Highlander Specifications

The intent of this section is to clarify and add to what is shown in the official plans. In case of conflict between these specifications and the official plans, these specifications shall govern. It is impossible to foresee every conceivable innovation which may be thought of in the future or mention every suggestion that has been ruled illegal in the past. When in doubt, it must be assumed that anything in connection with the boat, sails and rigging which is not clearly covered by the official plans and specifications or published "Measurer's Rulings" is illegal and that a ruling must be obtained from the Chief Measurer before attempting such an innovation. All such decisions shall be made with the best interests of the class in mind, rather than any technical misconstruction of drawing or text.

The Association reserves the right to declare ineligible any boat which does not conform to the spirit as well as the letter of all rules and specifications.

1. The hull and spars must be constructed by a manufacturer licensed by the HCIA and shall comply with all of the certified measurements indicated in these specifications.
2. The boat number shall be cut into the keelson aft of the centerboard trunk in digits at least two inches high.
3. Minimum all up weight of the Highlander shall be 830 pounds. All up boat includes only hull, flotation, centerboard, rudder, tiller, mast, boom, main sheet, fixed hardware and standing rigging. Boats which weigh less than the minimum must be brought up to minimum by permanently attaching one-half of the increase forward of Station 6 and one-half of the increase aft of Station 14. Any other method of adding boat weight must be submitted to the Chief Measurer for approval in advance. Whatever, the method used, the weight shall be distributed over the hull and not placed in a single location.
4. The hull of a Highlander may be constructed of either a composite materials or wood and shall include sufficient flotation to support boat and crew when capsized.
5. ***Spars*:**
    a. Mast shall be as shown in official drawings. It shall not weigh less than forty pounds, completely rigged with all halyards, stays and winches. If weight must be added to the mast to bring it to the minimum, this weight must be added so as not to lower the center of gravity of the mast without the added weight. Minimum cross section of the mast shall not be less than 4 9/16 inches by 2 13/16 inches at any point between the bottom of the sail groove and the main halyard sheave.
    b. Boom shall be as in official drawings (Figure 4).
    c. The maximum length of the spinnaker pole, including fittings, shall be 84 inches. Only one spinnaker pole may be carried on board. Pole may be used as whisker pole on jib when spinnaker is not set.
6. The standing rigging shall conform to the official drawing without variation and shall not be adjusted in any way while racing. No change in the places of entry of the side shrouds into the deck, as called for in the official plans, shall be made.

7. ***Running Rigging*:**
   a. No locking device aloft for halyards is permitted. Halyards must be secured in the bottom three feet of the mast or within the hull. Weight of sails must be carried on halyards while sails are set.
   b. A separate spinnaker halyard shall be used, located either inside or external to the mast. It shall be located as shown on the drawings (Figure 4). The center of attachment of an external halyard must not exceed the maximum dimension and also must lie within the angle formed by the leading edge of the mast and a line that intersects the point of maximum allowable height and the bow at Station 0, excluding hardware.
8. ***Centerboard*:**
   a. Centerboard material is optional.
   b. Cocking or jibing centerboards are disallowed.
   c. Maximum weight 88 pounds, minimum weight 60 pounds.
   d. Side profile shall conform to the official plans.
   e. Method of hoist is optional.
   f. Maximum thickness of the portion of the centerboard that is unhoused when in the full-down position shall be 15/16 inch and the minimum thickness shall be 3/4 inch. The point of maximum thickness for each section shall be located at mid-chord $\pm$ 1 inch.
   g. Both the leading and trailing edges must be rounded and not less than 1/8 inch in diameter.
   h. Rollers shall be a minimum of 2 inches in diameter.
9. The centerboard trunk and slot shall be as designed. Centerboard shall be unrestricted in its travel on the trunk, i.e., no notches permitted in the centerboard trunk so as to lower the board in the water.
10. ***Rudder*:**
    a. Rudder material is optional.
    b. Maximum thickness of blade portion extending below the bottom of the transom shall be 15/16 inch.
    c. Kick-up rudders must be pinned in a full-down position in all National or sanctioned regattas.
11. Design of the tiller is optional. Hiking sticks are permitted.
12. A full width mainsheet traveler is permitted, provided it does not extend athwartship beyond the outside of the hull. All travelers must be located within two inches of the aft face of the transom.
13. ***Sails*:**

a. *Measuring Sails:*

i Sails shall be measured only when absolutely dry.

ii All measurements shall be taken to outside of cloth, boltrope and headboard.

iii All measurements shall be made with no tension is applied to the sail, but the cloth shall be smoothed out except that the luff and foot of the main and jib and the sides and foot of the spinnaker shall be measured under a five (5) pound tension.

iv Mid-luff dimension of main and jib is found by folding the head down to the tack and marking the mid-point. The mid-leech likewise, is found by folding the head down to the clew and marking the mid-point. The sail is opened flat and measured to the edges of the sail at the marks.

v The measurement of the spinnaker mid-seam, mid-girth and upper-girth shall be taken when all interior seams are straight and parallel to each other. All three measurements of triangle required to measure each of the two girths shall be taken simultaneously and without regard for position of rest of sail. All measurements shall be taken without intervening opportunity for the stretching or shrinking of any dimension. All measurements shall be made after sail is folded along the vertical middle seam and with the luffs conforming to each other.

b. *Mainsail:*

i Mainsails shall be made from any woven fabric not less than 3.5 oz. per running yard, 28 1/2 inches wide.

ii Distance between seams is optional.

iii There are no minimum measurements. Maximum measurements are as shown on official drawings (Figure 4).

iv Up to four battens as shown on the official drawings (Figure 4) are permitted. The use of a full-length upper batten on mainsails a minimum of three years old is permitted. The location and angle of the full-length batten shall be the same as that of the original batten. The full-length top batten pocket may be installed on the opposite side of the original pocket, but only one batten may be used at any given time. The full-length batten shall be installed in a manner that will not change the curvature of the sail, as manufactured.

v Placement and size of windows are optional providing that the total area not exceed six (6) square feet.

vi Holes for the purpose of reefing may be installed along the luff no higher than 3 feet 6 inches above the boltrope and along the leech no higher than 3 feet 9 inches. The leech hole measurement may vary from the luff hole measurement by no more than +/- 3 inches.

c. *Jib:*

i Jibs shall be made from any woven fabric not less than 3.5 oz. per running yard, 28 1/2 inches wide.

ii Distance between seams is optional.

iii There are no minimum measurements. Maximum measurements are as shown on official drawings (Figure 5).

iv Placement and size of windows are optional providing that the total area not exceed four (4) square feet.

v Up to two battens as shown on the official drawings (Figure 5) are permitted.

vi A clewboard of any material is permitted in the jib, which shall be located as shown on the official drawings (Figure 5).

vii A minimum number of five (5) snaps or hanks equally spaced along 80 percent of the luff must attach the jib to the forestay.

viii Zippers in the luff for the purpose of changing sail shape are not permitted.

ix Jibs which passed around the forestay and attach back of themselves, either by sewing or with a zipper or similar method are not permitted

d. *Spinnaker:*

i Spinnakers shall be made woven material with no restriction on material weight.

ii Distance between seams is optional.

iii Dimensions and tolerances are as shown on the official drawings (Figure 6).

14. Hiking straps are permitted, but must remain at all times inside the cockpit and below the level of the deck as it is measured at the cockpit opening as shown in Figure 2.

15. Holes in the deck through which the spinnaker is raised and lowered are not permitted.

16. ***Certified Hull and Rigging Measurements*:**

The following are the certified hull and rigging measurements. The required dimensions with any tolerances that are applicable are shown on the official drawings in Figures 1 through 4 of these specifications.

a. *Hull Measurements:*

(1) L – Length Overall

(2) F – Forward End Of Cockpit Opening From Station 0

(3) R – Aft End of Cockpit Opening From Station 0

(4) B – Beam at Station 10, Taken to Outside of the Hull at the Sheerline

(5) D – Depth at Station 10, Taken From Sheerline to Bottom of Hull

(6) C – Crown of Deck at Station 6, Taken From Sheerline to Sheerline

(7) Deck Widths, Taken from Outside of Hull to Inboard Deck Edge at:

Forward End of Cockpit Opening

Station 12

Aft End of Cockpit Opening

(8) Seat Location:

Forward End Aft of Station 7

Aft End Forward of Station 17

(9) S – Height of Bow Above Baseline

(10) CB – Station 0 to Forward End of Centerboard Slot at Bottom of Hull

(11) T – Height of Transom at Centerline Excluding Deck Trim

(12) X – Beam of Transom at Sheerline

(13) W – Thickness of Rubbing Strip Taken From Deck

b. *Rudder Measurements:*

i Z – Length of Rudder Blade From Lower Edge of Transom to Extreme Bottom of Rudder, When Rudder Mounted in Normal Position on Boat

ii P – Width of Rudder at One-Half Z

c. *Centerboard Measurements*

(16) A – Length of Leading Edge of Centerboard

(17) Y – Width of Centerboard at One-Half A

(18) Centerboard Thickness at Mid-chord plus or minus 1”

(19) Centerboard Weight

d. *Mast Measurements:*

(20) Height of Main Halyard Sheave Centerline Above Butt of Mast

(21) Height of Spinnaker Halyard Sheave Centerline Above Butt of Mast

(22) Height of Jib Halyard Sheave Centerline Above Butt of Mast

(23) Height of Pivot Gooseneck Above Butt of Mast

e. *Boom Measurements*

(24) Cross Sectional Dimension of Boom:

Width
Depth
Corner Radius

(25) Overall Length of Boom From Bottom of Mast Luff Groove Including Fittings

f. *Foretriangle*

(26) M – Station 0 to Forestay at Deck

(27) J – Foretriangle

g. *Boat Weight*

(28) All Up Hull Weight

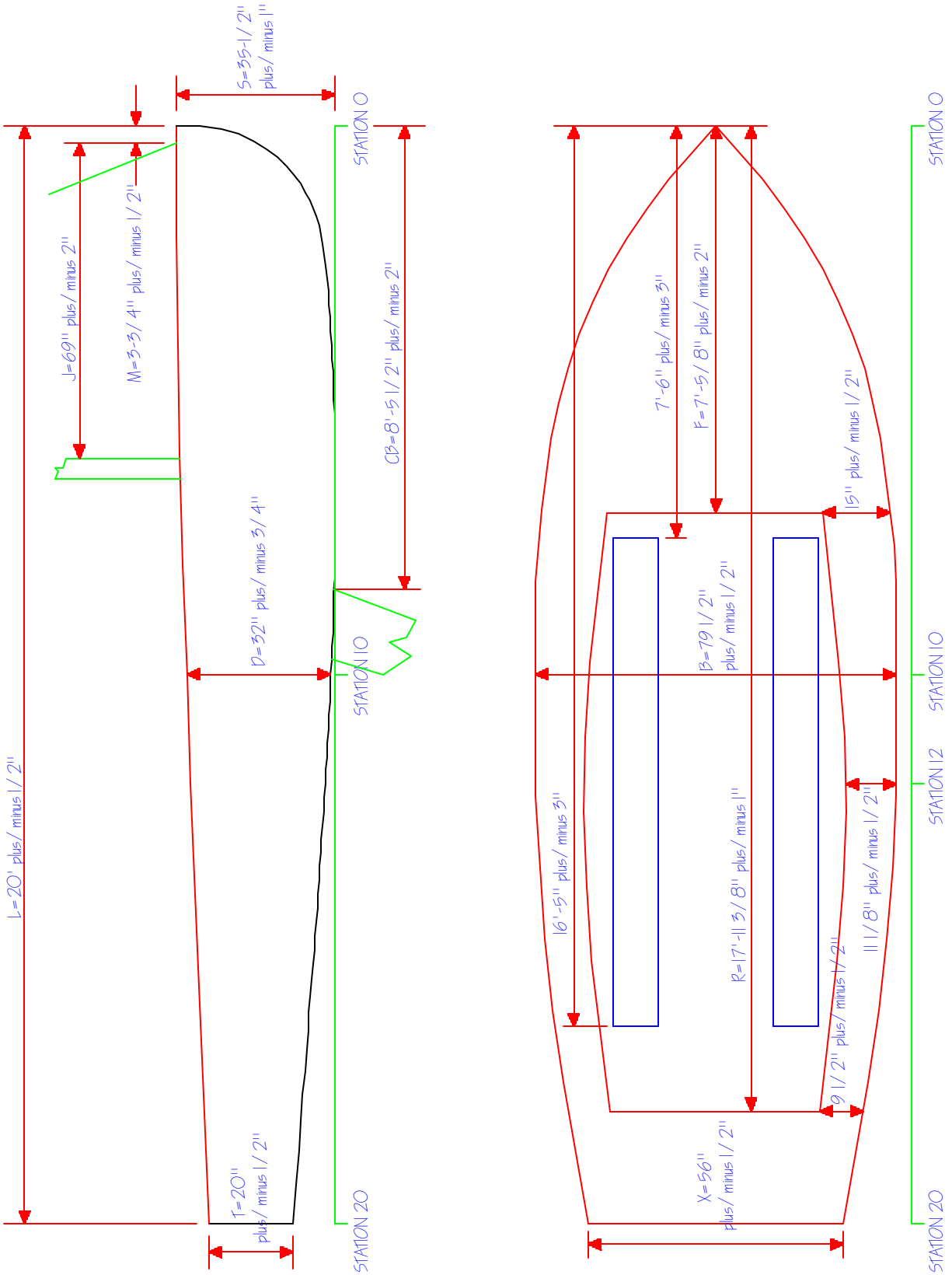
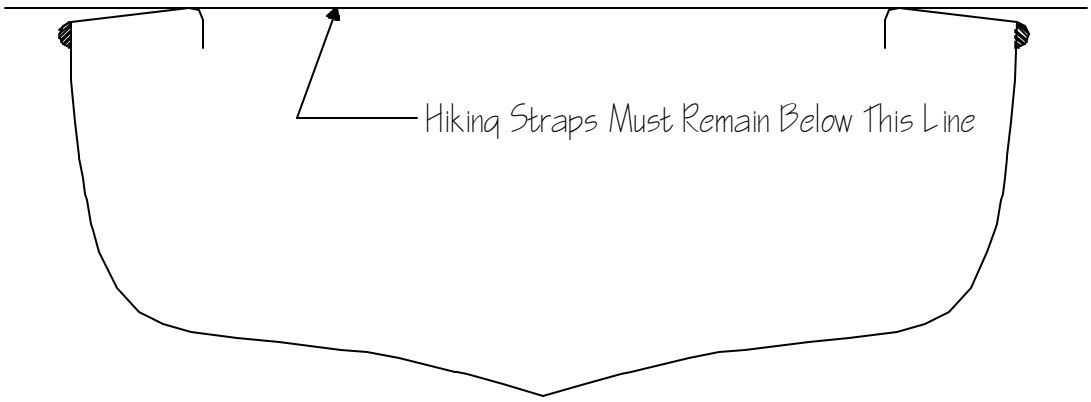
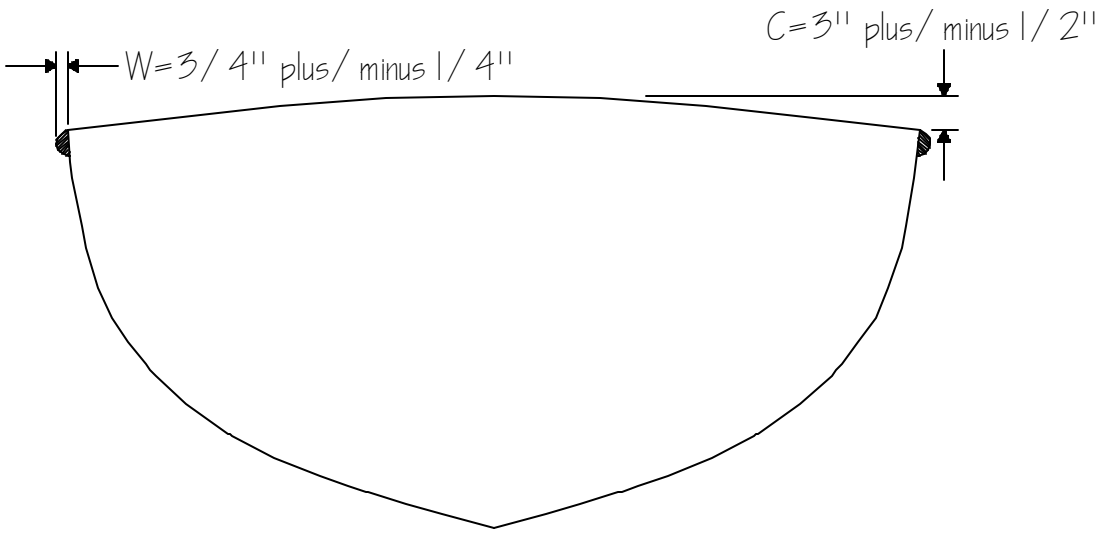


Figure 1. Certified Hull Measurements



Typical Section in Way of Cockpit



Section at Station 6

Notes:

(1) Rubbing Strip Dimension "W" Must Be Met Along Entire Length of Boat.

Figure 2. Certified Hull Measurements

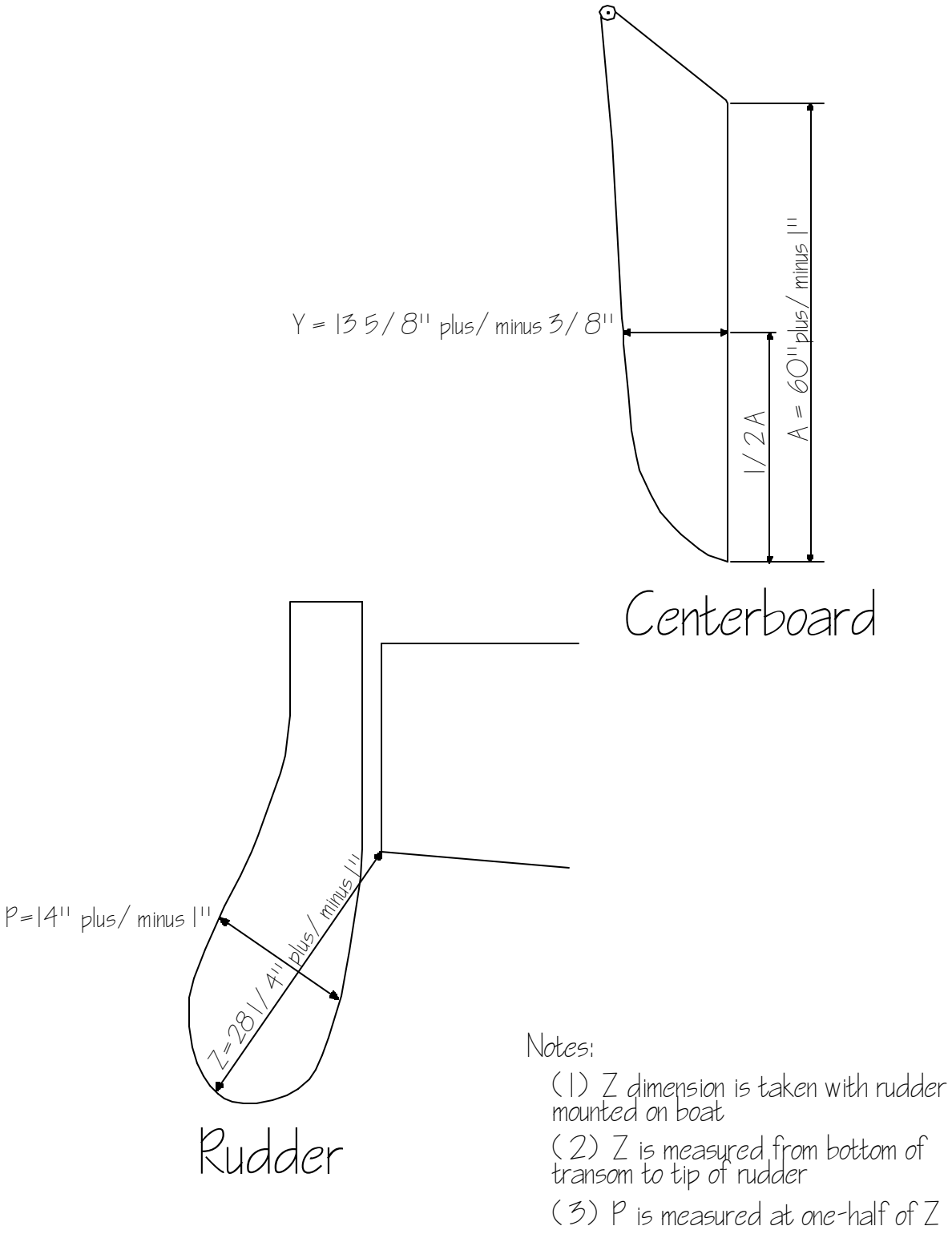


Figure 3. Rudder and Centerboard Certified Measurements

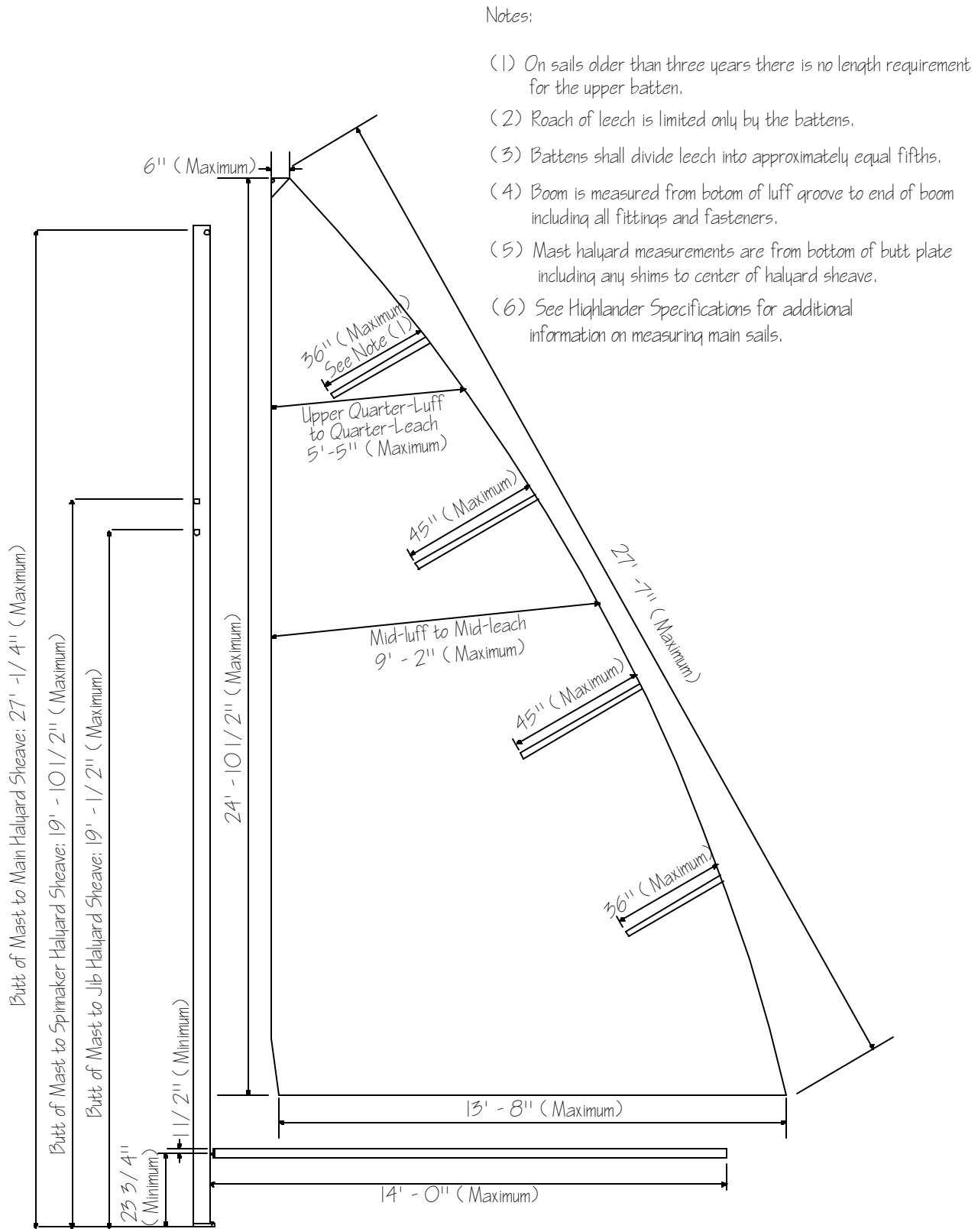


Figure 4. Mast Boom and Mainsail Measurements

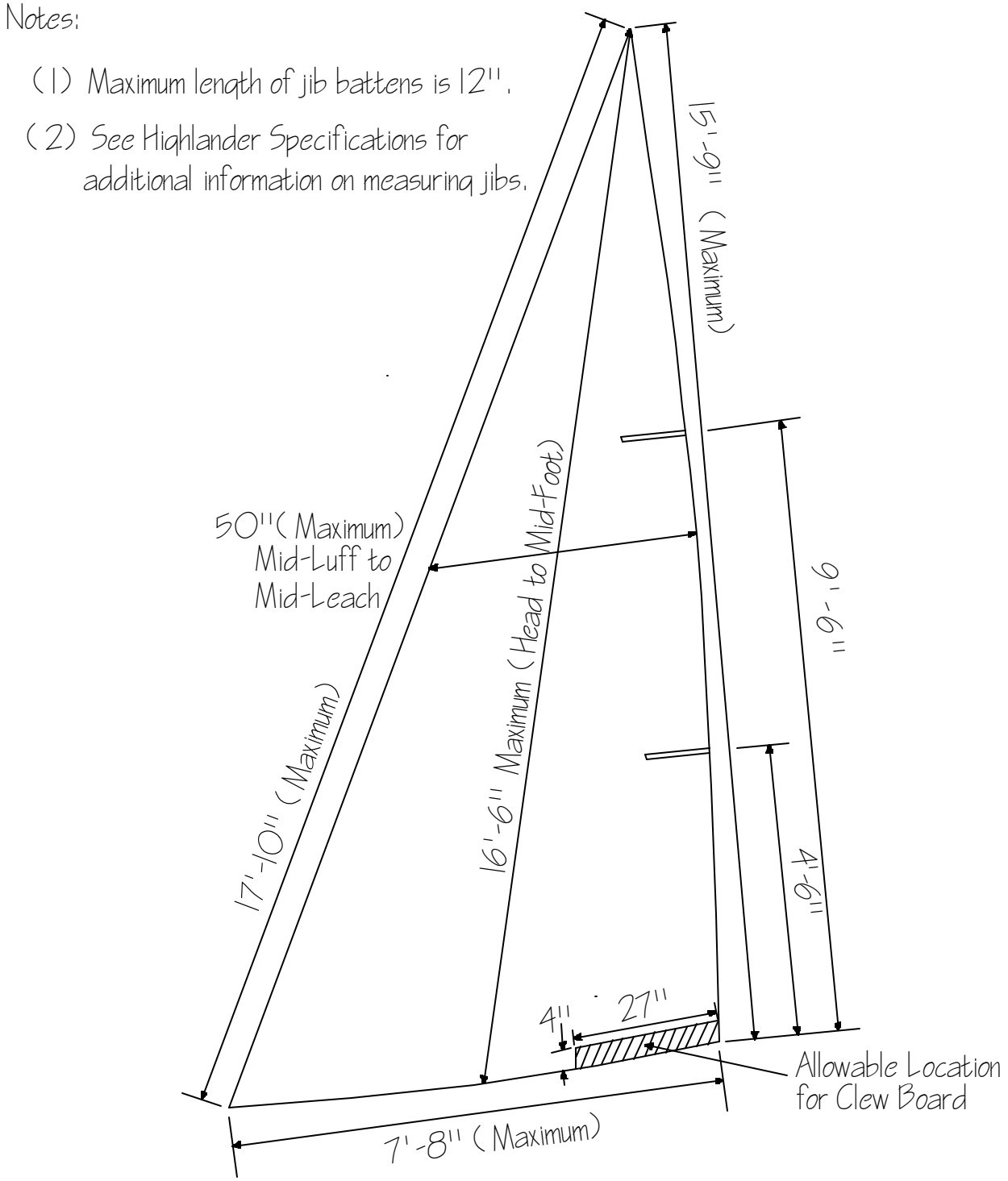


Figure 5. Jib Measurements

Notes:

(1) Spinnaker measurements are for sail folded in half along center seam.

(2) See Highlander Specifications for additional information on measuring spinnakers.

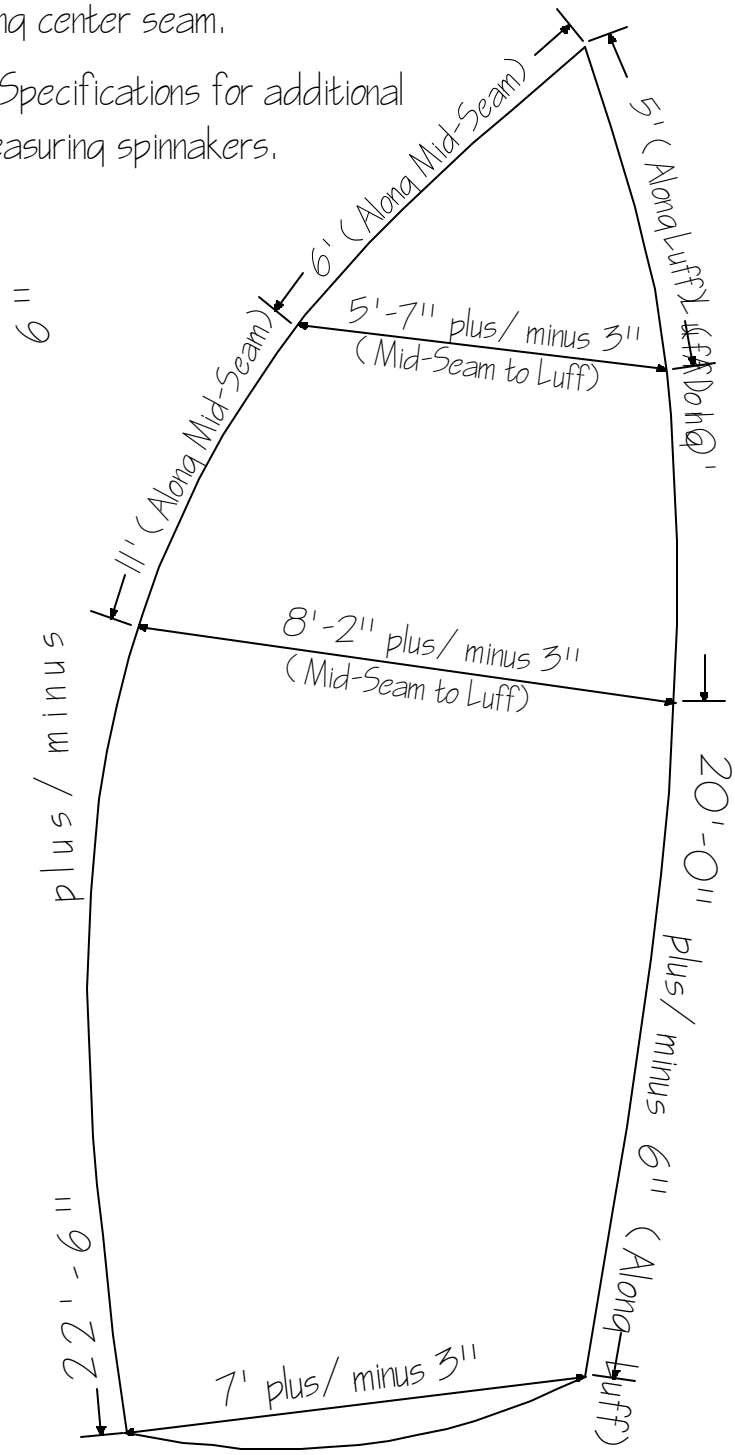


Figure 6. Spinnaker Measurements