sector' lights at the same location

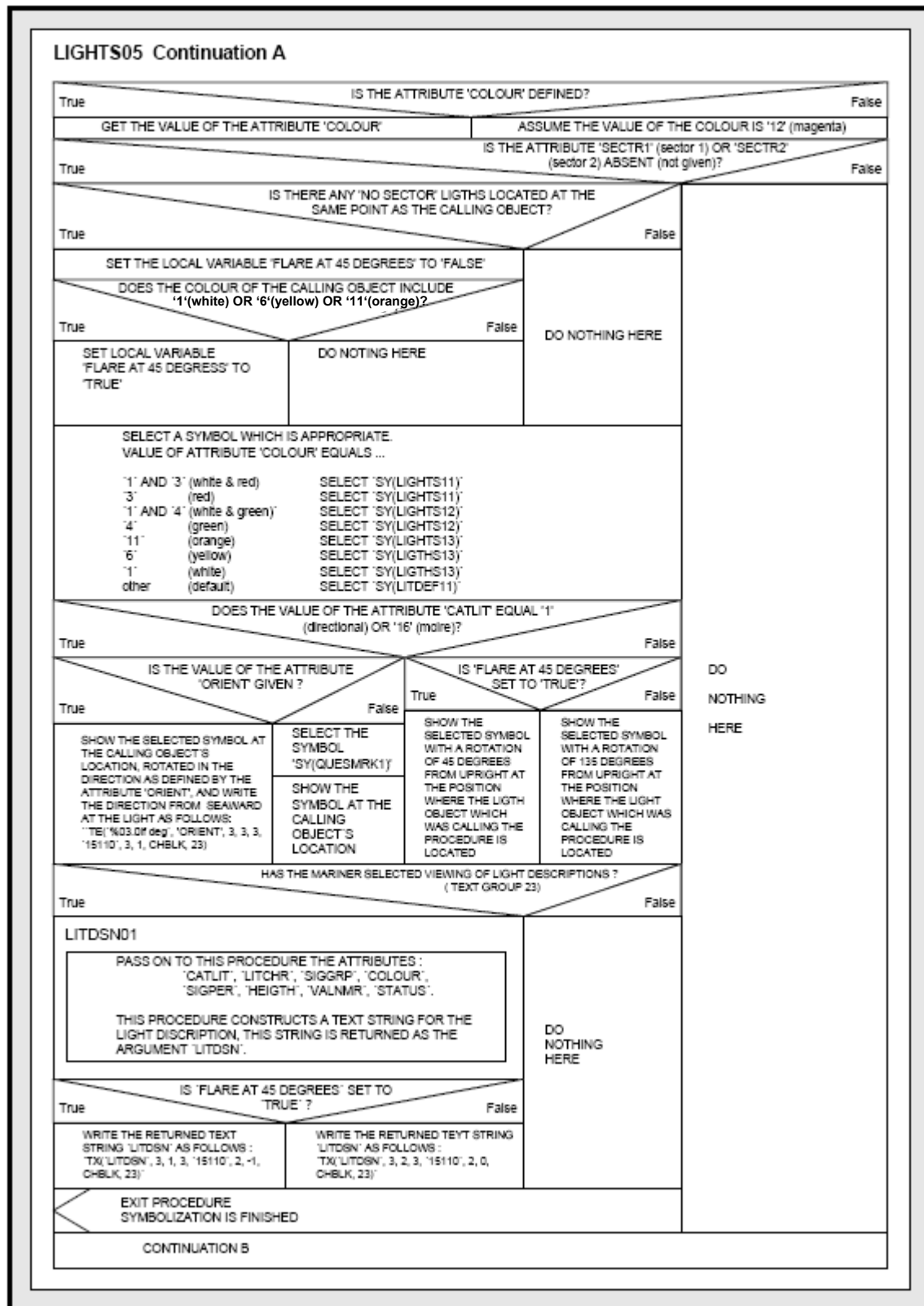
LIGHTS05 Continuation A



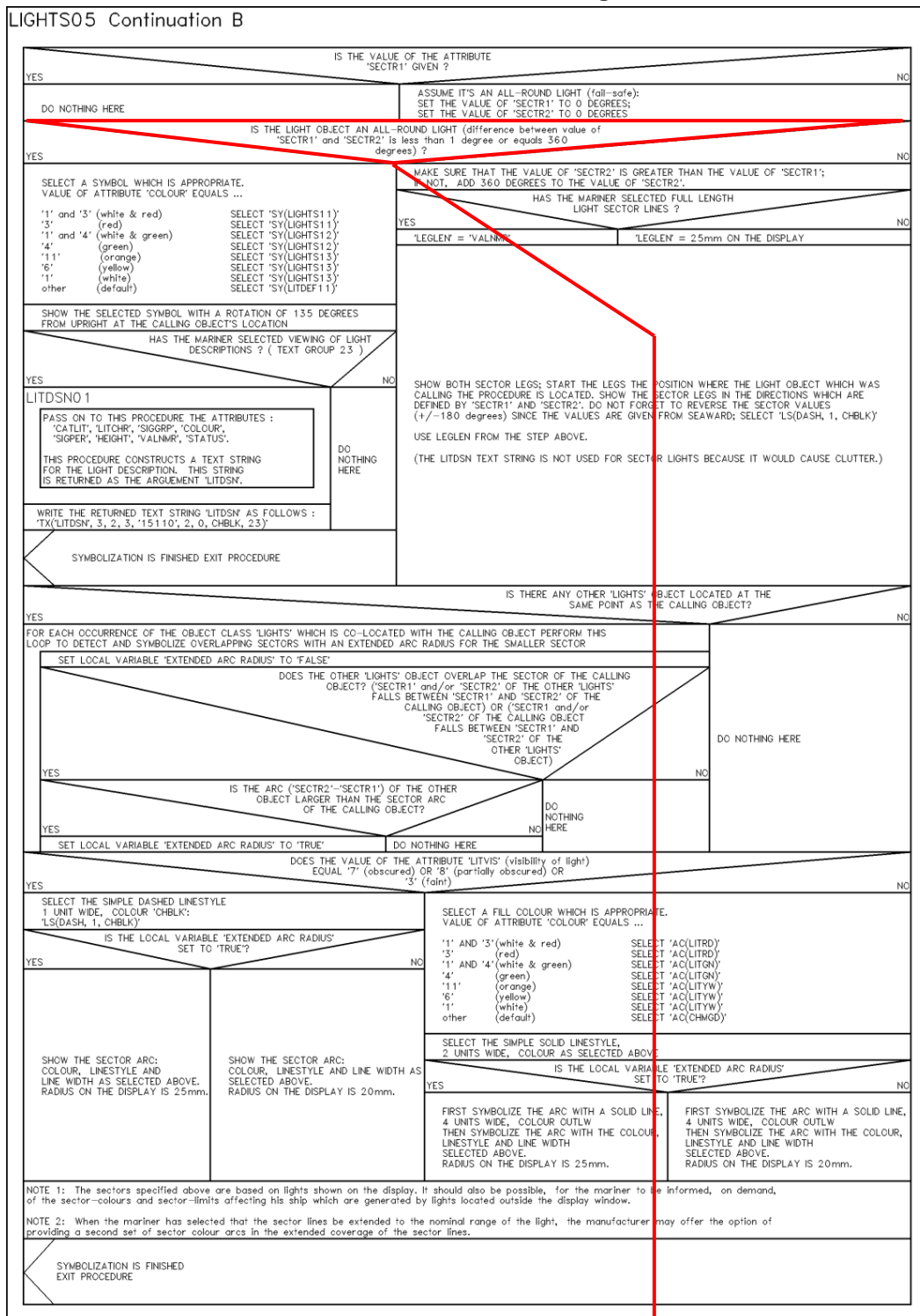
Modification of this conditional branch: The question "Is there any other 'lights' object located at the same point as the calling object?" must be replaced by **"is there any 'No Sector' lights located at the same point as the calling object ?"**

The value for the request call for yellow is wrongly set to '5'. The correct value for yellow is '6'.

The diagram LIGHTS05 CONTINUATION A below corrects the PresLib and substitutes LIGHTS05 CONTINUATION A of PL 3.3:



Item No.PL03.3.d7.co.8 Correction to PresLib CSP
Visualization of all-around lights



The existing check of CSP LIGHTS05 Continuation B:

"IS THE LIGHT OBJECT AN ALL-ROUND LIGHT (difference between value of 'SECTR1' and 'SECTR2' is less than 1 degree or equals 360 degrees)?

decides if a light is interpreted as all-around-light or sector light. According to this calculation sector lights with a sector value difference of less than 1 degree are displayed as an all-around-light added by a light flare.

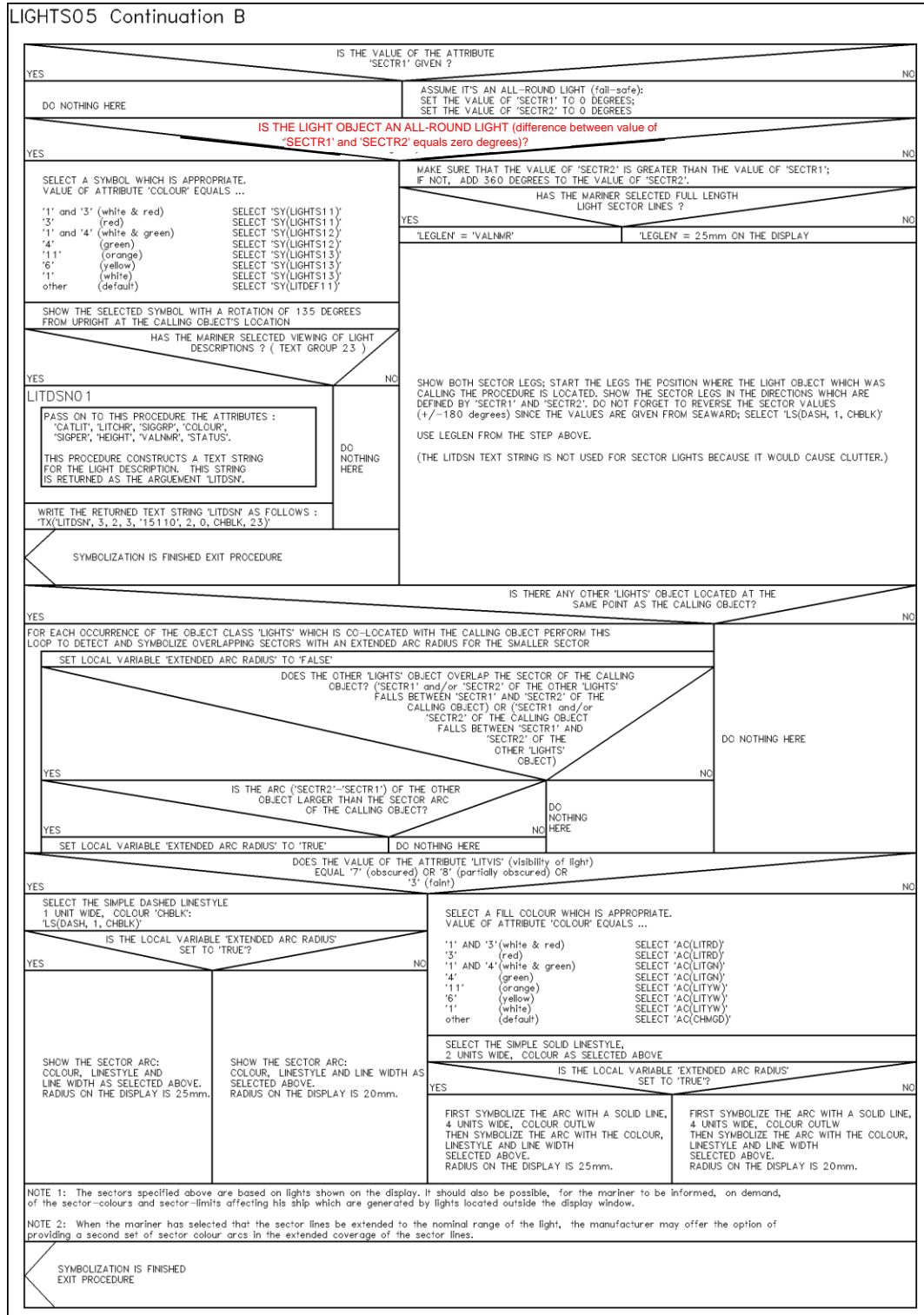
Modification of this conditional branch: the check changes to:

"IS THE LIGHT OBJECT AN ALL-ROUND LIGHT (difference between value of 'SECTR1' and 'SECTR2' equals zero degrees)?"

This change results to the effect that:

- As for any other sector light of bigger sectors the light flare is no longer displayed for sector lights of a sector smaller 1 degree
- All-round-lights of 360 degree are displayed identical to sector lights

Note that it is understood that sectors of less than 1 degree cannot be detected visually on an ECDIS display.



Item No. PL03.3.d7.co.9 Correction to PresLib Look-up table
Revised Look-up table entry for tideway

11.3.1 Look-up Table for areas with symbolized boundaries

~~"TIDEWY","","TX(OBJNAM,1,2,3,'15110',0,0,CHBLK,25)","7","S","OTHER","32070"~~

"TIDEWY","","LS(DASH,1,CHGRF);TX(OBJNAM,1,2,3,'15110',0,0,CHBLK,25)","7","S",
 ", "OTHER", "32070"

11.3.2 Look-up Table for areas with plain boundaries

~~"TIDEWY","","TX(OBJNAM,1,2,3,'15110',0,0,CHBLK,25)","7","S","OTHER","32070"~~

"TIDEWY","","LS(DASH,1,CHGRF);TX(OBJNAM,1,2,3,'15110',0,0,CHBLK,25)","7","S",
 ", "OTHER", "32070"

Item No. PL03.3.d7.co.10 Correction to PresLib Look-up table
Revised Look-up table for LNDARE point and line features to display OBJNAM

11.1.1 Look-up Table for paper chart point symbolization

~~"LNDARE","","SY(LNDARE01);CS(QUAPOS01)","4","O","DISPLAYBASE","12010"~~

"LNDARE","","SY(LNDARE01);TX(OBJNAM,1,2,2,'15110',0,
 1,CHBLK,26);CS(QUAPOS01)","4","O","DISPLAYBASE","12010"

11.1.2 Look-up Table for simplified point symbolisation

~~"LNDARE","","SY(LNDARE01);CS(QUAPOS01)","4","O","DISPLAYBASE","12010"~~

"LNDARE","","SY(LNDARE01);TX(OBJNAM,1,2,2,'15110',0,
 1,CHBLK,26);CS(QUAPOS01)","4","O","DISPLAYBASE","12010"

11.2 Look-up Table Listing for Object Type Line 'L'

~~"LNDARE","","CS(QUAPOS01)","8","O","DISPLAYBASE","12010"~~

"LNDARE","","CS(QUAPOS01);TX(OBJNAM,1,1,2,'15110',0,1,CHBLK,26)","8","O",
 "DISPLAYBASE","12010"

Item No. PL03.3.d7.co.11 Correction to PresLib Look-up table
Revised Look-up table entry for rivers

The Display Category and Viewing Group of class "RIVERS" should be modified to "DISPLAY BASE". and will when become identical to those used for objects of class "CANALS":

11.2 Look-up Table Listing for Object Type Line 'L'

"RIVERS", "", "LS(SOLD,1,CHBLK)", "2", "O", "~~STANDARD~~**DISPLAYBASE**", "12420"

11.3.1 Look-up Table for areas with symbolized boundaries

"RIVERS", "", "AC(DEPVS);LS(SOLD,1,CHBLK)", "2", "S", "~~STANDARD~~**DISPLAYBASE**", "12420"

11.3.2 Look-up Table for areas with plain boundaries

"RIVERS", "", "AC(DEPVS);LS(SOLD,1,CHBLK)", "2", "S", "~~STANDARD~~**DISPLAYBASE**", "12420"

Item No. PL03.3.d7.co.12 Correction to PresLib Look-up table
Revised Look-up table entry for UNSARE objects

The display priority for UNSARE should be altered from 3 to 1:

11.3.1 Look-up Table for areas with symbolized boundaries

~~"UNSARE", "", "AC(NODTA);AP(NODATA03);LS(SOLD,2,CHGRD)", "3", "S",
 "DISPLAYBASE", "11050"~~

"UNSARE", "", "AC(NODTA);AP(NODATA03);LS(SOLD,2,CHGRD)", "31", "S",
 "DISPLAYBASE", "11050"

11.3.2 Look-up Table for areas with plain boundaries

~~"UNSARE", "", "AC(NODTA);AP(NODATA03);LS(SOLD,2,CHGRD)", "3", "S",
 "DISPLAYBASE", "11050"~~

"UNSARE", "", "AC(NODTA);AP(NODATA03);LS(SOLD,2,CHGRD)", "31", "S",
 "DISPLAYBASE", "11050"

Item No. PL03.3.d7.ad.13 Addition to PresLib symbolisation
DGPS reference stations

A new entry must be added immediately after the default entry for RDOSTA . This new entry is for look up point tables "simplified and paper chart ".

11.1.1 Look-up Table for paper chart point symbolization

"RDOSTA", "", "SY(RDOSTA02)", "4", "O", "OTHER", "38010"
"RDOSTA", "CATROS10", "SY(DGPS01)", "4", "O", "OTHER", "38010"

11.1.2 Look-up Table for simplified point symbolisation

"RDOSTA", "", "SY(RDOSTA02)", "4", "O", "OTHER", "38010"
"RDOSTA", "CATROS10", "SY(DGPS01)", "4", "O", "OTHER", "38010"

Item No.PL03.3.d7.ad.14 Addition to PresLib symbol description (Users' Manual Addendum)
DGPS reference station symbol

Symbol Name:	SY(DRFSTA01)	RN:
--------------	--------------	-----

Symbol Explanation: DGPS reference station

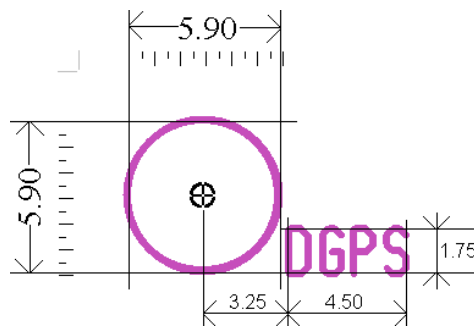
Look up table affected: paper chart point symbols
simplified point symbols

Pivot Point Column: 3.00

Pivot Point Row: 3.00

Width of Bounding Box: 10.75

Height of Bounding Box: 6.00




Symbol Colours: CHMGD

Comments: Line weight 0.3 mm; circle diameter 5.9 mm

Examples on ENC: N/A

References:

S57	INT 1	
RDOSTA	S 51	(S 10)
		

Item No. PL03.3.d7.ad.15 Addition to PresLib symbol description (Users' Manual Addendum)
AIS symbology

Symbol Name:	SY(AISATN02)	RN:	588
--------------	--------------	-----	-----

Symbol Explanation: AIS based aid to navigation

Look up table affected: N/A

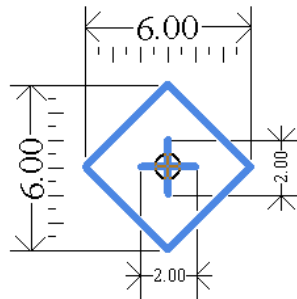
Called by CSP etc.: CSP VESSEL02

Pivot Point Column: 3.00

Pivot Point Row: 3.00

Width of Bounding Box: 6.00

Height of Bounding Box: 6.00



Symbol Colours: ■ RESBL

Comments: Diamond line weight 0.3 mm;
Cross line weight 0.3 mm

Examples on ENC: N/A

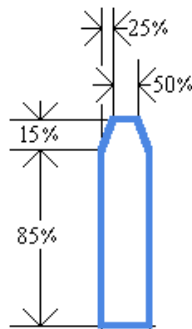
References: IMO Guidelines for the presentation of navigation-related symbols,
terms and abbreviations SN/Circ.243 15.December 2004


IEC 62288 Ed.1

S57	INT 1
-----	-------

Symbol Name:	SY(AISTSO01)	RN:	589
--------------	--------------	-----	-----

Symbol Explanation:	AIS target – true scale outline
Look up table affected:	N/A
Called by CSP etc.:	CSP VESSEL02
Pivot Point Column:	relative to reported position
Pivot Point Row:	and according to reported position offsets
Width of Bounding Box:	scaled according to reported
Height of Bounding Box:	beam and length



Symbol Colours:	 RESBL
Comments:	Line weight 0.6 mm
Examples on ENC:	N/A
References:	IMO Guidelines for the presentation of navigation-related symbols, terms and abbreviations SN/Circ.243 15.December 2004 IEC 62288 Ed.1

S57	INT 1
-----	-------

Item No. PL03.3.d7.co.16 Correction to PresLib symbol description (Users' Manual Addendum)
AIS symbology

Symbol Name:	SY(AISLST02)	RN:	580
--------------	---------------------	-----	-----

Symbol Explanation: Lost AIS target

Look up table affected: N/A

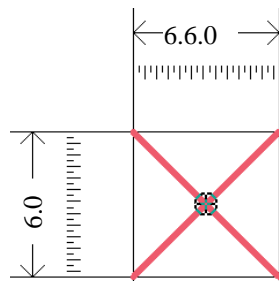
Called by CSP etc.: CSP VESSEL02

Pivot Point Column: 3.0

Pivot Point Row: 3.0

Width of Bounding Box: 6.0

Height of Bounding Box: 6.0



Symbol Colours: DNGHL

Comments: Line weight 0.6 mm

Examples on ENC: N/A

References: IMO Guidelines for the presentation of navigation-related symbols,
terms and abbreviations SN/Circ.243 15.December 2004

IEC 62288 Ed.1

S57	INT 1	
N/A	S 17	AIS

Symbol Name:	SY(AISSEL01)	RN:	581
--------------	--------------	-----	-----

Symbol Explanation: selected AIS target

Look up table affected: N/A

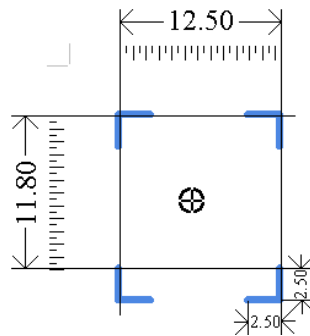
Called by CSP etc.: CSP VESSEL02

Pivot Point Column: 5.75

Pivot Point Row: 6.75

Width of Bounding Box: 12.50

Height of Bounding Box: 11.80



Symbol Colours: ■ RESBL

Comments: Line weight 0.6 mm

Examples on ENC: N/A

References: IMO Guidelines for the presentation of navigation-related symbols, terms and abbreviations SN/Circ.243 15.December 2004

IEC 62288 Ed.1

S57	INT 1
-----	-------

Symbol Name:	SY(AISSLP02)	RN:	11
--------------	--------------	-----	----

Symbol Explanation: sleeping AIS target

Look up table affected: N/A

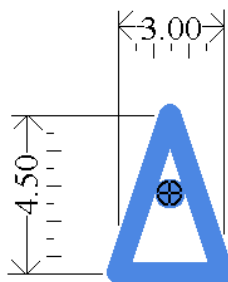
Called by CSP etc.: CSP VESSEL02

Pivot Point Column: 1.50

Pivot Point Row: 2.25

Width of Bounding Box: 3.00

Height of Bounding Box: 4.50



Symbol Colours:



RESBL

Comments:

Point diameter 0.6 mm
Line weight 0.6 mm

Examples on ENC:

N/A

References:

IMO Guidelines for the presentation of navigation-related symbols, terms and abbreviations SN/Circ.243 15.December 2004

IEC 62288 Ed.1

S57	INT 1
-----	-------

Symbol Name:	SY(AISTRN03)	RN:	582
--------------	---------------------	-----	-----

Symbol Explanation: AIS target turning to starboard

Look up table affected: N/A

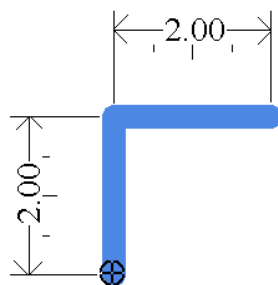
Called by CSP etc.: CSP VESSEL02

Pivot Point Column: 0.00

Pivot Point Row: 2.00

Width of Bounding Box: 2.00

Height of Bounding Box: 2.00



Symbol Colours: RESBL

Comments: Line weight 0.3 mm

Examples on ENC: N/A

References: IMO Guidelines for the presentation of navigation-related symbols, terms and abbreviations SN/Circ.243 15.December 2004

IEC 62288 Ed.1

S57	INT 1
-----	-------

Symbol Name:	SY(AISTRN04)	RN:	583
--------------	--------------	-----	-----

Symbol Explanation: AIS target turning to port

Look up table affected: N/A

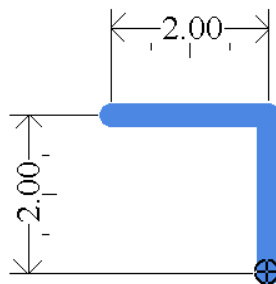
Called by CSP etc.: CSP VESSEL02

Pivot Point Column: 2.00

Pivot Point Row: 2.00

Width of Bounding Box: 2.00

Height of Bounding Box: 2.00



Symbol Colours: RESBL

Comments: Line weight 0.3 mm

Examples on ENC: N/A

References: IMO Guidelines for the presentation of navigation-related symbols, terms and abbreviations SN/Circ.243 15.December 2004

IEC 62288 Ed.1

S57	INT 1
-----	-------

Symbol Name:	SY(AISVES02)	RN:	12
--------------	--------------	-----	----

Symbol Explanation: active AIS target showing vector and/or heading

Look up table affected: N/A

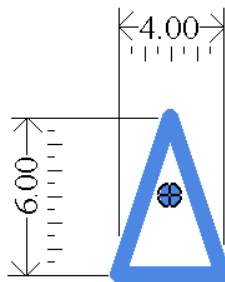
Called by CSP etc.: CSP VESSEL02

Pivot Point Column: 2.00

Pivot Point Row: 6.00

Width of Bounding Box: 4.00

Height of Bounding Box: 6.00



Symbol Colours: ■ RESBL

Comments: Line weight 0.6 mm
Point diameter 0.6 mm

Examples on ENC: N/A

References: IMO Guidelines for the presentation of navigation-related symbols, terms and abbreviations SN/Circ.243 15.December 2004

IEC 62288 Ed.1

S57	INT 1
-----	-------

Item No. PL03.3.d7.co.17 Correction to Preslib 3.3
Deletion of single unit complex line style

S-52 Presentation Library Edition 3.3, Part 1, section 5.1:

5.2 Usage of a Complex Line Style

- 5.2.1 A complex linestyle is formed from a repeating symbol. The symbol definition for a line style is very similar to the symbol definition for a point symbol. The linestyle symbol has its own pivot point around which it is rotated. The orientation is given by the direction between the two vertices of the segment of the line object that the symbol will represent on the ECDIS display.

~~The Presentation Library uses two types of complex linestyle symbol (see figures 3a and 3b):~~

- ~~———— (i) The single unit type of complex linestyle is one in which the linestyle unit is described as a whole and is fitted as a string of units between the two vertices of the entire line object, using one orientation (figure 3a).~~
- ~~———— (ii) However the single unit type of complex linestyle will only symbolize a straight line. To symbolize all lines, straight or curved, a composite type of complex linestyle is used, in which the unit is composed of a series of horizontal lines and symbols, strung together along the line object to form the linestyle unit, using a continually changing orientation if the line object is a curve (figure 3b).~~

- ~~5.2.2 For the single unit type of complex linestyle, the orientation is given by the direction between two vertices of the line object that will be presented on the ECDIS display. The linestyle symbol is placed with its pivot point on the geometry of the line. The pivot point of the following symbol is placed where the run length of the preceding symbol ends. The run length is calculated by subtracting the largest x-coordinate of the symbol definition from the x-coordinate of the pivot point. If the run length of a linestyle symbol does not fit between two vertices of a line object, a simple linestyle should be used to join the vertices. A dashed line is preferred, but a solid line may be used. The colour and line width are taken from the last drawing instruction within the linestyle definition of the preceding symbol.~~

For further information about linestyle definitions, see section 10.7

- 5.2.3 ~~For the composite type of~~ **To compose a** complex linestyle, locate the start and end position of each horizontal line in the complex linestyle along the edge to be symbolized. Then draw the complex line along the edge between the start and end positions. If a symbol needs to be drawn, then determine the angle of rotation by calculating the slope of the tangent of the edge at the location where the symbol is to be drawn. The symbol will then be rotated 90 degrees to the slope of the tangent. Figure 3b shows how the composite symbol is created from the linestyle and the embedded symbols.

Delete figure 3 and rename figure 3b to become figure 3.

Item No. PL03.3.d7.co.18 Correction to Preslib 3.3
Reference of Addendum to Users' Manual

The paper based description of symbology contained in the PresLib was compiled in form of an Addendum to Appendix 2, Annex A, Part I, Users' Manual and issued first in 2003.

Addendum to Appendix 2, Annex A, Part I, Users' Manual, Page 1:

IHO Publication S-52 Appendix 2

**ADDENDUM TO THE IHO ECDIS PRESENTATION LIBRARY ANNEX A,
 PART I, USERS' MANUAL (2008), Edition 3.4**

SYMBOL LIBRARY FOR USE ON ECDIS

1. Point Symbols and Centered Area Symbols	3
2. Complex Linestyles	503
3. Area pattern	553

Note: ~~For the introduction to the Symbol Library, see section 14 of the Presentation Library, Part I. A full explanation of application and use of the described symbols of the ECDIS symbol library can be found in the S-52 Presentation Library, Appendix 2, Annex A, Part I, Users' Manual in section 14.~~

Item No. PL03.3.d7.co.19 Correction to Preslib 3.3
Definition of Linestyles

Addendum to Appendix 2, Annex A, Part I, Users' Manual, Paragraph 2, Page 503:

2. Complex Linestyles

Line Styles

There are two types of line styles available in the Presentation Library: simple line styles and complex line styles. Complex line styles are composed from repeating symbols.

Simple line-styles are used to allow for a variety of basic line-styles without having them defined in the format of complex line-styles. Simple line-styles are based on a solid, dashed or dotted line that can be modified in width and colour. On user's selection, a composite type of complex line style is used, in which the unit is composed of a series of horizontal lines and symbols, strung together along the line object to form the line style unit, using a continually changing orientation if the line object is a curve.

A full explanation of line Styles can be found in the S-52 Presentation Library, Appendix 2, Annex A, Part I, Users' Manual in section 7.3.

Line Width

The line-width is given in units of the line-spacing (pixel size) specified in section 9 of S-52. This is currently 0.32 mm. If the pixel-diameter or line-spacing is grossly smaller, the line-width should be compensated by drawing the line in an appropriate width. If possible the "Display Generator" should smooth line ends with a width of more than 0.6 mm.

Item No. PL03.3.d7.co.20 Correction to Preslib 3.3
Placement of numerical values of planned tracks

An improved placement of numerical values of planned tracks according can be reached by the following changes:

7.3.1.2 (Details of the above)

The pivot point of symbols or text should be the midpoint of the **visible** run-length of the line. If the symbol or text is truncated by the display window, it may be removed or it may remain truncated until screen refresh remedies the problem.

Modify all entries carrying text instructions which include the attribute 'ORIENT':

TE('%03.0lf deg','ORIENT',3,1,2,'15110',4,-1,CHBLK,11)
 becomes
 TE('%03.0lf deg','ORIENT',1,1,2,'15110',0,-1,CHBLK,11)

HJUST= 1 : CENTRE justified
 XOFFS= 0 : no x-offset
 YOFFS= -1

11.2 Look-up Table Listing for Object Type Line 'L'

"DWRTCL","","LC(DWLDEF01);TE('%03.0lf deg','ORIENT',1,1,2,'15110',0,-1,CHBLK,11),"6","O","DISPLAYBASE","15010"
 "DWRTCL","CATTRK1TRAFIC1","LC(DWRTCL08);TE('%03.0lf deg','ORIENT',1,1,2,'15110',0,-1,CHBLK,11),"6","O","DISPLAYBASE","15010"
 "DWRTCL","CATTRK1TRAFIC2","LC(DWRTCL08);TE('%03.0lf deg','ORIENT',1,1,2,'15110',0,-1,CHBLK,11),"6","O","DISPLAYBASE","15010"
 "DWRTCL","CATTRK1TRAFIC3","LC(DWRTCL08);TE('%03.0lf deg','ORIENT',1,1,2,'15110',0,-1,CHBLK,11),"6","O","DISPLAYBASE","15010"
 "DWRTCL","CATTRK1TRAFIC4","LC(DWRTCL06);TE('%03.0lf deg','ORIENT',1,1,2,'15110',0,-1,CHBLK,11),"6","O","DISPLAYBASE","15010"
 "DWRTCL","CATTRK2TRAFIC1","LC(DWRTCL07);TE('%03.0lf deg','ORIENT',1,1,2,'15110',0,-1,CHBLK,11),"6","O","DISPLAYBASE","15010"
 "DWRTCL","CATTRK2TRAFIC2","LC(DWRTCL07);TE('%03.0lf deg','ORIENT',1,1,2,'15110',0,-1,CHBLK,11),"6","O","DISPLAYBASE","15010"
 "DWRTCL","CATTRK2TRAFIC3","LC(DWRTCL07);TE('%03.0lf deg','ORIENT',1,1,2,'15110',0,-1,CHBLK,11),"6","O","DISPLAYBASE","15010"
 "DWRTCL","CATTRK2TRAFIC4","LC(DWRTCL05);TE('%03.0lf deg','ORIENT',1,1,2,'15110',0,-1,CHBLK,11),"6","O","DISPLAYBASE","15010"
 "DWRTCL","TRAFIC1","LC(DWRTCL07);TE('%03.0lf deg','ORIENT',1,1,2,'15110',0,-1,CHBLK,11),"6","O","DISPLAYBASE","15010"
 "DWRTCL","TRAFIC2","LC(DWRTCL07);TE('%03.0lf deg','ORIENT',1,1,2,'15110',0,-1,CHBLK,11),"6","O","DISPLAYBASE","15010"
 "DWRTCL","TRAFIC3","LC(DWRTCL07);TE('%03.0lf deg','ORIENT',1,1,2,'15110',0,-1,CHBLK,11),"6","O","DISPLAYBASE","15010"
 "DWRTCL","TRAFIC4","LC(DWRTCL05);TE('%03.0lf deg','ORIENT',1,1,2,'15110',0,-1,CHBLK,11),"6","O","DISPLAYBASE","15010"

"NAVLNE","CATNAV1","LS(DASH,1,CHGRD);TE('%03.0lf deg','ORIENT',1,1,2,'15110',0,-1,CHBLK,11),"4","O","STANDARD","25010"
 "NAVLNE","CATNAV2","LS(DASH,1,CHGRD);TE('%03.0lf deg','ORIENT',1,1,2,'15110',0,-1,CHBLK,11),"4","O","STANDARD","25010"

"RADLNE","","LS(DASH,2,TRFCD);TE('%03.0lf deg','ORIENT',1,1,2,'15110',0,-1,CHBLK,11),"6","O","STANDARD","25040"

"RCRTCL","","LC(RCRDEF11);TE('%03.0lf deg','ORIENT',1,1,2,'15110',0,-1,CHBLK,11),"6","O","DISPLAYBASE","15020"
 "RCRTCL","CATTRK1TRAFIC1","LC(RCRTL14);TE('%03.0lf deg','ORIENT',1,1,2,'15110',0,-1,CHBLK,11),"6","O","DISPLAYBASE","15020"
 "RCRTCL","CATTRK1TRAFIC2","LC(RCRTL14);TE('%03.0lf deg','ORIENT',1,1,2,'15110',0,-1,CHBLK,11),"6","O","DISPLAYBASE","15020"
 "RCRTCL","CATTRK1TRAFIC3","LC(RCRTL14);TE('%03.0lf deg','ORIENT',1,1,2,'15110',0,-1,CHBLK,11),"6","O","DISPLAYBASE","15020"
 "RCRTCL","CATTRK1TRAFIC4","LC(RCRTL13);TE('%03.0lf deg','ORIENT',1,1,2,'15110',0,-1,CHBLK,11),"6","O","DISPLAYBASE","15020"
 "RCRTCL","CATTRK2TRAFIC1","LC(RCRTL12);TE('%03.0lf deg','ORIENT',1,1,2,'15110',0,-1,CHBLK,11),"6","O","DISPLAYBASE","15020"
 "RCRTCL","CATTRK2TRAFIC2","LC(RCRTL12);TE('%03.0lf deg','ORIENT',1,1,2,'15110',0,-1,CHBLK,11),"6","O","DISPLAYBASE","15020"
 "RCRTCL","CATTRK2TRAFIC3","LC(RCRTL12);TE('%03.0lf deg','ORIENT',1,1,2,'15110',0,-1,CHBLK,11),"6","O","DISPLAYBASE","15020"
 "RCRTCL","CATTRK2TRAFIC4","LC(RCRTL11);TE('%03.0lf deg','ORIENT',1,1,2,'15110',0,-1,CHBLK,11),"6","O","DISPLAYBASE","15020"
 "RCRTCL","TRAFIC1","LC(RCRTL12);TE('%03.0lf deg','ORIENT',1,1,2,'15110',0,-1,CHBLK,11),"6","O","DISPLAYBASE","15020"
 "RCRTCL","TRAFIC2","LC(RCRTL12);TE('%03.0lf deg','ORIENT',1,1,2,'15110',0,-1,CHBLK,11),"6","O","DISPLAYBASE","15020"
 "RCRTCL","TRAFIC3","LC(RCRTL12);TE('%03.0lf deg','ORIENT',1,1,2,'15110',0,-1,CHBLK,11),"6","O","DISPLAYBASE","15020"
 "RCRTCL","TRAFIC4","LC(RCRTL11);TE('%03.0lf deg','ORIENT',1,1,2,'15110',0,-1,CHBLK,11),"6","O","DISPLAYBASE","15020"

"RECTRC","","LC(RECDEF02);TE('%03.0lf deg','ORIENT',1,1,2,'15110',0,-1,CHBLK,11),"6","O","STANDARD","25020"
 "RECTRC","CATTRK1TRAFIC1","LC(RECTRC12);TE('%03.0lf deg','ORIENT',1,1,2,'15110',0,-1,CHBLK,11),"6","O","STANDARD","25020"
 "RECTRC","CATTRK1TRAFIC2","LC(RECTRC12);TE('%03.0lf deg','ORIENT',1,1,2,'15110',0,-1,CHBLK,11),"6","O","STANDARD","25020"
 "RECTRC","CATTRK1TRAFIC3","LC(RECTRC12);TE('%03.0lf deg','ORIENT',1,1,2,'15110',0,-1,CHBLK,11),"6","O","STANDARD","25020"
 "RECTRC","CATTRK1TRAFIC4","LC(RECTRC10);TE('%03.0lf deg','ORIENT',1,1,2,'15110',0,-1,CHBLK,11),"6","O","STANDARD","25020"
 "RECTRC","CATTRK2TRAFIC1","LC(RECTRC11);TE('%03.0lf deg','ORIENT',1,1,2,'15110',0,-1,CHBLK,11),"6","O","STANDARD","25020"
 "RECTRC","CATTRK2TRAFIC2","LC(RECTRC11);TE('%03.0lf deg','ORIENT',1,1,2,'15110',0,-1,CHBLK,11),"6","O","STANDARD","25020"
 "RECTRC","CATTRK2TRAFIC3","LC(RECTRC11);TE('%03.0lf deg','ORIENT',1,1,2,'15110',0,-1,CHBLK,11),"6","O","STANDARD","25020"
 "RECTRC","CATTRK2TRAFIC4","LC(RECTRC09);TE('%03.0lf deg','ORIENT',1,1,2,'15110',0,-1,CHBLK,11),"6","O","STANDARD","25020"
 "RECTRC","TRAFIC1","LC(RECTRC11);TE('%03.0lf deg','ORIENT',1,1,2,'15110',0,-1,CHBLK,11),"6","O","STANDARD","25020"
 "RECTRC","TRAFIC2","LC(RECTRC11);TE('%03.0lf deg','ORIENT',1,1,2,'15110',0,-1,CHBLK,11),"6","O","STANDARD","25020"
 "RECTRC","TRAFIC3","LC(RECTRC11);TE('%03.0lf deg','ORIENT',1,1,2,'15110',0,-1,CHBLK,11),"6","O","STANDARD","25020"
 "RECTRC","TRAFIC4","LC(RECTRC09);TE('%03.0lf deg','ORIENT',1,1,2,'15110',0,-1,CHBLK,11),"6","O","STANDARD","25020"

Item No. PL03.3.d7.co.21 Correction to Preslib 3.3
substitute example for empty look-up table entry

8.3.3.10 'No symbol' - Objects

In some cases the "symbolization instruction"-fields ~~(field 3)~~ in a look-up table line ~~is~~ **are** empty. Such an explicitly "empty" instruction means that no actual presentation for the respective object is required. Such objects are not symbolized and they are not shown on the screen. For example, an **point** object of the class ~~EXEZNE (exclusive economic zone)~~ **BRIDGE** is not shown since **the coding of a bridge crossing waters as point object is not useful and will not occur** ~~it is an object of administrative meaning that would be read out only on cursor inquiry.~~ **The empty entry into the look-up table is simply for completeness.**