APPENDIX 1 -- ORR RATING CERTIFICATE

SAMPLE CERTIFICATE WILL BE AVAILABLE WITH NEXT UPDATE

APPENDIX 2 -- MEASUREMENT CONDITION CHECK LIST & INVENTORY

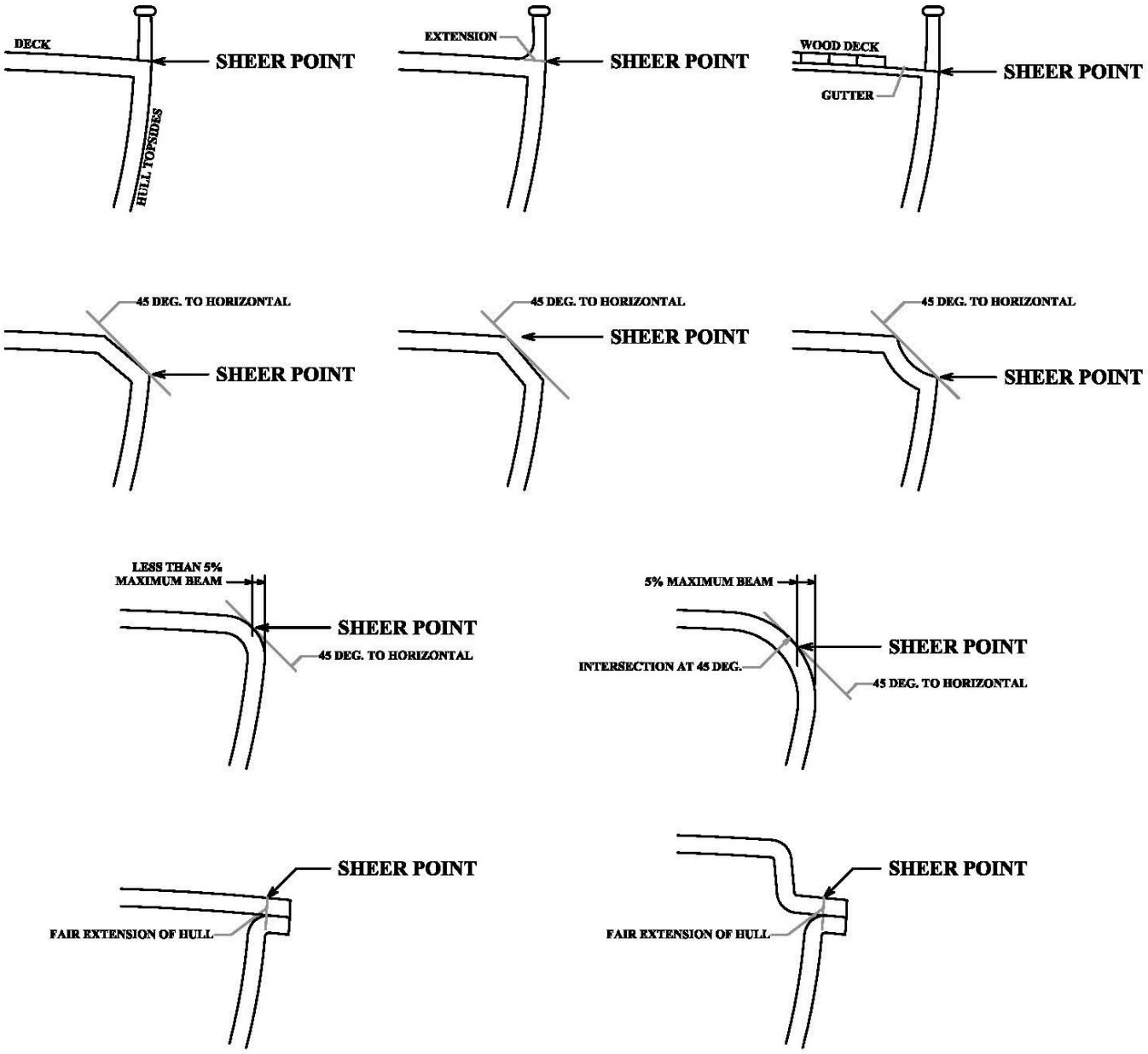
This check list is intended to help the owner prepare the yacht for measurement. Each item checked will be initialed by the owner and Measurer. The completed document will be returned to the Rating Office for retention. The yacht shall be completed and equipped for sailing. There shall be no sails aboard at the time of the check below deck.

		Initials Owner	Measurer
1.	All sails removed from the yacht.	_____	_____
2.	Ballast sealed to hull structure and anchors, chain and batteries fixed in clearly marked stowage.	_____	_____
3.	Heads, bowls, sinks, etc. are dry.	_____	_____
4.	Bilges and other possible areas where water may collect are dry.	_____	_____
5.	Tankage and voids condition checked.	_____	_____
6.	Navigational and cooking equipment stowed as specified.	_____	_____
7.	No clothing, bedding, food or stores on board.	_____	_____
8.	Mattresses, cushions and pillows stowed in normal position (dry)	___	_____
9.	No portable equipment in front of the mast.	_____	_____
10.	Safety gear stowed in normal position, but not forward of the mast.	_____	_____
11.	All stowages opened and checked.	_____	_____
12.	No liferaft or dinghy on board.	_____	_____
13.	Centerboards raised unless to be locked down while racing.	_____	_____
14.	Sheets, guys, etc. on cabin sole abaft the mast according to 502.2.a.2.	_____	_____
15.	Measurement bands PAINTED on spars.	_____	_____
16.	All standing rigging tight.	_____	_____
17.	Running rigging tight. Halyards led to the foot of the mast and tails to their normal operating position.	_____	_____
18.	Running backstays aft and tight, running forestays to the mast.	_____	_____
19.	Masts raked aft to the limit of adjustment, not forward of vertical.	_____	_____
20.	Boom at low point, horizontal, centered and secured against movement.	_____	_____
21.	No spinnaker pole(s) aboard while measuring freeboards.	_____	_____

Signed ---------- (Owner) ---------- (Measurer)

Dated: ----------

APPENDIX 3 -- Various Sheer Points



APPENDIX 4 -- RULES AND PROCEDURES FOR RACE ADMINISTRATION

Unless otherwise prescribed by the Sailing Instructions, the following shall apply to races conducted under the ORR.

1. Pre-race Inspection or Measurement.

When, as a result of any pre-race inspection or measurement, it is determined that a yacht does not conform to its ORR certificate:

a) When the nonconformance is considered to be minor and can be easily corrected, the yacht may be brought into conformance with her certificate, or, when necessary, a new certificate may be issued.

The measurer appointed for the series shall report all such corrections to the protest committee.

b) When the protest committee considers that the nonconformance is major (even if it can be corrected) or that it cannot be corrected without requiring significant remeasurement, they shall act in accordance with RRS.

2. During a Race or Series.

When, as a result of an inspection, measurement, or protest during a race or series, it is determined that a yacht does not conform to its certificate, the facts shall be referred to the protest committee which shall act in accordance with the RRS.

a) When the nonconformance is considered to be minor (whether or not the yacht is issued with a new certificate), the original certificate shall be considered valid throughout the race or series.

b) When the nonconformance is not considered to be minor the yacht shall receive a 50% place penalty in any race in which her rating was incorrect.

c) When a yacht's Certificate is withdrawn by a Rating Authority the matter shall be referred to the protest committee which shall act in accordance with the RRS and may disqualify the yacht from all races in the series or take such other action as it deems proper.

d) The results of a race or series shall not be affected by measurement protests lodged after the prize-giving or such other time as the Sailing Instructions shall prescribe. Nothing in this paragraph shall bar action under the RRS concerning a yacht deliberately altered.

3. General.

a) When a yacht is checked at an event or as a result of a protest, the measurement shall be checked using the rule as it was in effect at the time of measurement upon which the certificate is based (see 6.03 for hull re-measurement).

b) The Rating Authority in whose waters the yacht is racing would normally be the "authority qualified" referred to in the RRS to resolve questions involving ORR certificates. A protest committee considering a protest involving an ORR certificate may submit questions to the Rating Authority which shall provide all reasonable advice and assistance to resolve the protest. The measurements resulting from a protest re-measurement shall be used to issue any new Certificate.

4. Investigation and Reporting of Rating Irregularities.

a) When, as a result of an action in a race or series or the withdrawal of a certificate by a Rating Authority, a yacht is remeasured and her resulting General Purpose Handicap (GPH) is faster by 0.75% or more, the yacht's National Authority shall investigate the circumstances and report its findings to the ORA which may take such further action as it deems proper.

b) Race and protest committees are asked to report all actions arising under 1(b), 2(b) and 2(c) above to the ORC Chief Measurer. Such reports may be made through the National Authority of the organizing authority.

5. Other Actions.

This Appendix only concerns actions with respect to yachts. It does not limit in any way the rights and responsibilities of race and protest committees and of National Authorities to investigate or act with respect to individuals.

APPENDIX 5 -- ADMINISTRATIVE RATING PROTESTS

1. The Offshore Racing Association shall be the Rating Authority referred to in the ISAF Rules to resolve questions involving ORR Certificates. A protest committee considering a protest involving an ORR certificate may submit questions to that Rating Authority which shall provide all reasonable advice and assistance to resolve the protest.

2. Administrative Protests.

   a) The administrative protest procedure permits protests involving a yacht's certificate without regard to whether the yacht was racing. An administrative protest shall be lodged with the Rating Authority in whose water the yacht is lying.

   b) Any person or organization which has a valid interest in a yacht's certificate may lodge an administrative protest, provided that:

      - The protest is in writing and is signed and dated by the protestor;
      - The protest includes a detailed description of the alleged defects and a full statement identifying the protestor as having a valid interest;
      - The protest is accompanied by a copy of the certificate of the yacht being protested and the address and telephone number of the protested yacht's owner;
      - The protest includes a statement of the issues the protestor wishes to have resolved, identification of the applicable rules and any relevant evidence.

   c) The owner of the protested yacht shall file a reply with the Rating Authority as soon as possible. If he elects to concede the protest or refuses to cooperate in providing for re-measurement when required, the Rating Authority shall invalidate the yacht's certificate and so advise all concerned, including the local organization within whose jurisdiction the yacht normally races.

   d) The Rating Authority may consult or refer the matter to the ORR Chief Measurer for advice and assistance. It shall make its decision based on the available evidence and may order re-measurement of the yacht in whole or in part (see 6.03 for hull re-measurement).

   e) The decision of the Rating Authority shall determine any measurement and processing costs of deciding the protest and determine which party will pay, as follows:

      - When the correct General Purpose Handicap (GPH) of the protested yacht is faster than the protested GPH by not more than 0.25%, the protestor will be responsible for the measurement and processing costs. The filing fee will not be counted toward payment of costs.
      - When the correct GPH is faster than the protested GPH by more than 0.25%, the measurement and processing costs will be borne (or shared) by the owner or the yacht's Revalidating Authority depending upon the determination of responsibility for the defect. The filing fee will be returned to the protestor.

3. Redress from Actions of the Rating Authority.

   a) When an owner believes that his yacht's certificate is being withheld unreasonably or that any related actions of the Rating Authority are unreasonable, he may seek redress by following the applicable procedures set out in 2. Administrative Protests above, stating the relevant facts and the relief or redress requested.

   b) The Rating Authority concerned shall appoint a committee to investigate, hear, and decide on the request following the procedures of the ISAF Racing Rules. In the event that there is reasonable doubt as to the interpretation or application of the ORR, the ORA Chief Measurer shall be the "authority qualified" to resolve such questions.

APPENDIX 6 -- DYNAMIC & AGE ALLOWANCES

1. Dynamic Allowance (DA)

Dynamic Allowance is an adjustment which may be applied to velocity predictions (i.e., time allowances) to account for relative performance degradation in unsteady states (e.g., while tacking) not otherwise accounted for in the VPP performance prediction model. DA is a percentage credit calculated on the basis of design variables deemed to be relevant in assessing the performance degradation and is applied (or not applied) as explained below. Even where applied, the result of the calculated credit may be zero. Examples of design variables considered appear below.

Where applied, the calculated amount of credit will vary with point of sail and wind velocity and course type. These credits are therefore applied individually to the various time allowances available within the ORR. The single value for DA which is actually displayed on the certificate is that which was applied to GPH and is shown only to give a comparative reference to the average DA applied for the yacht.

DA percentage credits are always fully applied to the time allowances. For other yachts, no DA is applied for the first three years of age (as defined in 2 below). Thereafter, DA is applied incrementally with only 20% of the full calculated DA being applied in the forth year and a further 20% in each of the following years until full DA is applied in the eighth year.

Typical design parameters for ORR Dynamic Allowance:

- Length: Effective sailing length
- Draft: Effective keel draft
- SAup: Upwind sail area
- SAdn: Downwind sail area
- VOL: Volume of displacement (weight of boat divided by density of water)
- WA: Wetted area of hull (including appendages)
- Draft: Effective keel draft

Typical non-dimensional design factors for ORR Dynamic Allowance:

- SAup / (VOL)^(2/3)
- SAup / WA
- SAdn / (VOL)^(2/3)
- SAdn / WA
- Length / (VOL)^1/3
- Draft / Length

2. Age Allowance (AA)

Independent of DA, an Age Allowance of 0.05% increase in time allowance is applied for a one-year old yacht. From the second year to a maximum of 20 years, the Age Allowance is calculated as:

AA = 0.00017*Age^3-0.011*Age^2+0.25*Age-0.35

The age used for Age Allowance is the earlier of Age Date or Series Date (see 1.05.1 & 1.05.2). The reference year is the current rule year. This allowance is applied to all yachts.

APPENDIX 7 -- WATER BALLAST & SPECIAL APPENDAGES

A yacht holding a valid certificate under this Appendix shall be deemed not to contravene ORR 4.04, Shifting of Ballast (nor RRS 51) with regard to the features rated hereunder.

Stability:

Rating Certificates for canting keel and water-ballasted yachts display both the Stability Index and also a Ballast-Leeward Recovery Index (BLR Index). The BLR Index is related to a yacht's estimated ability to recover from a knockdown to windward where the moveable ballast is on the leeward side. Recommended BLR Index minimum limits and the formula for calculation of the BLR Index is given in ORR 2.02.2, General Limits and Exclusions, Stability.

The stability criteria for moveable ballast yachts (water ballast or canting keel) have been set to achieve similar levels of capsize resistance and recovery as conventional yachts. However the defining feature of moveable ballast yachts is that, with the ballast deployed, they have an angle of list, i.e. a static heel angle that is not upright. Consequently the energy required to heel the yacht to 90 degrees (i.e., spreaders in the water) is greater when heeling with the ballast to windward (normal sailing) than it is with the ballast to leeward (caught aback). When available, it is planned to display on the certificate of each moveable ballast yacht three values that define this situation for that specific yacht and provide a means of comparison with conventionally ballasted yachts of similar size.

1) the area under the righting moment curve to 90 degrees of heel with ballast to windward.

2) the area under the righting moment curve to 90 degrees of heel with ballast to leeward.

3) an average area under the righting moment curve of a selection of conventionally ballasted ORR yachts of a similar sailing length.

These values are not directly entered into the Stability Index or BLRI Index, but do offer an indication of the relative ease with which the vessel may be heeled to 90 degrees, both under normal sailing conditions and when "caught aback". Owners and crew should be aware of the different characteristics of moveable ballast yachts when the ballast is to windward as well as to leeward.

Measurement:

Where the following provisions for water-ballasted yachts and special appendages are in conflict with ORR Part 2, General Limits and Exclusions, the provisions below shall take precedence. There is currently no provision for rating a yacht with both water ballast and a canting keel.

1. Water Ballasted Yachts

a) Water ballast tanks shall be symmetrical about the yacht's centerline and no provision for trimming the yacht fore and aft is permitted.

b) For measurement afloat (see 5.02), the yacht shall first be measured with ballast tanks empty and the full set of flotation and inclining measurements recorded as for conventional yachts.

c) The ballast tank(s) on the starboard side of the yacht shall then be filled, pressed up and the resulting angle of list recorded.

d) The port ballast tank(s) shall then also be filled, pressed up and a full in-water measurement performed as in 1(b) above, except with all ballast tanks full. The full set of in-water measurements shall be recorded as was done for the tanks-empty measurement, except that the corresponding datafield names include the suffix "W".

e) The starboard ballast tank(s) shall then be emptied and the resulting list angle recorded. The port and starboard list angles shall be reported to the Rating Office and where these are not approximately equal, the yacht may be deemed not to comply with the provision above for symmetric ballast tankage. The average of the port and starboard list angles shall be recorded as **LIST** to the nearest tenth of a degree.

f) The ORR time allowance for each true wind angle and true wind velocity will be given as the faster of a comparison between calculated performance with ballast tankage on only the windward side of the yacht full and that with both tanks empty in the respective sailing condition.

2. Canting Keel Yachts

a) A canting keel may pivot laterally only about a longitudinal axis aligned with the centerline of the yacht and no other movement is permitted. The maximum cant angles, port and starboard respectively, shall be symmetric.

b) For measurement afloat (see 5.02), the yacht shall first be measured with the keel on centerline and the full set of flotation and inclining measurements recorded as for conventional yachts.

c) The keel shall then be canted fully to starboard. The resulting list angle shall be recorded and the angle of the keel relative to the yacht's centerplane also recorded. These measurements shall be repeated and recorded with the keel canted fully to port.

d) The port and starboard list angles shall be reported to the Rating Office and where these are not approximately equal, the yacht may be deemed not to comply with the provision above for symmetric cant angles. The average of the port and starboard list angles shall be recorded as LIST to the nearest tenth of a degree. The average of the port and starboard cant angles shall be recorded as CANT to the nearest tenth of a degree.

e) The ORR time allowance for each true wind angle and true wind velocity will be given as the faster of a comparison between calculated performance with the keel fully canted to the windward side of the yacht and that with the keel centered in the respective sailing condition.

3. Bilge Boards

Bilge boards with motion only up and down in a straight line are permitted, subject to the restriction of angular motion as provided also for centerboards under 2.03.7.2. The location and vertical extension of bilge boards shall be taken as part of the machine hull measurement procedure (see Part VI) and their draft determined from the Hull Offset File (see 6.02) at various angles of heel.

4. Trim Tabs

A movable trim tab is permitted. The fitting of such a trim tab shall be recorded. The effect on performance of a moveable trim tab will be calculated to reflect a reduction in leeway angle.