Summary of Substantive Changes in Edition 1.2.0

**Bold** references in the Clauses Affected column indicate the principle sections/clauses that are impacted by the described change.

|  |  |
| --- | --- |
| Change Summary | Clauses Affected |
| Feature and Attribute clause headings standardized throughout for consistency with the FC/GI Registry. | **Entire** |
| Amended multiplicity for binding of **information** complex attribute from (0..\*) to (0..\*) (ordered). | **Entire** |
| Terms and definitions replaced with reference to corresponding Clause (1.3.2) in the S-101 Main document. | **1.3.1** |
| Moved former clause 2.3 “Information Types” to clause 2.2 (former clause 2.2 “Geometric primitives” renumbered to clause 2.3). | **2.2**, 2.3 |
| Added Curve as an allowable geometric primitive for features **Administration Area**, **Contiguous Zone**, **Continental Shelf Area**, **Exclusive Economic Zone** and **Territorial Sea Area**. | **2.3**, 16.8, 16.12, 16.13, 16.15, 16.23 |
| Added new feature **Helipad**. | 2.3, 2.5.9, **6.5** |
| Added new feature **Mooring Buoy**. | 2.3, 2.4.3, 2.5.9, **20.8** |
| Simple attribute types “Free Text” (TE) and “Truncated Date” (TD) amended to “Text” and “S100\_TruncatedDate” respectively. | **2.4.2** |
| Added complex attribute **fixed date range** and mandatory attribute **nationality** to feature **Archipelagic Sea Lane**. | 2.4.3, **15.26** |
| Amended multiplicity of attribute **nationality** from (1,1) to (0,1 (conditional)) for feature **Archipelagic Sea Lane Area**. | 2.4.3, **15.24** |
| Amended multiplicity of attribute **nationality** from (1,1) to (0,1 (conditional)) for feature **Archipelagic Sea Lane Axis**. | 2.4.3, **15.25** |
| Amended conditional mandatory attributes for feature **Bridge** in Table 2-3 in accordance with re-modelling (see clause 6.5). | **2.4.3** |
| Amended multiplicity of complex attribute **information** for **Precautionary Area** from (0,\*) to (1,\*) (consistency with S-57 ENC). | 2.4.3, **15.17** |
| Corrected Table 2.3 (Mandatory attributes) to remove former attribute **text justification** as a mandatory attribute for the cartographic feature **Text Placement**. | **2.4.3** |
| Added new guidance specifying that the ECDIS “system” attributes **default clearance depth** and **surrounding depth** must be populated with a value, which must not be an empty (null) value, if the attribute **value of sounding** is populated with an empty (null) value.  | 2.4.3, **2.4.5.1**, 13.4, 13.5, 13.6, 13.10, 30.1, 30.5 |
| Added new paragraph referencing S-101 Main document Section 4.5 for further information regarding ENC datasets. | **2.5** |
| Enhanced guidance for the population of the complex attribute **information**. | **2.4.6** |
| Added new guidance for features having encoded complex colour/colour pattern combinations to additionally include an image of the feature using the attribute **pictorial representation**. | **2.4.10**, 20.14.1 |
| Added new paragraph referencing S-101 Main document Section 4.5 for further information regarding ENC datasets. | **2.5** |
| Removed Figures 2.2 and 2.3 and the paragraph between these Figures. | **2.5.5** |
| Enhanced guidance for the population of the complex attribute **feature name**. | **2.5.8** |
| Removed scenario 3 - "Linear" surface features – from the clause related to edge masking. | **2.5.10** |
| Amended definition for meta feature **Navigational System of Marks** to match GI Registry definition (consistency). | **3.5** |
| Added missing Spatial/Information association **Spatial Association** to geo feature clauses as required (new allowable geometric primitives included in Edition 1.1.0). | **5.5**, **8.21**, **15.6**, **15.8**, **15.11**, **15.15**, **15.23**, **15.26** |
| Amendments to attribution and guidance for feature **Bridge** based on re-modelled (former) attribute **category of bridge**. | **6.6** |
| Added new mandatory Boolean sub-attribute **vertical clearance unlimited** to complex attribute **vertical clearance open** for feature **Span Opening**. Amended sub-attribute **vertical clearance value** to conditional mandatory. | 6.8, **27.188**, **29.39** |
| Added complex attributes **fixed date range** and **periodic date range** as allowable (non-mandatory) attributes for feature **Hulk**. | **8.3** |
| Removed value *7* (mooring buoy) as an allowable value for attribute **category of mooring/warping facility**. | 8.14, **27.39** |
| Added new value *9* (junction cable) as an allowable value for attribute **category of cable**. | 8.21, 14.2, **27.12**  |
| Former attribute **category of sea area** value *24* (abyssal hills) renamed to "abyssal hill" and definition amended to B-6 Edition 4.2.0 definition. | 9.1, **27.59** |
| Amended attribute type for attribute **station number** from integer to free text. | 10.5, **27.165** |
| Added new guidance informing Data Producers of the impact of populating attribute **value of sounding** with an empty (null) value on ECDIS display for underwater hazards. | **13.4.1**, **13.5.1**, **13.6.1**, **13.10.1** |
| Amended multiplicity of complex attribute **information** for **Precautionary Area** from [0..\*] to [1..\*] (consistency with S-57 ENC). | **15.17** |
| Removed guidance related to encoding linear maritime jurisdiction areas as a "very narrow area". Replaced with specification that geometric primitive curve must only be used where the area cannot be defined. Replaced Figure 16-1 and added new Figures 16-2 and 16-3. | **16.2**, 16.8.1, 16.12.1, 16.13.1, 16.15.1, 16.23.1 |
| Removed **category of anchorage** value *4* (explosives anchorage) as an allowable value; and added attribute **category of cargo**, for feature **Anchorage Area**.  | **16.3** |
| Removed **category of anchorage** value *4* (explosives anchorage) as an allowable value; and added attribute **category of cargo**, for feature **Anchor Berth**.  | **16.4** |
| Added additional guidance for the encoding of more detailed information for vessel speed limits. | **17.4**, 17.8.1 |
| Added generic IHO Hydrographic Dictionary definitions for the terms "Beacon" and "Buoy". [NOTE: These generic definitions have been removed from the feature class tables in Sections 19 and 20.] | **18** |
| Amended multiplicity of the sub-attribute **colour** on complex attribute **topmark** from (0,1) to (0,\*). Added attribute **colour pattern** as an allowable sub-attribute for **topmark**. Removed guidance for encoding topmarks having multiple colours using feature **Daymark**. | 18.1, 18.3.1.1, **20.1**, **20.2**, **20.3**, **20.4**, **20.5**, **20.6**, **20.9**, **20.10**, **20.11**, **20.12**, **20.13**, **20.15**,  |
| Added new guidance for table entry for flood lights in Table 19-2 to specify how to encode the colour of a structure when flood lit. | **19.1.7** |
| Added new table entry to Table 19-2 to specify the encoding for multiple lights that have been arranged in a specific shape. | **19.1.7** |
| Removed attribute **buoy shape** values *7* (superbuoy) and *8* (ice buoy) as allowable values for feature **Buoy Emergency Wreck Marking**. | **20.6** |
| Removed Remarks 2nd bullet relating to population of attribute **vertical length** on feature **Buoy Installation**. | **20.7.1** |
| Information related to different types of radar reflector moved from definition to Remarks. | **20.18**, **20.18.1** |
| Amended attribute **virtual AIS aid to navigation type** values *5-9* to be consistent with the S-57 values and definitions. | 21.3, **27.193** |
| Amended attribute category of **signal station, traffic** value *4* from “berthing” to "berthing signal station". | 22.5, **27.61** |
| Removed value *29* (visitors mooring) as an allowable value for attribute **category of small craft facility**. | 22.8, **27.65** |
| Amended attribute **orientation value** to new attribute **text offset bearing** for cartographic feature **Text Placement**. | 23.1, **27.173** |
| Renamed attribute **text offset mm** to **text offset distance**. | 23.1, **27.174** |
| Enhanced encoding guidance for the encoding of the cartographic feature **Text Placement**. | **23.1.1** |
| Added new enumerate type attributes **bridge construction** and **bridge function** (remodelling of feature Bridge – see clause 6.6). | **27.3**, **27.4** |
| Removed attribute **category of bridge** (remodelling of feature **Bridge** – see clause 6.6). | **27.9** (Edition 1.1.0) |
| Removed **category of anchorage** value *4* (explosives anchorage) as an allowable value.  | **27.10** |
| Added definitions for values of attribute **category of cardinal mark**. | **27.12** |
| Added new value *9* (junction cable) as an allowable value for attribute **category of cable**. | **27.12**  |
| Added missing value *14* (project cargo) for attribute **category of cargo**. | **27.13** |
| Added new enumerate type attribute **category of opening bridge** (remodelling of feature **Bridge** – see clause 6.6). | **27.43** |
| Information related to radiobeacons for attribute **category of radio station** moved from definition to Remarks. | **27.52** |
| Amended definition for attribute **category of radio station** value *10* (differential GNSS) to conform to the IHO Hydrographic Dictionary definition. | **27.52** |
| Removed attribute **category of runway** (remodelling of **Runway** – see clauses 6.4 and 6.5). | **27.58** (Edition 1.1.0) |
| Amended definition for attribute **category of sea area** value *28* (continental margin) to conform to the B-6 latest Edition and IHO Hydrographic Dictionary definition. | **27.59** |
| Definition for a depth range included in attribute **depth range maximum value** moved from definition to Remarks. | **27.85** |
| Definition for a depth range included in attribute **depth range minimum value** moved from definition to Remarks. | **27.86** |
| Amended guidance to allow for two instances of complex attribute **information** having sub-attribute **display name** = *True* to be encoded. | **27.88** |
| Amended unit of measure for attribute **magnetic anomaly value** from minutes to decimal degrees. | **27.120** |
| Added new Boolean type attribute **opening bridge** (re-modelling of feature Bridge – see clause 6.6). | **27.136** |
| Added new guidance in remarks that each group included in the rhythm of a light is to be encoded as a separate instance of the attribute **signal group**. | **27.158** |
| Removed value *6* (swept by wire-drag) as an allowable value for attribute **technique of vertical measurement**. Added new value *18* (mechanically swept). | **27.169** (corresponding changes made throughout) |
| Removed clause 27.171 (Edition 1.1.0) – **text justification**. Clause erroneously retained. | **27.171** (Edition 1.1.0) |
| Information related to cones, spheres, cylinders and x-shape for attribute **topmark/daymark shape** moved from definition to Remarks. | **27.179** |
| Added new Boolean type attribute **visitors mooring** (re-modelling of mooring buoys – see clause 20.8). | **27.194** |
| Added definition and amended Indication for complex attribute **feature name**. | **29.2** |
| Added definition for complex attribute **rhythm of light**. | **29.17** |