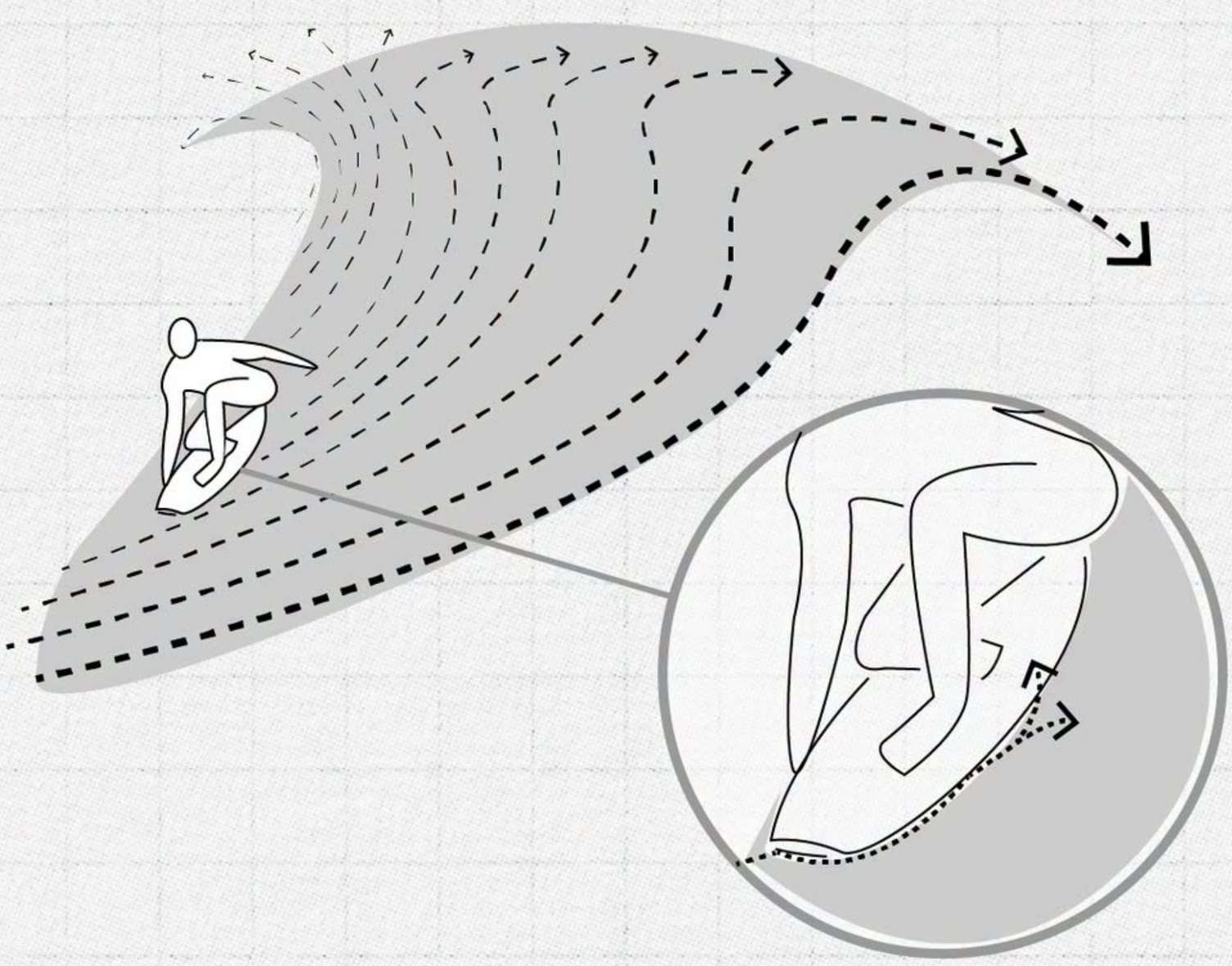
HARD vs SOFT RAILS

A SURF SIMPLY GUIDE

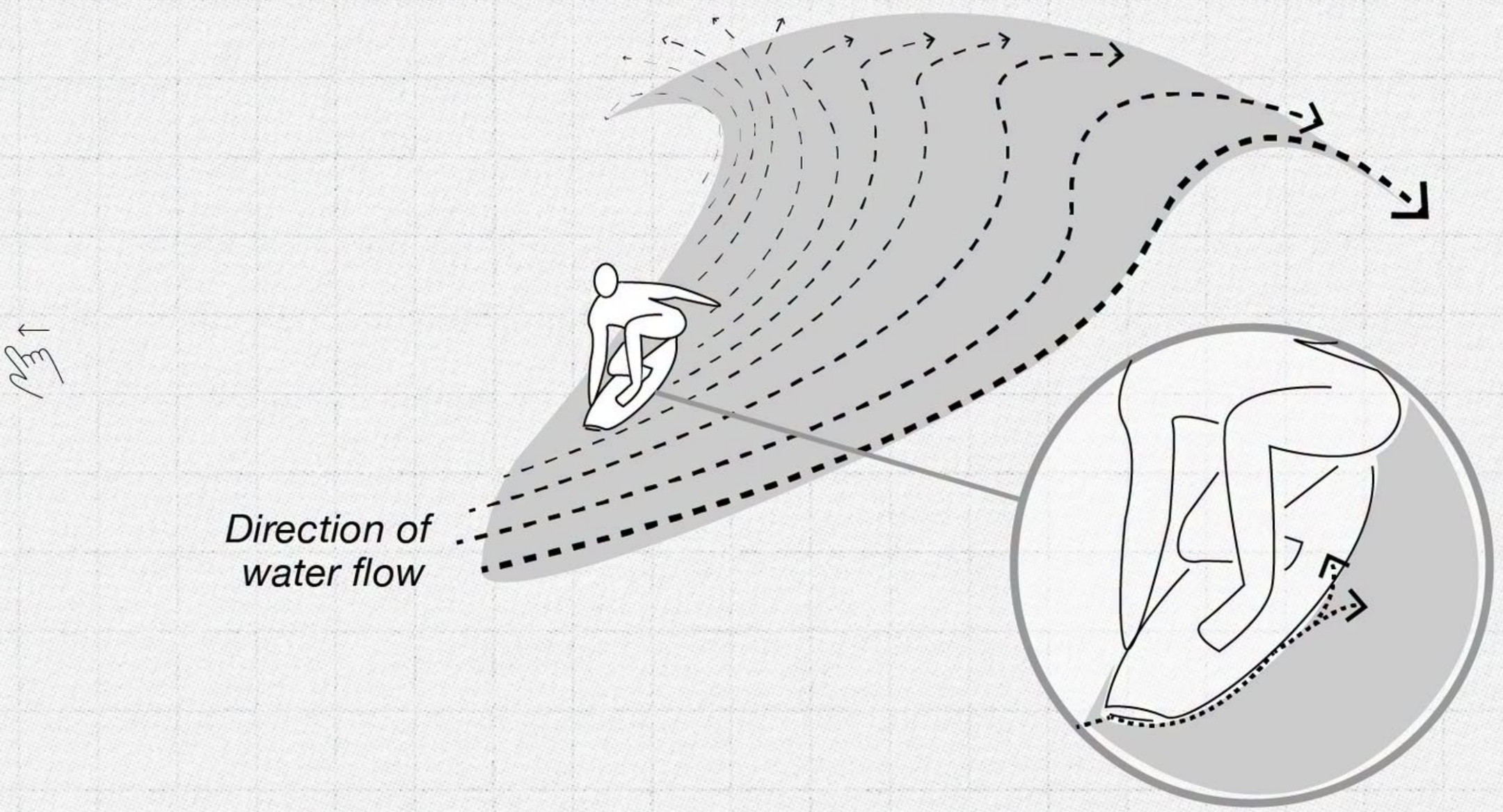


HARD RAIL

SOFT RAIL

FIRST, THE BASICS

As a wave rolls in towards the beach, from the perspective of the surfer it would appear that there is a flow of water running up the wave face toward them.

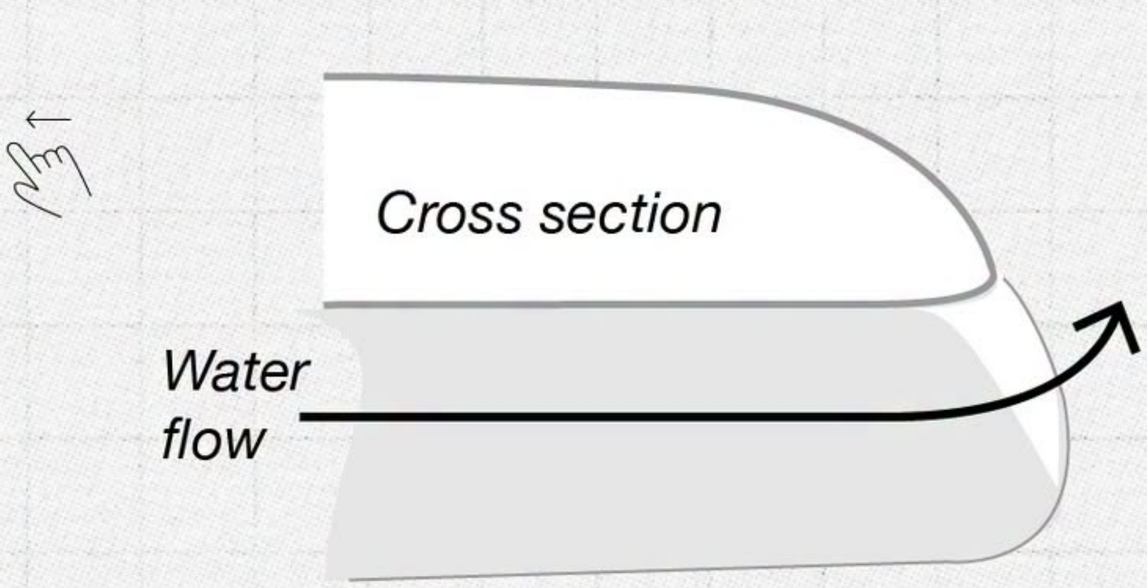


When we sit in trim on the wave face, our inside rail disrupts this flow of water. The shape of the rail then determines how the surfboard interacts with the flow, and where it is directed to.

HARD RAIL

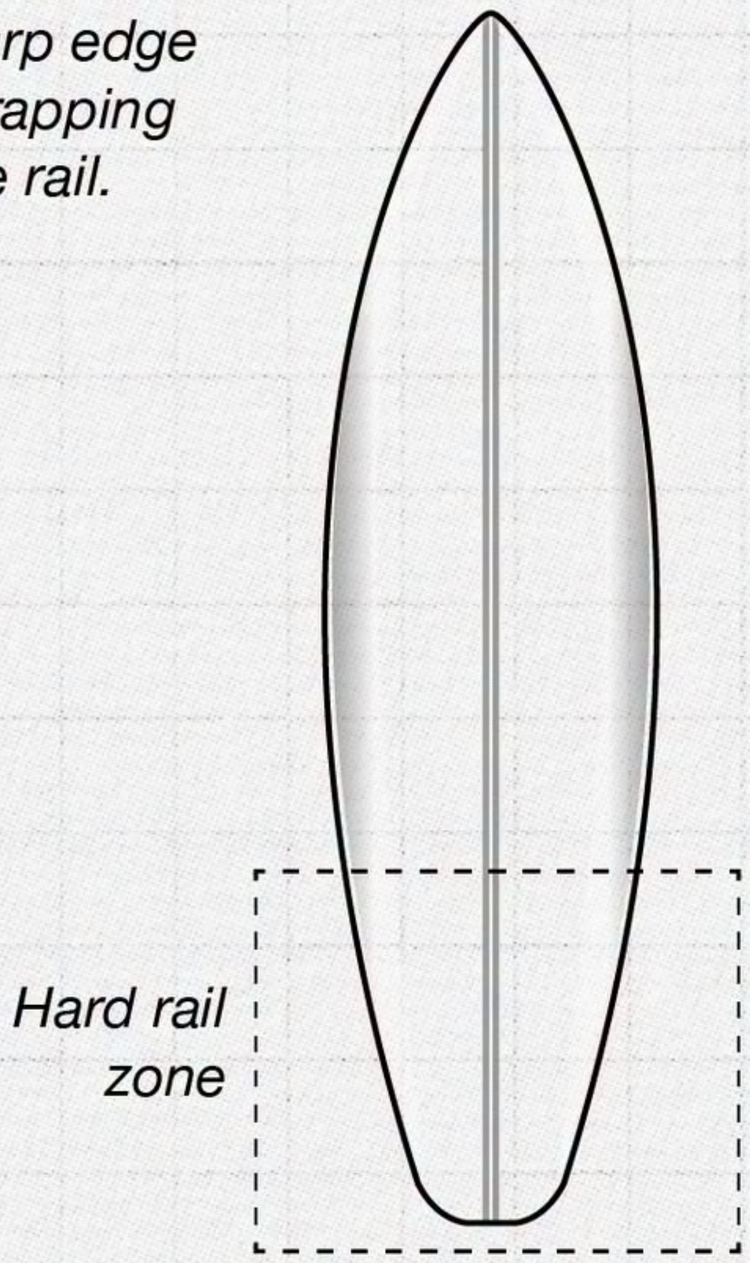
Hard, 90° rails (in the tail) shed water quickly, reducing drag and increasing speed.

This allows for cleaner release and a more responsive feel. The transition from soft to hard rails is a critical part of board design.



Water flow releases off the sharp edge without wrapping around the rail.

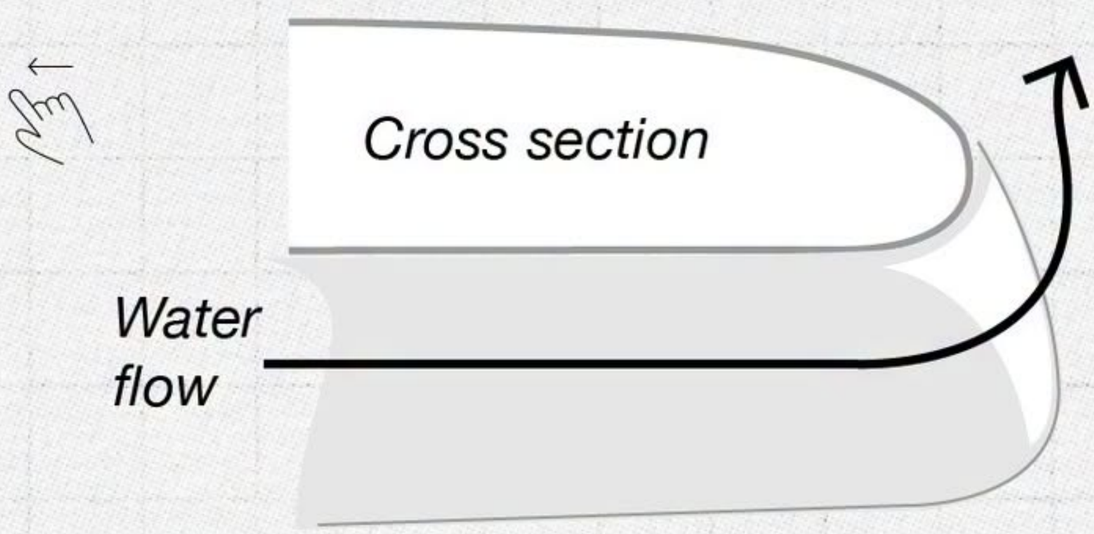
A hard, sharp edged rail is sometimes known as a 70/30 rail, where 70% of the curve is above the apex, and only 30% is below.



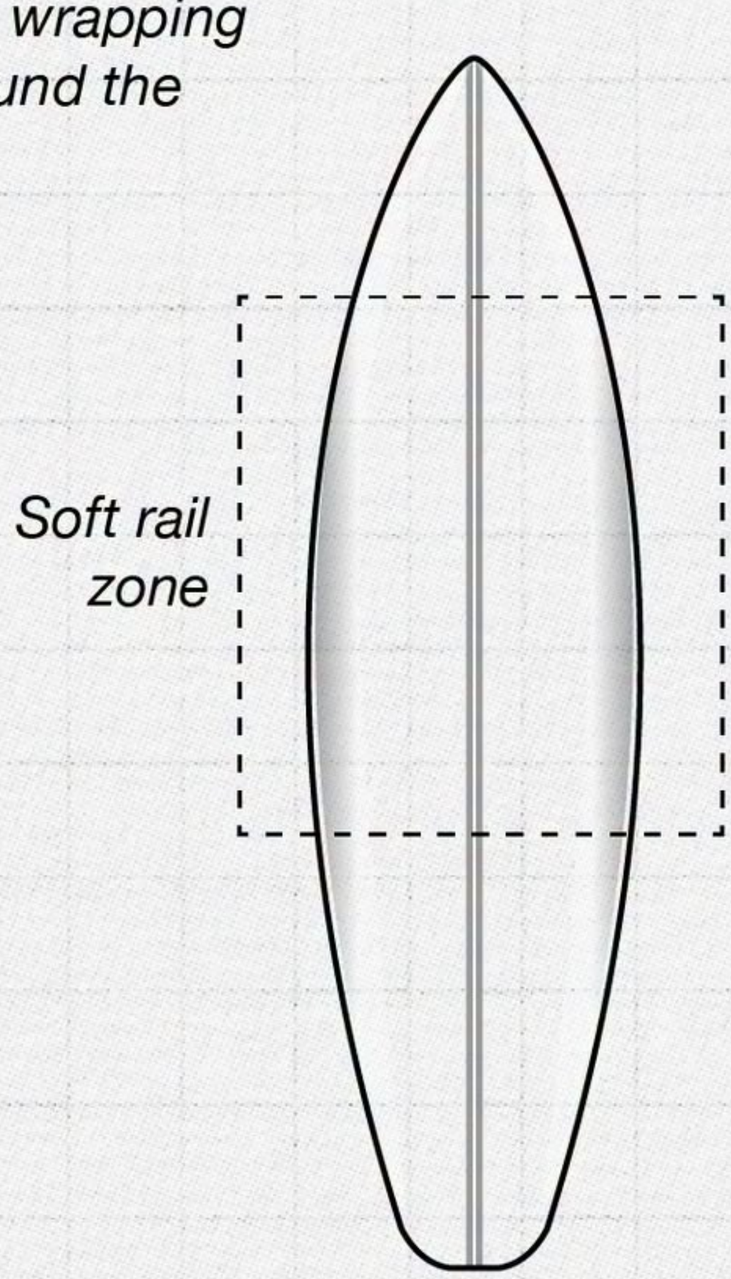
SOFT RAIL

Soft, rounded rails found in the front two-thirds of most boards, guide water to wrap around the rail and grip the wave face.

This creates traction, helping the board stay engaged in the wave face.



Water flow wrapping further around the soft rail



A rounded soft curve sometimes described as a 50/50 rail; as 50% of its curve is above the apex, and 50% of its curve is below the apex.

FINAL THOUGHTS

Where and how quickly this transition happens will influence how the board balances traction vs. speed.

The next time you're surfing, take a look at your board's rails.

Understanding their design can help you make more informed choices about the right board for the conditions and your style of surfing.

