

INTERNATIONAL HYDROGRAPHIC ORGANIZATION



IHO Publication S-52

Specifications for Chart Content and Display Aspects of ECDIS

Edition 6.0 – March 2010

and its Annex A

IHO ECDIS Presentation Library

Edition 3.4 – January 2008

S-52 MAINTENANCE DOCUMENT

Number 8 – October 2011

DEFERRED AMENDMENT 9

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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.ihb.int

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Introduction

Types of Amendments

Amendments may consist of clarifications, corrections or extensions, which are defined below:

Clarification: an improvement to the wording of S-52 which does not result in any substantive change to the specifications. A substantive change is one which would result in a change in symbolization.

Correction: a relatively specific change to S-52 to correct errors of commission or omission; or to improve the ECDIS presentation in the light of practical experience; or to take into account changes in another specification; etc.

Extension: an extension has no immediate effect. It is a more general change to S-52 intended to improve the ECDIS presentation.

Implementation of Amendments

Amendments may either be implemented immediately or deferred. Normally, amendments will be deferred until the next edition of S-52 or its Annex A (Presentation Library) that is identified as bringing the deferred amendments into force. However, ECDIS Original Equipment Manufacturers 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 for corrections or extensions that directly affect safety of navigation. Immediate amendments must be implemented in ECDIS units in production and in the field at the earliest opportunity. An immediate amendment to S-52 or its Annex A (Presentation Library) changes the respective edition number.

All of the amendments in this maintenance document are deferred amendments which all apply to S-52 Annex A (Presentation Library).

Amendment Item Identifiers

Each item within an amendment is assigned a unique identifier in the form of "SSmm.n.aa.dd.nnn", where:

SS	S-52 "Specifications for Chart Content and Display Aspects of ECDIS" (CS) or its Annex A "Presentation Library" (PL), depending on which part the amendment applies to,
mm.n	the edition number to which the amendment applies,
aa	deferred (d) or immediate (i) amendment followed by the sequential number of the amendment,
dd.	clarification (cl), correction (co) or extension (ex),
n	sequential number of the item within the amendment.

For example, for item "PL03.4.d9.co.2", each part is described below:

PL03.4	Item applies to Presentation Library edition 3.4
d9	Item is a part of deferred amendment 9
co	Item is a correction
2	This is the second item in the amendment

The item number of each amendment item gives the edition number of S-52 or its Annex A (PL) to which the amendment item applies. This edition number will change once an immediate amendment is applied, but does not change for deferred amendments.

Change Markings

The changes to be implemented in this amendment are indicated by ~~strikethrough~~ text for deletions and **bold** text for changes or additions. Changes may also be outlined or highlighted in **red**.

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S-52 CHANGE CONTROL HISTORY SINCE 1996

Amendment Abbreviations:	MD	Maintenance Document
	IA	Immediate Amendment
	DA	Deferred Amendment

Specifications for Chart Content and Display Aspects of ECDIS (S-52)

Previous Edition	Amendments Applied	Resulting Edition
Edition 5.0 (Dec 1996)	Mar 1999	"5th Edition, amended Mar 1999"
"5th Edition, amended Mar 1999"	Dec 2001	"5th Edition, amended Mar 1999 & Dec 2001"
"5th Edition, amended Mar 1999 & Dec 2001"	MD7 + Merging with former S-52 App. 2, Ed. 4.3 (C&S specs)	Edition 6.0 (March 2010)

Guidance on Updating the Electronic Navigational Chart (S-52, Appendix 1)

Current Edition	Amendments Applied
Edition 3.0 (Dec 1996)	No revisions have been applied since 1996*

*Revision is currently being developed.

Colours & Symbols Specifications (Former S-52, Appendix 2)

Previous Edition	Amendments Applied	Resulting Edition
Edition 3.0 (July 1996)	July 1997	Edition 4.0 (July 1997)
Edition 4.0 (July 1997)	MD1 IA i01	Edition 4.1 (Jan 1999)
Edition 4.1 (Jan 1999)	MD2 DA d02 MD4 DA d6	Edition 4.2 (Mar 2004)
Edition 4.2 (Mar 2004)	MD5 DA d7	Edition 4.3 (Jan 2008) †

† Withdrawn after incorporation into the main part of S-52 in 2010.

Glossary of ECDIS-Related Terms Specifications (Former S-52, Appendix 3)

Previous Edition	Amendments Applied	Resulting Edition
Edition 3.0 (Dec 1997)	Transferred to S-32	S-32, Appendix 1 (Sep 2007)

Presentation Library (Annex A to former S-52, Appendix 2; now Annex A to S-52)

Previous Edition	Amendments Applied	Resulting Edition	Digital PresLib	Paper Addendum to Part I
Edition 3.0 (July 1997)	MD1 IA i01	Edition 3.1 (Jan 1999)	PRSLIB03.dai (July 1997) PSLB03_1.dai (Dec 1998)	
Edition 3.1 (Jan 1999)	MD 3 IA i04	Edition 3.2 (May 2000)	PSTY03_0.dai (June 1999) PSLB03_2.dai (May 2000)	Users' Manual (2003)
Edition 3.2 (May 2000)	MD2 DA d02 MD3 DA d05 MD4 DA d6	Edition 3.3 (2004)	PSTY3_2b.dai (Oct 2001) PSLB03_3.dai (Mar 2004)	Users' Manual (2007)
Edition 3.3 (2004)	MD5 IA i5 MD5 DA d7 MD6 IA i6	Edition 3.4 (2008)	PSLB03_4.dai (Jan 2008)	Users' Manual (2008)
Edition 3.4 (2008)	MD7 DA d8 MD8 DA d9			

INDEX OF ITEMS IN DEFERRED AMENDMENT 9

Item No.	Meeting / Action Item No.	Agenda Item	Description	Pg
PL03.4.d9.co.1	DIPWG-3 / 6	8.6C.1	Correction to Presentation Library Look-up table to corrects portrayal of radio tower landmarks	1
PL03.4.d9.ex.2	DIPWG-3 / 2	8.3A	Extension to LIGHTS05 Conditional Symbology Procedure to allow the display of 360 degree major light sectors with a nominal range of 10nM or greater	4
PL03.4.d9.co.3	DIPWG-3 / 6	8.6C.2	Correction to RESARE03 Conditional Symbology Procedure to harmonize portrayal of entry prohibited restricted areas with INT 1	6
PL03.4.d9.ex.4	DIPWG-2 / 2	4.1A	Extension to Presentation Library Colour tables to provide additional colours for non-charted items	7

Item No. PL03.4.d9.co.1Correction to Presentation Library look-up table to
correct portrayal of radio tower landmarks

Note: Retain all modifications identified in Colours and Symbols Maintenance Document 07, but replace all LNDMRK entries in Look-Up Table 11.1.1 and Look-Up Table 11.1.2 with the LNDMRK entries listed below. To save space in this maintenance document, the entries from MD07 that precede and follow the LNDMRK entries have are represented here by **< SNIP >** to show where these lines are located in the full table.

New LNDMRK entries are shown in **bold red text**.

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

11.1.1 Look-up Table for paper chart point symbolization

```

* *** PAPER CHART POINTS ***
* *** This is the look-up table for point symbolization. ***
* *** For edition 3.4 Preslib, dated January 2008 *****
*
* Each line contains minimum 6 fields:
* 1. field - code of the object class
* 2. field - attribute combination
* 3. field - symbolization instruction
* 4. field - display priority
* 5. field - radar
* 6. field - IMO display category
* 7. field - viewing group (optional)
*
* Each field entry is framed by "" and fields are separated by ','.
*
* Please note, that the entries to this table must be in
* alphabetic order (sorted by the class code).
*
* This table has 2 sections:
*
* - The first section contains symbolization instructions for
* standard S-57 'real world' objects:
* - The second section contains symbolization instructions for
* non-standard (class code in lowercase) objects:
*
* default for symbolization failure; must be the first entry to look-up table
"#####", "", "SY(QUESMRK1)", "5", "O", "STANDARD", "21010"
*
* ***
* ***
* *** section one: REAL WORLD CLASSES ***
* ***
*
< SNIP >
"LNDMRK", "", "SY(POSGEN01)", "4", "O", "OTHER", "32220"
"LNDMRK", "CATLMK17FUNCTN33CONVIS1", "SY(TOWERS03);TX(OBJNAM,3,2,2,'15110',1,-1,CHBLK,26)", "6", "O", "STANDARD", "22220"
"LNDMRK", "CATLMK15FUNCTN20CONVIS1", "SY(BUIREL13)", "6", "O", "STANDARD", "22220"
"LNDMRK", "CATLMK15FUNCTN21CONVIS1", "SY(BUIREL13)", "6", "O", "STANDARD", "22220"
"LNDMRK", "CATLMK17FUNCTN20CONVIS1", "SY(BUIREL13)", "6", "O", "STANDARD", "22220"
"LNDMRK", "CATLMK17FUNCTN21CONVIS1", "SY(BUIREL13)", "6", "O", "STANDARD", "22220"
"LNDMRK", "CATLMK20FUNCTN20CONVIS1", "SY(BUIREL13)", "6", "O", "STANDARD", "22220"
"LNDMRK", "CATLMK20FUNCTN21CONVIS1", "SY(BUIREL13)", "6", "O", "STANDARD", "22220"
"LNDMRK", "CATLMK20FUNCTN26CONVIS1", "SY(BUIREL15)", "6", "O", "STANDARD", "22220"
"LNDMRK", "CATLMK20FUNCTN27CONVIS1", "SY(BUIREL15)", "6", "O", "STANDARD", "22220"
"LNDMRK", "CATLMK17FUNCTN31CONVIS1", "SY(TOWERS15);TX(OBJNAM,3,2,2,'15110',1,1,CHBLK,26)", "6", "O", "STANDARD", "22220"
"LNDMRK", "CATLMK17FUNCTN31", "SY(TOWERS05);TX(OBJNAM,3,2,2,'15110',1,1,CHBLK,26)", "4", "O", "OTHER", "32220"
"LNDMRK", "CATLMK17FUNCTN33", "SY(TOWERS01);TX(OBJNAM,3,2,2,'15110',1,-1,CHBLK,26)", "4", "O", "OTHER", "32220"
"LNDMRK", "CATLMK1CONVIS1", "SY(CAIRNS11)", "6", "O", "STANDARD", "22220"
"LNDMRK", "CATLMK3CONVIS1", "SY(CHIMNY11)", "6", "O", "STANDARD", "22220"
"LNDMRK", "CATLMK4CONVIS1", "SY(DSHAER11)", "6", "O", "STANDARD", "22220"
"LNDMRK", "CATLMK5CONVIS1", "SY(FLGSTF01)", "6", "O", "STANDARD", "22220"
"LNDMRK", "CATLMK6CONVIS1", "SY(FLASTK11)", "6", "O", "STANDARD", "22220"

```

"LNDMRK","CATLMK7CONVIS1","SY(MSTCON14)","6","O","STANDARD","22220"
 "LNDMRK","CATLMK8CONVIS1","SY(POSGEN03)","6","O","STANDARD","22220"
 "LNDMRK","CATLMK9CONVIS1","SY(MONUMT12)","6","O","STANDARD","22220"
 "LNDMRK","CATLMK10CONVIS1","SY(MONUMT12)","6","O","STANDARD","22220"
 "LNDMRK","CATLMK12CONVIS1","SY(MONUMT12)","6","O","STANDARD","22220"
 "LNDMRK","CATLMK13CONVIS1","SY(MONUMT12)","6","O","STANDARD","22220"
 "LNDMRK","CATLMK15CONVIS1","SY(DOMES011)","6","O","STANDARD","22220"
 "LNDMRK","CATLMK16CONVIS1","SY(RASCAN11)","6","O","STANDARD","22220"
 "LNDMRK","CATLMK17CONVIS1","SY(TOWERS03)","6","O","STANDARD","22220"
 "LNDMRK","CATLMK18CONVIS1","SY(WNDMIL12)","6","O","STANDARD","22220"
 "LNDMRK","CATLMK19CONVIS1","SY(WIMCON11)","6","O","STANDARD","22220"
 "LNDMRK","CATLMK20CONVIS1","SY(POSGEN03)","6","O","STANDARD","22220"
 "LNDMRK","CATLMK20FUNCTN20","SY(BUIREL01)","4","O","OTHER","32220"
 "LNDMRK","CATLMK1","SY(CAIRNS01)","4","O","OTHER","32220"
 "LNDMRK","CATLMK3","SY(CHIMNY01)","4","O","OTHER","32220"
 "LNDMRK","CATLMK4","SY(DSHAER01)","4","O","OTHER","32220"
 "LNDMRK","CATLMK5","SY(FLGSTF01)","4","O","OTHER","32220"
 "LNDMRK","CATLMK6","SY(FLASTK01)","4","O","OTHER","32220"
 "LNDMRK","CATLMK7","SY(MSTCON04)","4","O","OTHER","32220"
 "LNDMRK","CATLMK8","SY(POSGEN03)","4","O","OTHER","32220"
 "LNDMRK","CATLMK9","SY(MONUMT02)","4","O","OTHER","32220"
 "LNDMRK","CATLMK10","SY(MONUMT02)","4","O","OTHER","32220"
 "LNDMRK","CATLMK12","SY(MONUMT02)","4","O","OTHER","32220"
 "LNDMRK","CATLMK13","SY(MONUMT02)","4","O","OTHER","32220"
 "LNDMRK","CATLMK15","SY(DOMES001)","4","O","OTHER","32220"
 "LNDMRK","CATLMK16","SY(RASCAN01)","4","O","OTHER","32220"
 "LNDMRK","CATLMK17","SY(TOWERS01)","4","O","OTHER","32220"
 "LNDMRK","CATLMK18","SY(WNDMIL02)","4","O","OTHER","32220"
 "LNDMRK","CATLMK19","SY(WIMCON01)","4","O","OTHER","32220"
 "LNDMRK","CATLMK20","SY(POSGEN01)","4","O","OTHER","32220"
 "LNDMRK","CONVIS1","SY(POSGEN03)","6","O","STANDARD","22220"

< SNIP >

*

* ***

* *** section two: NON-STANDARD CLASSES ***

* ***

*

*Note: category "DISPLAYBASE" should not be removed from the display.

*For non-standard classes, all category "MARINERS STANDARD" and "MARINERS OTHER"

*should be drawn when "STANDARD DISPLAY" is drawn, and thereafter may be re-assigned

*to the category of chosen by the mariner.

*

"cursor","SY(CURSRA01)","8","O","DISPLAYBASE","11010"
 "cursor","cursty2","SY(CURSRB01)","8","O","MARINERS OTHER","61040"
 "dnght","SY(DNGHLIT)","8","O","MARINERS STANDARD","53010"
 "events","SY(EVENTS03);TX(OBJNAM,3,2,3,'15110',1,0,CHBLK,50)","8","O","MARINERS STANDARD","52410"
 "marfea","SY(CHINFO09);TX(OBJNAM,3,1,3,'15110',1,-1,CHBLK,50)","8","O","MARINERS STANDARD","53050"
 "marnot","SY(CHINFO09);TX(usrmrk,3,1,2,'15110',0,0,CHBLK,50)","8","O","MARINERS STANDARD","53040"
 "marnot","catnot1","SY(CHINFO08);TX(usrmrk,3,1,2,'15110',0,0,CHBLK,50)","8","O","MARINERS STANDARD","53030"
 "marnot","catnot2","SY(CHINFO09);TX(usrmrk,3,1,2,'15110',0,0,CHBLK,50)","8","O","MARINERS STANDARD","53040"
 "mnufea","SY(CHINFO10)","5","O","MARINERS STANDARD","55010"
 "mnufea","catnot1","SY(CHINFO10)","5","O","MARINERS STANDARD","55010"
 "mnufea","catnot2","SY(CHINFO11)","5","O","MARINERS STANDARD","55020"
 "ownshp","CS(OWNSHP02)","9","O","DISPLAYBASE","42010"
 "plnpos","SY(PLNPOS01);SY(PLNPOS02.ORIENT);TX(plndat,1,2,2,'15110',4,3,CHBLK,50)","5","O","MARINERS STANDARD","52030"
 "positn","SY(POSITN02);TX(loctim,1,1,2,'15110',0,-1,CHBLK,50)","5","O","MARINERS OTHER","62010"
 "positn","pfmeth1","SY(POSITN02);TX('DR',2,3,2,'15110',-1,1,CHBLK,50);TX(loctim,1,1,2,'15110',0,-1,CHBLK,50)","5","O","MARINERS OTHER","62010"
 "positn","pfmeth2","SY(POSITN02);TX('EP',2,3,2,'15110',-1,1,CHBLK,50);TX(loctim,1,1,2,'15110',0,-1,CHBLK,50)","5","O","MARINERS OTHER","62010"
 "positn","pfmeth3","SY(POSITN02);TX('V',3,3,2,'15110',1,1,CHBLK,50);TX(loctim,1,1,2,'15110',0,-1,CHBLK,50)","5","O","MARINERS OTHER","62010"
 "positn","pfmeth4","SY(POSITN02);TX('A',3,3,2,'15110',1,1,CHBLK,50);TX(loctim,1,1,2,'15110',0,-1,CHBLK,50)","5","O","MARINERS OTHER","62010"
 "positn","pfmeth5","SY(POSITN02);TX('R',3,3,2,'15110',1,1,CHBLK,50);TX(loctim,1,1,2,'15110',0,-1,CHBLK,50)","5","O","MARINERS OTHER","62010"
 "positn","pfmeth6","SY(POSITN02);TX('D',3,3,2,'15110',1,1,CHBLK,50);TX(loctim,1,1,2,'15110',0,-1,CHBLK,50)","5","O","MARINERS OTHER","62010"
 "positn","pfmeth7","SY(POSITN02);TX('G',3,3,2,'15110',1,1,CHBLK,50);TX(loctim,1,1,2,'15110',0,-1,CHBLK,50)","5","O","MARINERS OTHER","62010"
 "positn","pfmeth8","SY(POSITN02);TX('GI',3,3,2,'15110',1,1,CHBLK,50);TX(loctim,1,1,2,'15110',0,-1,CHBLK,50)","5","O","MARINERS OTHER","62010"
 "positn","pfmeth9","SY(POSITN02);TX('L',3,3,2,'15110',1,1,CHBLK,50);TX(loctim,1,1,2,'15110',0,-1,CHBLK,50)","5","O","MARINERS OTHER","62010"
 "positn","pfmeth10","SY(POSITN02);TX('M',3,3,2,'15110',1,1,CHBLK,50);TX(loctim,1,1,2,'15110',0,-1,CHBLK,50)","5","O","MARINERS OTHER","62010"
 "positn","pfmeth11","SY(POSITN02);TX('O',3,3,2,'15110',1,1,CHBLK,50);TX(loctim,1,1,2,'15110',0,-1,CHBLK,50)","5","O","MARINERS OTHER","62010"
 "positn","pfmeth12","SY(POSITN02);TX('T',3,3,2,'15110',1,1,CHBLK,50);TX(loctim,1,1,2,'15110',0,-1,CHBLK,50)","5","O","MARINERS OTHER","62010"
 "positn","pfmeth13","SY(POSITN02);TX('dG',3,3,2,'15110',1,1,CHBLK,50);TX(loctim,1,1,2,'15110',0,-1,CHBLK,50)","5","O","MARINERS OTHER","62010"
 "positn","pfmeth14","SY(POSITN02);TX('dGI',3,3,2,'15110',1,1,CHBLK,50);TX(loctim,1,1,2,'15110',0,-1,CHBLK,50)","5","O","MARINERS OTHER","62010"
 "positn","pfmeth15","SY(POSITN02);TX('dO',3,3,2,'15110',1,1,CHBLK,50);TX(loctim,1,1,2,'15110',0,-1,CHBLK,50)","5","O","MARINERS OTHER","62010"
 "refpnt","SY(REFPNT02)","7","O","MARINERS OTHER","61050"
 "tidcur","SY(TIDCUR01.ORIENT);SY(TIDCUR03);TX(curstr,2,3,2,'15110',-1,2,CHBLK,50);TX(loctim,3,1,2,'15110',1,-2,CHBLK,50)","7","O","MARINERS STANDARD","53080"
 "tidcur","catcur1","SY(TIDCUR01.ORIENT);SY(TIDCUR03);TX('P',2,3,2,'15110',-4,2,CHBLK,50);TX(curstr,2,3,2,'15110',-1,2,CHBLK,50);TX(loctim,3,1,2,'15110',1,-2,CHBLK,50)","7","O","MARINERS STANDARD","53080"


```
"tidcur","catcur2","SY(TIDCUR02,ORIENT);SY(TIDCUR03);TX('A',2,3,2,'15110',-4,2,CHBLK,50);TX(curstr,2,3,2,'15110',-
1,2,CHBLK,50);TX(loctim,3,1,2,'15110',1,-2,CHBLK,50),"7","O","MARINERS STANDARD","53080"
"vessel","CS(VESSEL02),"9","O","MARINERS STANDARD","54030"
"waypnt","SY(WAYPNT01);TX(OBJNAM,3,1,3,'15110',1,-1,APLRT,50),"8","O","DISPLAYBASE","42210"
"waypnt","select1","SY(WAYPNT01);TX(OBJNAM,3,1,3,'15110',1,-1,CHBLK,50),"8","O","DISPLAYBASE","42210"
"waypnt","select2","SY(WAYPNT03);TX(OBJNAM,3,1,3,'15110',1,-1,APLRT,50),"8","O","MARINERS STANDARD","52210"
*
* ***          ***
* *** end of look-up table ***
* ***          ***
```

11.1.2 Look-up Table for simplified point symbolisation

```
* *** SIMPLIFIED POINTS          ***
* *** This is the look-up table for point symbolization. ***
* *** For edition 3.4 Preslib, dated January 2008 *****
*
* Each line contains minimum 6 fields:
* 1. field - code of the object class
* 2. field - attribute combination
* 3. field - symbolization instruction
* 4. field - display priority
* 5. field - radar
* 6. field - IMO display category
* 7. field - viewing group (optional)
*
* Each field entry is framed by '"' and fields are separated by ','.
*
* Please note, that the entries to this table must be in
* alphabetic order (sorted by the class code).
*
* This table has 2 sections:
*
* - The first section contains symbolization instructions for
* standard S-57 'real world' objects:
* - The second section contains symbolization instructions for
* non-standard (class code in lowercase) objects:
*
* default for symbolization failure; must be the first entry to look-up table
"#####", "", "SY(QUESMRK1)", "5", "O", "STANDARD", "21010"
*
* ***          ***
* *** section one: REAL WORLD CLASSES ***
* ***          ***
*
< SNIP >
"LNDMRK","SY(POSGEN01),"4","O","OTHER","32220"
"LNDMRK","CATLMK10CONVIS1","SY(MONUMT12),"6","O","STANDARD","22220"
"LNDMRK","CATLMK12CONVIS1","SY(MONUMT12),"6","O","STANDARD","22220"
"LNDMRK","CATLMK13CONVIS1","SY(MONUMT12),"6","O","STANDARD","22220"
"LNDMRK","CATLMK15","SY(DOMES001),"4","O","OTHER","32220"
"LNDMRK","CATLMK15CONVIS1","SY(DOMES011),"6","O","STANDARD","22220"
"LNDMRK","CATLMK15FUNCTN20","SY(BUIREL01),"4","O","OTHER","32220"
"LNDMRK","CATLMK15FUNCTN20CONVIS1","SY(BUIREL13),"6","O","STANDARD","22220"
"LNDMRK","CATLMK15FUNCTN21CONVIS1","SY(BUIREL13),"6","O","STANDARD","22220"
"LNDMRK","CATLMK16","SY(RASCAN01),"4","O","OTHER","32220"
"LNDMRK","CATLMK16CONVIS1","SY(RASCAN11),"6","O","STANDARD","22220"
"LNDMRK","CATLMK17","SY(TOWERS01),"4","O","OTHER","32220"
"LNDMRK","CATLMK17CONVIS1","SY(TOWERS03),"6","O","STANDARD","22220"
"LNDMRK","CATLMK17FUNCTN20","SY(BUIREL01),"4","O","OTHER","32220"
"LNDMRK","CATLMK17FUNCTN20CONVIS1","SY(BUIREL13),"6","O","STANDARD","22220"
"LNDMRK","CATLMK17CONVIS1","SY(BUIREL13),"6","O","STANDARD","22220"
"LNDMRK","CATLMK17FUNCTN31CONVIS1","SY(TOWERS15);TX(OBJNAM,3,2,2,'15110',1,-1,CHBLK,26),"6","O","STANDARD","22220"
"LNDMRK","CATLMK17FUNCTN31","SY(TOWERS05);TX(OBJNAM,3,2,2,'15110',1,-1,CHBLK,26),"4","O","OTHER","32220"
"LNDMRK","CATLMK17FUNCTN33","SY(TOWERS01);TX(OBJNAM,3,2,2,'15110',1,-1,CHBLK,26),"4","O","OTHER","32220"
"LNDMRK","CATLMK17FUNCTN33CONVIS1","SY(TOWERS03);TX(OBJNAM,3,2,2,'15110',1,-1,CHBLK,26),"6","O","STANDARD","22220"
"LNDMRK","CATLMK18CONVIS1","SY(WNDMIL12),"6","O","STANDARD","22220"
"LNDMRK","CATLMK19CONVIS1","SY(WIMCON11),"6","O","STANDARD","22220"
"LNDMRK","CATLMK1CONVIS1","SY(CAIRNS11),"6","O","STANDARD","22220"
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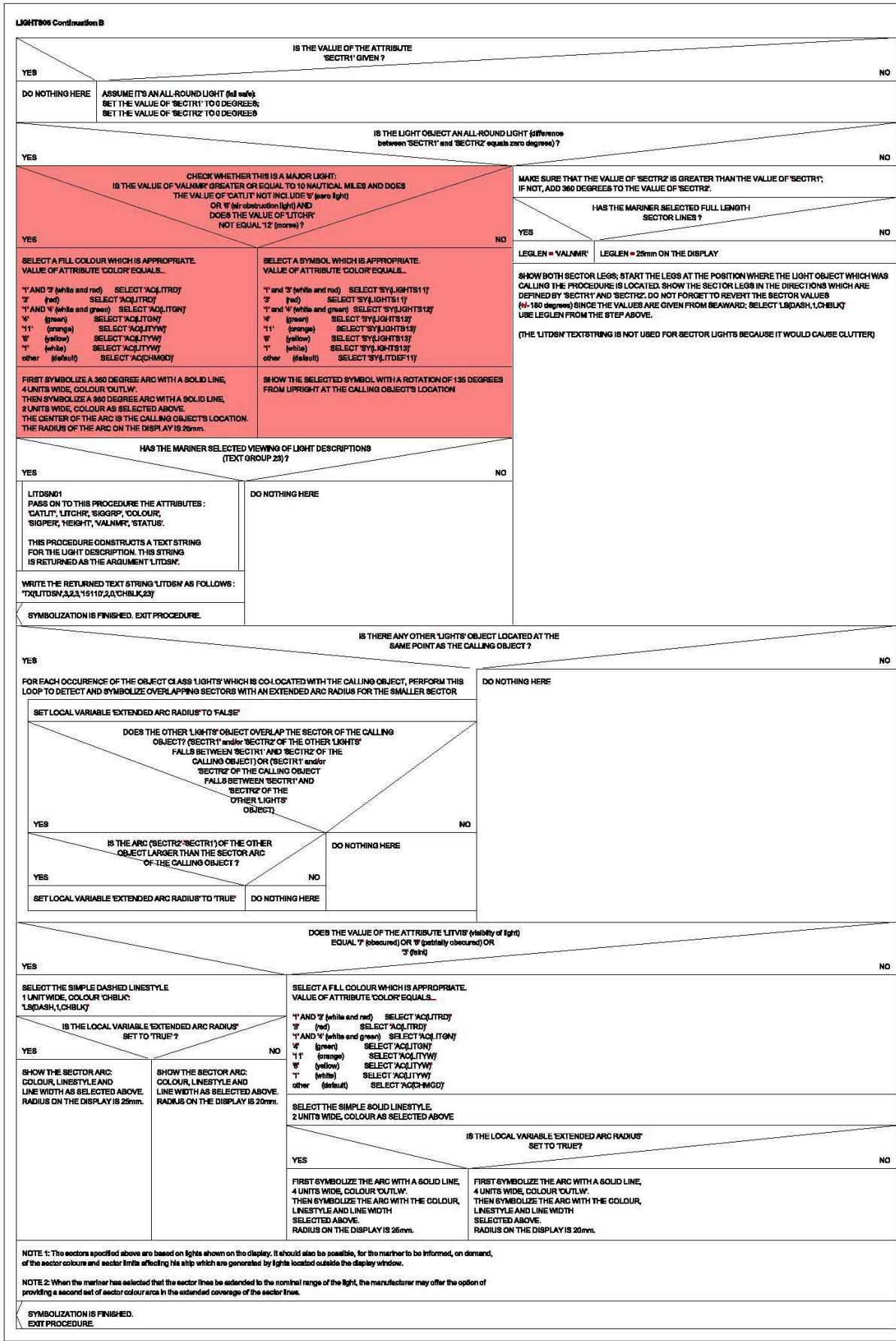
"LNDMRK","CATLMK20CONVIS1","SY(POSGEN03)","6","O","STANDARD","22220"
"LNDMRK","CATLMK20FUNCTN20","SY(BUIREL01)","4","O","OTHER","32220"
"LNDMRK","CATLMK20FUNCTN20CONVIS1","SY(BUIREL13)","6","O","STANDARD","22220"
"LNDMRK","CATLMK20FUNCTN21CONVIS1","SY(BUIREL13)","6","O","STANDARD","22220"
"LNDMRK","CATLMK20FUNCTN26CONVIS1","SY(BUIREL15)","6","O","STANDARD","22220"
"LNDMRK","CATLMK20FUNCTN27CONVIS1","SY(BUIREL15)","6","O","STANDARD","22220"
"LNDMRK","CATLMK3","SY(CHIMNY01)","4","O","OTHER","32220"
"LNDMRK","CATLMK3CONVIS1","SY(CHIMNY11)","6","O","STANDARD","22220"
"LNDMRK","CATLMK4CONVIS1","SY(DSHAER11)","6","O","STANDARD","22220"
"LNDMRK","CATLMK5CONVIS1","SY(FLGSTF01)","6","O","STANDARD","22220"
"LNDMRK","CATLMK6","SY(FLASTK01)","4","O","OTHER","32220"
"LNDMRK","CATLMK6CONVIS1","SY(FLASTK11)","6","O","STANDARD","22220"
"LNDMRK","CATLMK7","SY(MSTCON04)","4","O","OTHER","32220"
"LNDMRK","CATLMK7CONVIS1","SY(MSTCON14)","6","O","STANDARD","22220"
"LNDMRK","CATLMK8CONVIS1","SY(POSGEN03)","6","O","STANDARD","22220"
"LNDMRK","CATLMK9CONVIS1","SY(MONUMT12)","6","O","STANDARD","22220"
"LNDMRK","CONVIS1","SY(POSGEN03)","6","O","STANDARD","22220"
< SNIP >
*
* ***
* *** section two: NON-STANDARD CLASSES ***
* ***
*
*Note: category "DISPLAYBASE" should not be removed from the display.
*For non-standard classes, all category "MARINERS STANDARD" and "MARINERS OTHER"
*should be drawn when "STANDARD DISPLAY" is drawn, and thereafter may be re-assigned
*to the category of chosen by the mariner.
*
"cursor","SY(CURSRA01)","8","O","DISPLAYBASE","11010"
"cursor","cursy2","SY(CURSRB01)","8","O","MARINERS OTHER","61040"
"dnghl","SY(DNGHLIT)","8","O","MARINERS STANDARD","53010"
"events","SY(EVENTS03);TX(OBJNAM,3,2,3,'15110',1,0,CHBLK,50)","8","O","MARINERS STANDARD","52410"
"marfea","SY(CHINFO09);TX(OBJNAM,3,1,3,'15110',1,-1,CHBLK,50)","8","O","MARINERS STANDARD","53050"
"marnot","SY(CHINFO09);TX(usrmrk,3,1,2,'15110',0,0,CHBLK,50)","8","O","MARINERS STANDARD","53040"
"marnot","catnot1","SY(CHINFO08);TX(usrmrk,3,1,2,'15110',0,0,CHBLK,50)","8","O","MARINERS STANDARD","53030"
"marnot","catnot2","SY(CHINFO09);TX(usrmrk,3,1,2,'15110',0,0,CHBLK,50)","8","O","MARINERS STANDARD","53040"
"mnufea","SY(CHINFO10)","5","O","MARINERS STANDARD","55010"
"mnufea","catnot1","SY(CHINFO10)","5","O","MARINERS STANDARD","55010"
"mnufea","catnot2","SY(CHINFO11)","5","O","MARINERS STANDARD","55020"
"ownshp","CS(OWNSHP02)","9","O","DISPLAYBASE","42010"
"plnpos","SY(PLNPOS01);SY(PLNPOS02.ORIENT);TX(plndat,1,2,2,'15110',4,3,CHBLK,50)","5","O","MARINERS STANDARD","52030"
"positn","SY(POSITN02);TX(loctim,1,1,2,'15110',0,-1,CHBLK,50)","5","O","MARINERS OTHER","62010"
"positn","pfmeth1","SY(POSITN02);TX('DR',2,3,2,'15110',-1,1,CHBLK,50);TX(loctim,1,1,2,'15110',0,-1,CHBLK,50)","5","O","MARINERS OTHER","62010"
"positn","pfmeth2","SY(POSITN02);TX('EP',2,3,2,'15110',-1,1,CHBLK,50);TX(loctim,1,1,2,'15110',0,-1,CHBLK,50)","5","O","MARINERS OTHER","62010"
"positn","pfmeth3","SY(POSITN02);TX('V',3,3,2,'15110',1,1,CHBLK,50);TX(loctim,1,1,2,'15110',0,-1,CHBLK,50)","5","O","MARINERS OTHER","62010"
"positn","pfmeth4","SY(POSITN02);TX('A',3,3,2,'15110',1,1,CHBLK,50);TX(loctim,1,1,2,'15110',0,-1,CHBLK,50)","5","O","MARINERS OTHER","62010"
"positn","pfmeth5","SY(POSITN02);TX('R',3,3,2,'15110',1,1,CHBLK,50);TX(loctim,1,1,2,'15110',0,-1,CHBLK,50)","5","O","MARINERS OTHER","62010"
"positn","pfmeth6","SY(POSITN02);TX('D',3,3,2,'15110',1,1,CHBLK,50);TX(loctim,1,1,2,'15110',0,-1,CHBLK,50)","5","O","MARINERS OTHER","62010"
"positn","pfmeth7","SY(POSITN02);TX('G',3,3,2,'15110',1,1,CHBLK,50);TX(loctim,1,1,2,'15110',0,-1,CHBLK,50)","5","O","MARINERS OTHER","62010"
"positn","pfmeth8","SY(POSITN02);TX('GI',3,3,2,'15110',1,1,CHBLK,50);TX(loctim,1,1,2,'15110',0,-1,CHBLK,50)","5","O","MARINERS OTHER","62010"
"positn","pfmeth9","SY(POSITN02);TX('L',3,3,2,'15110',1,1,CHBLK,50);TX(loctim,1,1,2,'15110',0,-1,CHBLK,50)","5","O","MARINERS OTHER","62010"
"positn","pfmeth10","SY(POSITN02);TX('M',3,3,2,'15110',1,1,CHBLK,50);TX(loctim,1,1,2,'15110',0,-1,CHBLK,50)","5","O","MARINERS OTHER","62010"
"positn","pfmeth11","SY(POSITN02);TX('O',3,3,2,'15110',1,1,CHBLK,50);TX(loctim,1,1,2,'15110',0,-1,CHBLK,50)","5","O","MARINERS OTHER","62010"
"positn","pfmeth12","SY(POSITN02);TX('T',3,3,2,'15110',1,1,CHBLK,50);TX(loctim,1,1,2,'15110',0,-1,CHBLK,50)","5","O","MARINERS OTHER","62010"
"positn","pfmeth13","SY(POSITN02);TX('dG',3,3,2,'15110',1,1,CHBLK,50);TX(loctim,1,1,2,'15110',0,-1,CHBLK,50)","5","O","MARINERS OTHER","62010"
"positn","pfmeth14","SY(POSITN02);TX('dGI',3,3,2,'15110',1,1,CHBLK,50);TX(loctim,1,1,2,'15110',0,-1,CHBLK,50)","5","O","MARINERS OTHER","62010"
"positn","pfmeth15","SY(POSITN02);TX('dO',3,3,2,'15110',1,1,CHBLK,50);TX(loctim,1,1,2,'15110',0,-1,CHBLK,50)","5","O","MARINERS OTHER","62010"
"refpnt","SY(REFPNT02)","7","O","MARINERS OTHER","61050"
"tidcur","SY(TIDCUR01.ORIENT);SY(TIDCUR03);TX(curstr,2,3,2,'15110',-1,2,CHBLK,50);TX(loctim,3,1,2,'15110',1,-2,CHBLK,50)","7","O","MARINERS STANDARD","53080"
"tidcur","catcur1","SY(TIDCUR01.ORIENT);SY(TIDCUR03);TX('P',2,3,2,'15110',-4,2,CHBLK,50);TX(curstr,2,3,2,'15110',-1,2,CHBLK,50);TX(loctim,3,1,2,'15110',1,-2,CHBLK,50)","7","O","MARINERS STANDARD","53080"
"tidcur","catcur2","SY(TIDCUR02.ORIENT);SY(TIDCUR03);TX('A',2,3,2,'15110',-4,2,CHBLK,50);TX(curstr,2,3,2,'15110',-1,2,CHBLK,50);TX(loctim,3,1,2,'15110',1,-2,CHBLK,50)","7","O","MARINERS STANDARD","53080"
"vessel","CS(VESSEL02)","9","O","MARINERS STANDARD","54030"
"waypnt","SY(WAYPNT01);TX(OBJNAM,3,1,3,'15110',1,-1,APLRT,50)","8","O","DISPLAYBASE","42210"
"waypnt","select1","SY(WAYPNT01);TX(OBJNAM,3,1,3,'15110',1,-1,CHBLK,50)","8","O","DISPLAYBASE","42210"
"waypnt","select2","SY(WAYPNT03);TX(OBJNAM,3,1,3,'15110',1,-1,APLRT,50)","8","O","MARINERS STANDARD","52210"
*
* ***
* *** end of look-up table ***
* ***

```

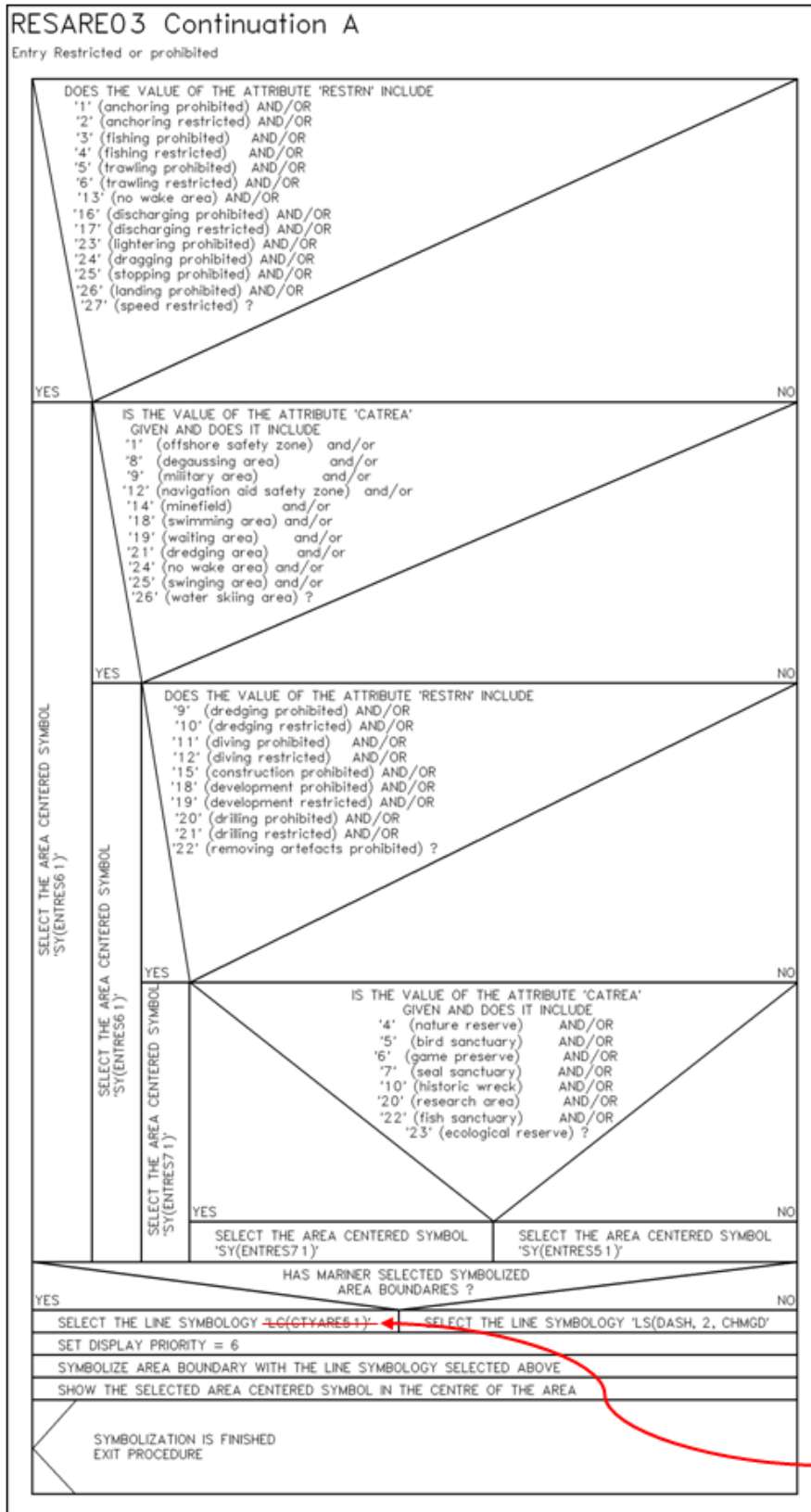
Item No. PL03.4.d9.ex2

Extension to LIGHTS05 Conditional Symbology Procedure to allow the display of 360 degree major light sectors with a nominal range of 10nM or greater, except for those with the following attribute values:

Light Characteristic: "12" Morse
Category of Light: "5" Aero Light
Category of Light: "6" Air Obstruction Light



12.2.15 Conditional Symbology Procedure 'RESAREnn'



Item No. PL03.4.d9.ex.4 Extension to Presentation Library Colour tables to provide additional colours for non-charted items

13. TABLES

13.1 Colour tables

The following pages list the colour tables which have been designed for different conditions of ambient illumination on the bridge.

The colours are defined in CIE values. The ECDIS manufacturer is responsible for computing the correct RGB values for the monitor he uses, from CIE values, as described in annex B of the C&S Specifications. A program for the conversion of CIE into RGB values for CRT monitors is provided on the Presentation Library CD (see section 19).

ECDIS manufacturers should refer to section 4 of S-52 for details for the design and use of the colour tables and colour tokens.

There are 63 colours in these tables. With the addition of the transparent colour (TRNSP) there are 64 colour tokens.

Colour Table: DAY

Token	Colour	X	Y	LUMINANCE
NODTA	grey	0.2800	0.3100	40.000
*CURSR	orange	0.5000	0.4000	32.000
CHBLK	black	0.2800	0.3100	0.000
CHGRD	grey	0.2800	0.3100	10.000
CHGRF	grey	0.2800	0.3100	25.000
CHRED	red	0.4800	0.3000	25.000
CHGRN	green	0.3100	0.5600	60.000
CHYLW	yellow	0.4100	0.4900	70.000
CHMGD	magenta	0.3000	0.1700	20.000
CHMGF	magenta	0.2800	0.2400	48.000
CHBRN	brown	0.3900	0.4300	30.000
CHWHT	white	0.2800	0.3100	80.000
SCLBR	orange	0.5000	0.4000	32.000
CHCOR	orange	0.5000	0.4000	32.000
LITRD	red	0.4800	0.3000	25.000
LITGN	green	0.3100	0.5600	60.000
LITYW	yellow	0.4100	0.4900	70.000
ISDNG	magenta	0.3000	0.1700	20.000
DNGHL	red	0.4800	0.3000	25.000
TRFCD	magenta	0.3000	0.1700	20.000
TRFCF	magenta	0.2800	0.2400	48.000
LANDA	brown	0.3500	0.3900	50.000
LANDF	brown	0.4500	0.4200	15.000
CSTLN	grey	0.2800	0.3100	10.000
SNDG1	grey	0.2800	0.3100	25.000
SNDG2	black	0.2800	0.3100	0.000
DEPSC	grey	0.2800	0.3100	10.000
DEPCN	grey	0.2800	0.3100	25.000
DEPDW	white	0.2800	0.3100	80.000
DEPMD	pale_blue	0.2600	0.2900	65.000
DEPMS	light_blue	0.2300	0.2500	55.000
DEPVS	medium_blue	0.2100	0.2200	45.000
DEPIT	yellow-green	0.2600	0.3600	35.000
RADHI	green	0.3100	0.5600	60.000
RADLO	green	0.3100	0.5600	20.000
*ARPAT	blue-green	0.2600	0.4200	30.000
*NINFO	orange	0.5000	0.4000	32.000
RESBL	blue	0.1800	0.1500	22.000
ADINF	yellow	0.4100	0.4900	35.000
RESGR	grey	0.2800	0.3100	25.000
SHIPS	black	0.2800	0.3100	0.000
PSTRK	black	0.2800	0.3100	0.000
SYTRK	grey	0.2800	0.3100	25.000
PLRTE	red	0.5800	0.3500	18.000
*APLRT	orange	0.5000	0.4000	32.000
UINFD	black	0.2800	0.3100	0.000
UINFF	grey	0.2800	0.3100	10.000
UIBCK	white	0.2800	0.3100	80.000
UIAFD	medium_blue	0.2100	0.2200	45.000
UINFR	red	0.4800	0.3000	25.000
UINFG	green	0.3100	0.5600	60.000
UINFO	orange	0.5000	0.4000	32.000
UINFB	blue	0.1800	0.1500	22.000
UINFM	magenta	0.3000	0.1700	20.000
UIBDR	grey	0.2800	0.3100	10.000
UIAFF	brown	0.3500	0.3900	50.000
OUTLW	black	0.2800	0.3100	0.000
OUTLL	brown	0.4500	0.4200	15.000
RES01	grey	0.2800	0.3100	25.000
RES02	grey	0.2800	0.3100	25.000
RES03	grey	0.2800	0.3100	25.000
BKAJ1	grey	0.2800	0.3100	0.600
BKAJ2	grey	0.2800	0.3100	1.600

* These items are allowed the use of four additional colours listed at the end of this amendment

Colour Table: **DUSK**

Token	Colour	X	Y	LUMINANCE
NODTA	grey	0.2800	0.3100	7.000
*CURSR	orange	0.5000	0.4000	10.000
CHBLK	grey	0.2800	0.3100	20.000
CHGRD	grey	0.2800	0.3100	20.000
CHGRF	grey	0.2800	0.3100	10.000
CHRED	red	0.4800	0.3000	10.000
CHGRN	green	0.3100	0.5600	20.000
CHYLW	yellow	0.4100	0.4900	24.000
CHMGD	magenta	0.2800	0.2400	18.000
CHMGF	magenta	0.3000	0.1700	7.000
CHBRN	brown	0.3900	0.4300	8.000
CHWHT	white	0.2800	0.3100	36.000
SCLBR	orange	0.5000	0.4000	10.000
CHCOR	orange	0.5000	0.4000	10.000
LITRD	red	0.4800	0.3000	10.000
LITGN	green	0.3100	0.5600	20.000
LITYW	yellow	0.4100	0.4900	24.000
ISDNG	magenta	0.2800	0.2400	18.000
DNGHL	red	0.4800	0.3000	10.000
TRFCD	magenta	0.2800	0.2400	18.000
TRFCF	magenta	0.3000	0.1700	7.000
LANDA	brown	0.3500	0.3900	5.000
LANDF	brown	0.4500	0.4200	12.000
CSTLN	grey	0.2800	0.3100	20.000
SNDG1	grey	0.2800	0.3100	10.000
SNDG2	white	0.2800	0.3100	36.000
DEPSC	grey	0.2800	0.3100	20.000
DEPCN	grey	0.2800	0.3100	10.000
DEPDW	black	0.2800	0.3100	0.000
DEPMD	dark_blue	0.2500	0.2900	1.000
DEPMS	medium_blue	0.2300	0.2500	3.000
DEPVS	light_blue	0.2100	0.2200	5.000
DEPIT	yellow-green	0.2600	0.3600	6.000
RADHI	green	0.3100	0.5600	20.000
RADLO	green	0.3100	0.5600	7.000
*ARPAT	green	0.2600	0.4200	17.000
*NINFO	orange	0.5000	0.4000	10.000
RESBL	blue	0.1800	0.1500	10.000
ADINF	yellow	0.4100	0.4900	12.000
RESGR	grey	0.2800	0.3100	20.000
SHIPS	white	0.2800	0.3100	36.000
PSTRK	white	0.2800	0.3100	36.000
SYTRK	grey	0.2800	0.3100	10.000
PLRTE	red	0.5800	0.3500	8.000
*APLRT	orange	0.5000	0.4000	10.000
UINFD	white	0.2800	0.3100	36.000
UINFF	grey	0.2800	0.3100	20.000
UIBCK	black	0.2800	0.3100	0.000
UIAFD	light_blue	0.2100	0.2200	5.000
UINFR	red	0.4800	0.3000	10.000
UINFG	green	0.3100	0.5600	20.000
UINFO	orange	0.5000	0.4000	10.000
UINFB	blue	0.1800	0.1500	10.000
UINFM	magenta	0.2800	0.2400	18.000
UIBDR	grey	0.2800	0.3100	20.000
UIAFF	brown	0.4500	0.4200	12.000
OUTLW	black	0.2800	0.3100	0.000
OUTLL	brown	0.3500	0.3900	5.000
RES01	grey	0.2800	0.3100	10.000
RES02	grey	0.2800	0.3100	10.000
RES03	grey	0.2800	0.3100	10.000
BKAJ1	black	0.2800	0.3100	0.000
BKAJ2	grey	0.2800	0.3100	0.720

* These items are allowed the use of four additional colours listed at the end of this amendment

Colour Table: NIGHT

Token	Colour	X	Y	LUMINANCE
NODTA	grey	0.2800	0.3100	1.200
*CURSR	orange	0.5000	0.4000	1.250
CHBLK	grey	0.2800	0.3100	2.500
CHGRD	grey	0.2800	0.3100	2.500
CHGRF	grey	0.2800	0.3100	1.250
CHRED	red	0.4800	0.3000	1.250
CHGRN	green	0.3100	0.5600	2.500
CHYLW	yellow	0.4100	0.4900	3.000
CHMGD	magenta	0.3000	0.1700	2.000
CHMGF	magenta	0.3000	0.1700	2.000
CHBRN	brown	0.3900	0.4300	1.300
CHWHT	white	0.2800	0.3100	5.000
SCLBR	orange	0.5000	0.4000	1.250
CHCOR	orange	0.5000	0.4000	1.250
LITRD	red	0.4800	0.3000	1.250
LITGN	green	0.3100	0.5600	2.500
LITYW	yellow	0.4100	0.4900	3.000
ISDNG	magenta	0.3000	0.1700	2.000
DNGHL	red	0.4800	0.3000	1.250
TRFCD	magenta	0.3000	0.1700	2.000
TRFCF	magenta	0.3000	0.1700	2.000
LANDA	brown	0.3500	0.3900	0.800
LANDF	brown	0.4500	0.4200	1.600
CSTLN	grey	0.2800	0.3100	2.500
SNDG1	grey	0.2800	0.3100	1.250
SNDG2	white	0.2800	0.3100	5.000
DEPSC	grey	0.2800	0.3100	2.500
DEPCN	grey	0.2800	0.3100	1.250
DEPDW	black	0.2800	0.3100	0.000
DEPMD	dark_blue	0.2500	0.2900	0.200
DEPMS	medium-blue	0.2300	0.2500	0.400
DEPVS	light-blue	0.2100	0.2200	0.800
DEPIT	yellow-green	0.2600	0.3600	1.200
RADHI	green	0.3100	0.5600	2.500
RADLO	green	0.3100	0.5600	0.800
*ARPAT	blue-green	0.2600	0.4200	1.750
*NINFO	orange	0.5000	0.4000	1.250
RESBL	blue	0.1800	0.1500	1.250
ADINF	yellow	0.4100	0.4900	1.500
RESGR	grey	0.2800	0.3100	1.250
SHIPS	white	0.2800	0.3100	5.000
PSTRK	white	0.2800	0.3100	5.000
SYTRK	grey	0.2800	0.3100	1.250
PLRTE	red	0.5800	0.3500	0.900
*APLRT	orange	0.5000	0.4000	1.250
UINFD	white	0.2800	0.3100	5.000
UINFF	grey	0.2800	0.3100	2.500
UIBCK	black	0.2800	0.3100	0.000
UIAFD	light-blue	0.2100	0.2200	0.800
UINFR	red	0.4800	0.3000	1.250
UINFG	green	0.3100	0.5600	2.500
UINFO	orange	0.5000	0.4000	1.250
UINFB	blue	0.1800	0.1500	1.250
UINFM	magenta	0.3000	0.1700	2.000
UIBDR	grey	0.2800	0.3100	2.500
UIAFF	brown	0.4500	0.4200	3.200
OUTLW	black	0.2800	0.3100	0.000
OUTLL	brown	0.3500	0.3900	0.800
RES01	grey	0.2800	0.3100	1.250
RES02	grey	0.2800	0.3100	1.250
RES03	grey	0.2800	0.3100	1.250
BKAJ1	black	0.2800	0.3100	0.000
BKAJ2	grey	0.2800	0.3100	0.100

* These items are allowed the use of four additional colours listed at the end of this amendment

The alternative colours below are allowed for CURSR, NINFO, APLRT, and ARPAT in addition to the colours specified in the three colour tables above.

DAY

Token	Colour	X	Y	LUMINANCE
MARBL	Blue	0.145	0.140	20.0
MARCY	Cyan	0.200	0.355	20.0
MARMG	Magenta	0.360	0.220	20.0
MARWH	White	0.305	0.344	20.0

DUSK

Token	Colour	X	Y	LUMINANCE
MARBL	Blue	0.145	0.140	17.0
MARCY	Cyan	0.200	0.355	17.0
MARMG	Magenta	0.360	0.220	17.0
MARWH	White	0.305	0.344	17.0

NIGHT

Token	Colour	X	Y	LUMINANCE
MARBL	Blue	0.145	0.140	1.75
MARCY	Cyan	0.200	0.355	1.75
MARMG	Magenta	0.360	0.220	1.75
MARWH	White	0.305	0.344	1.75