The lateral parts or alae of the sacrum are formed by the embryonic transverse processes, pedicles and embryonic costal elements fused with the vertebral bodies. The alae are wider superiorly and narrower inferiorly. Superior and posterior to these areas, the bone is rough and pitted for the attachment of the powerful interosseous sacro-iliac ligaments. Below the auricular surfaces, the alae taper and curve medially towards the fifth sacral segment.

The pelvic surfaces give attachment to the piriformis muscles.