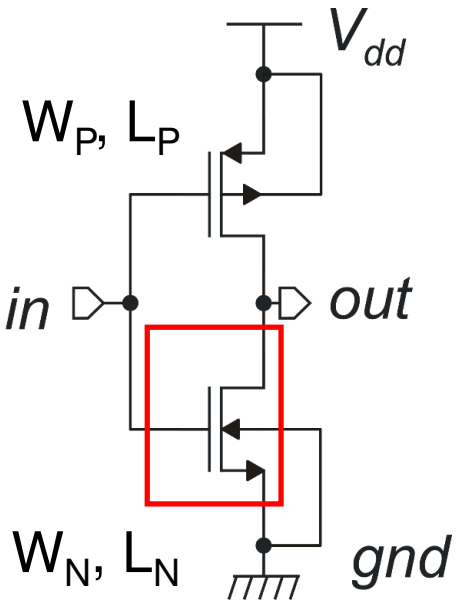
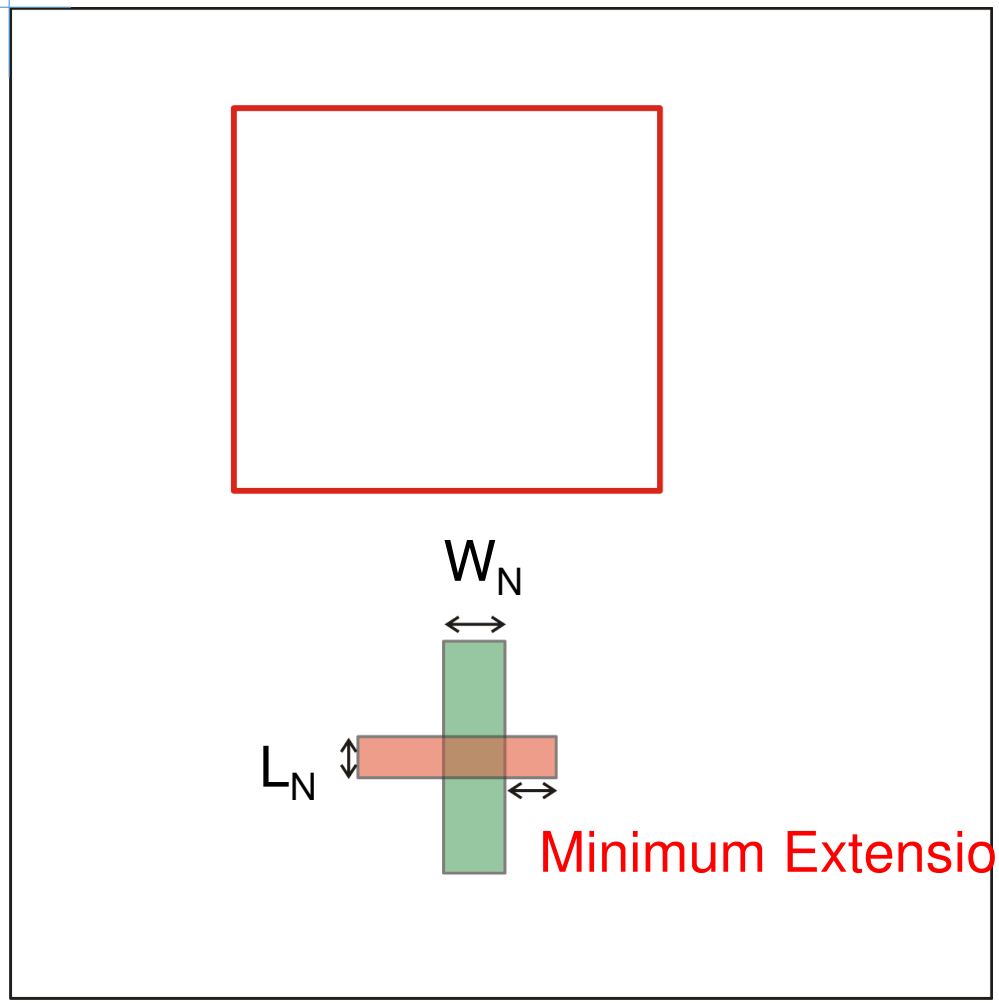
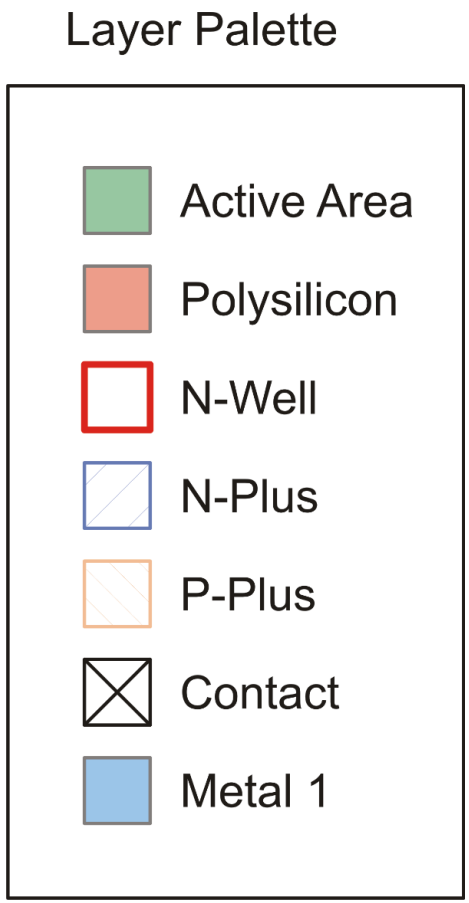
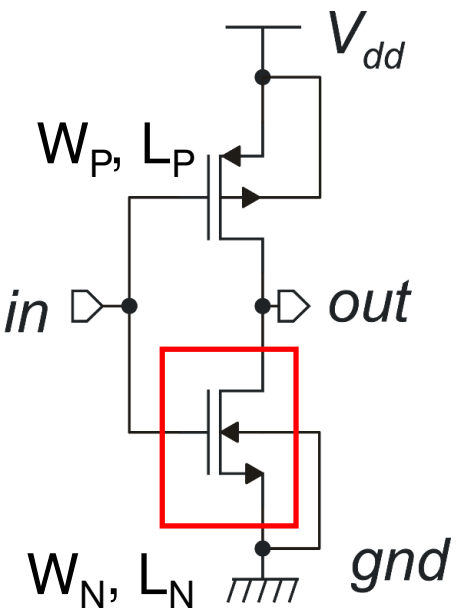
Example: CMOS Inverter

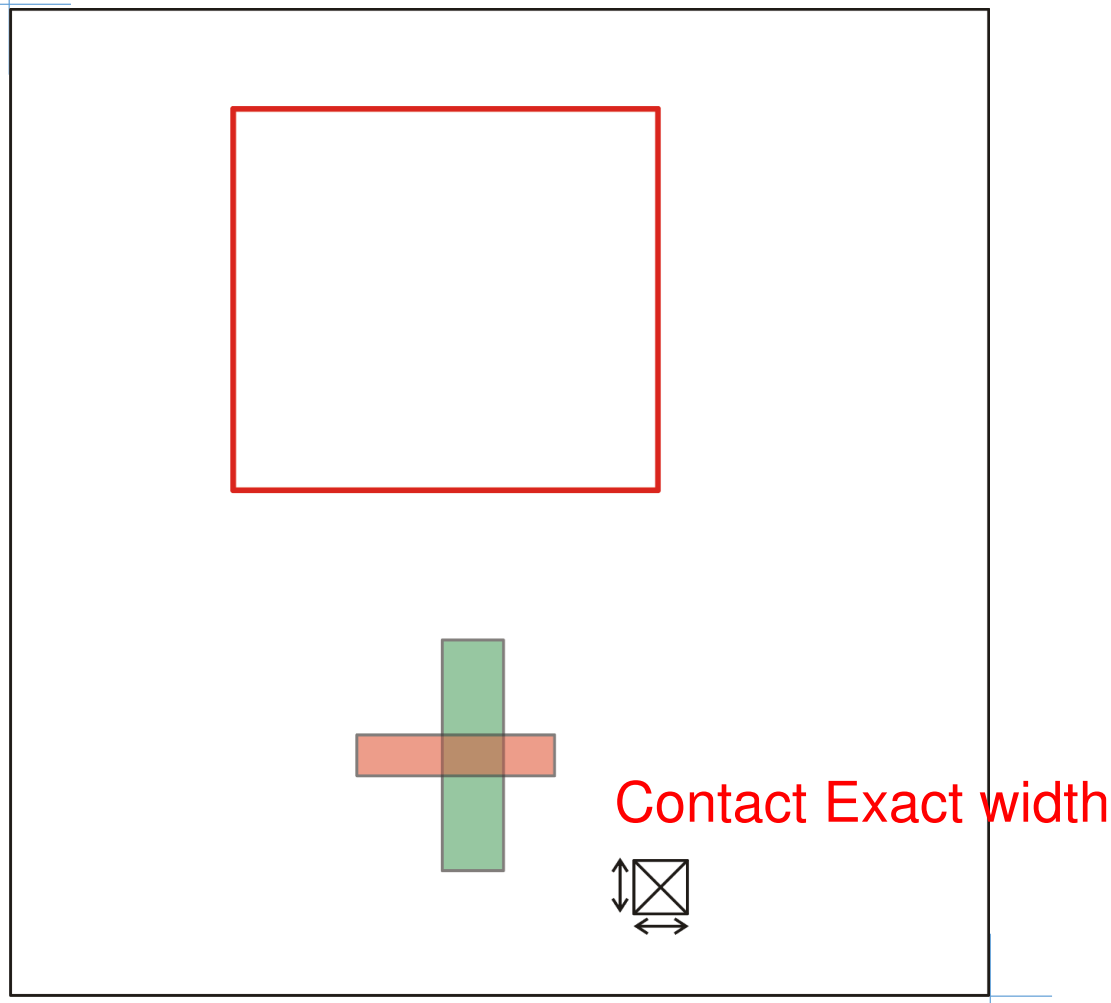




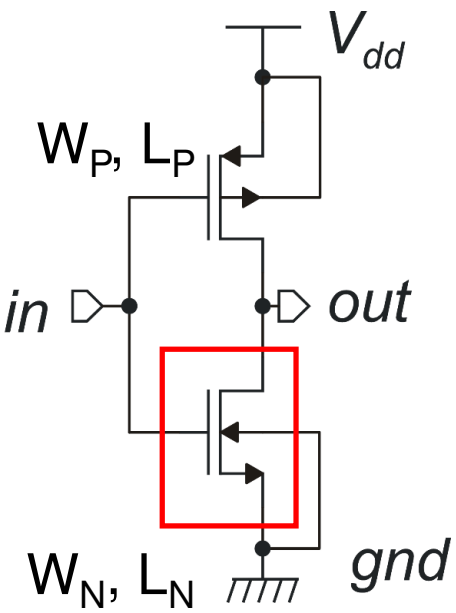


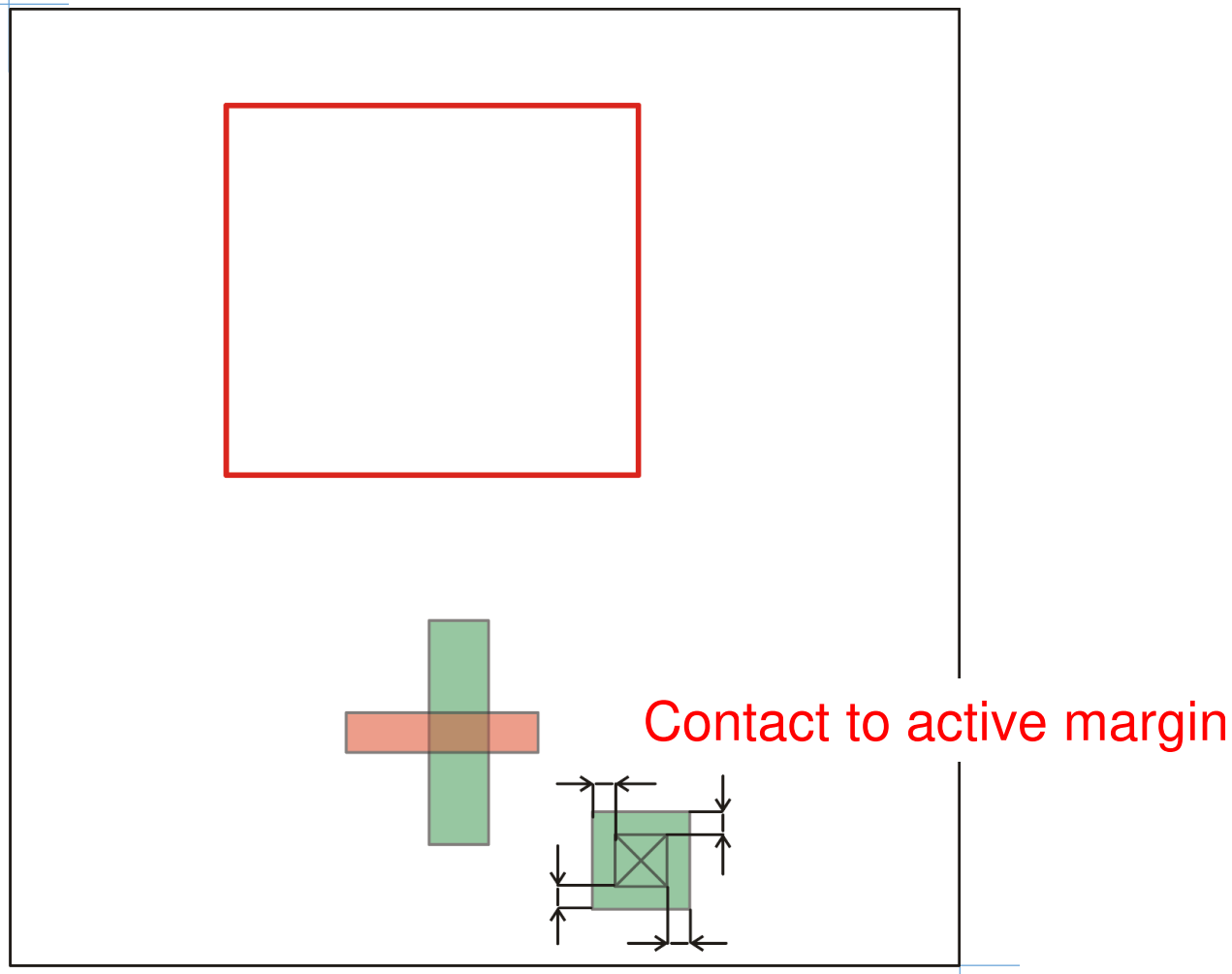
Let's introduce a contact



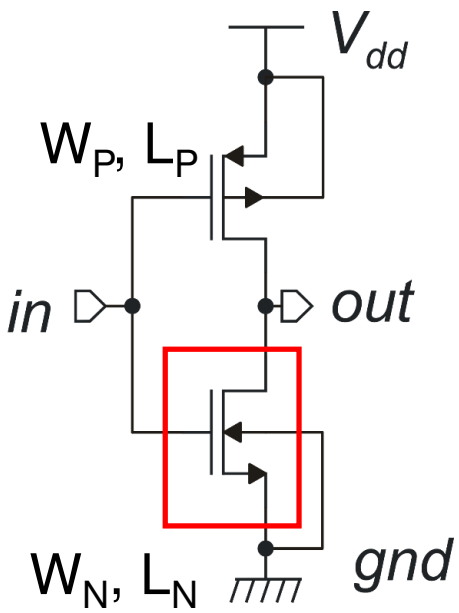


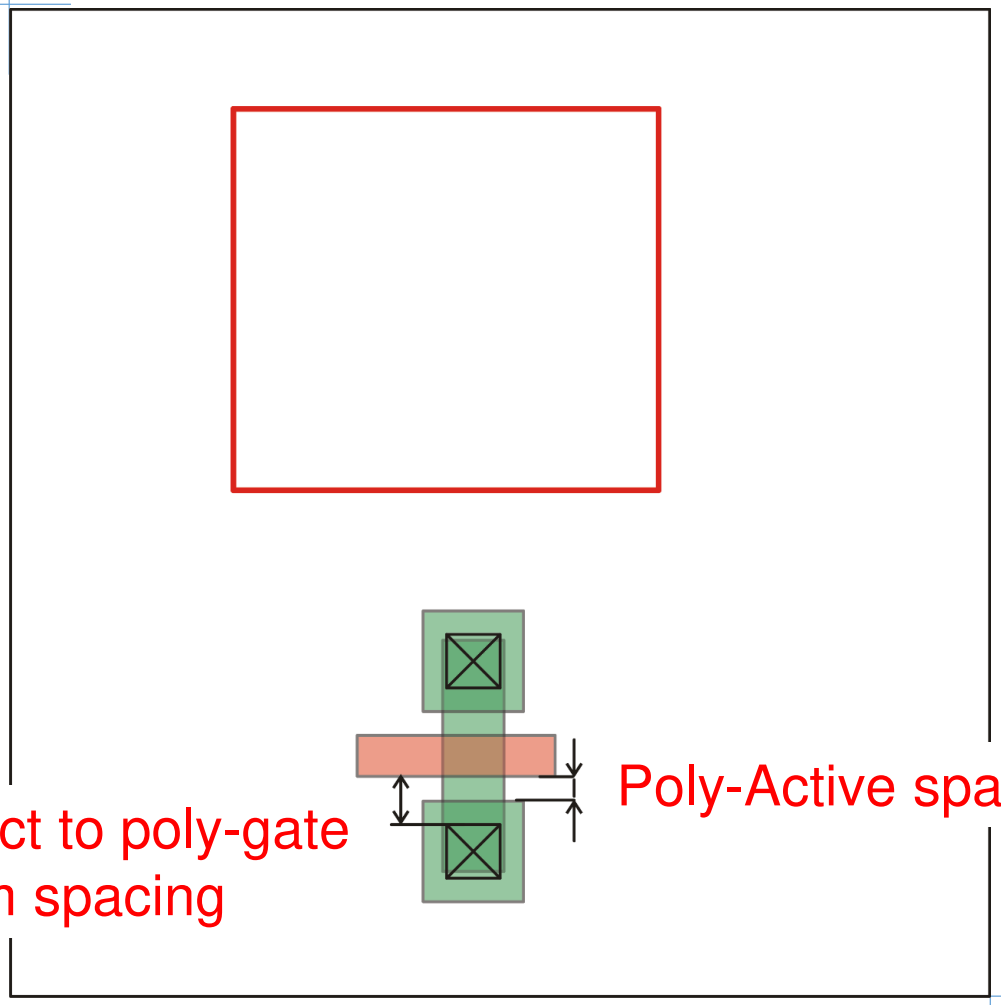
Then, we provide enough active surround to the contact





Then, we provide enough active surround to the contact

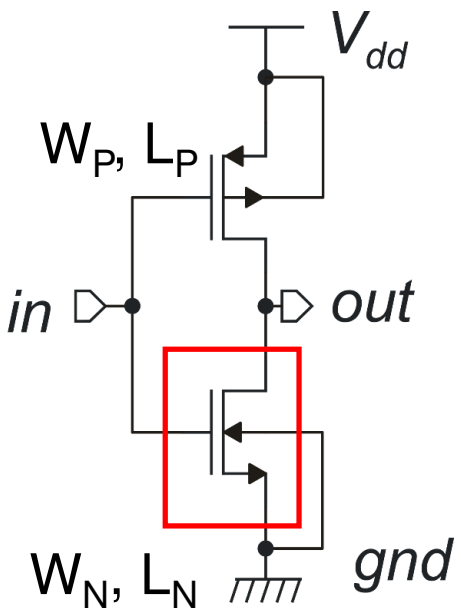


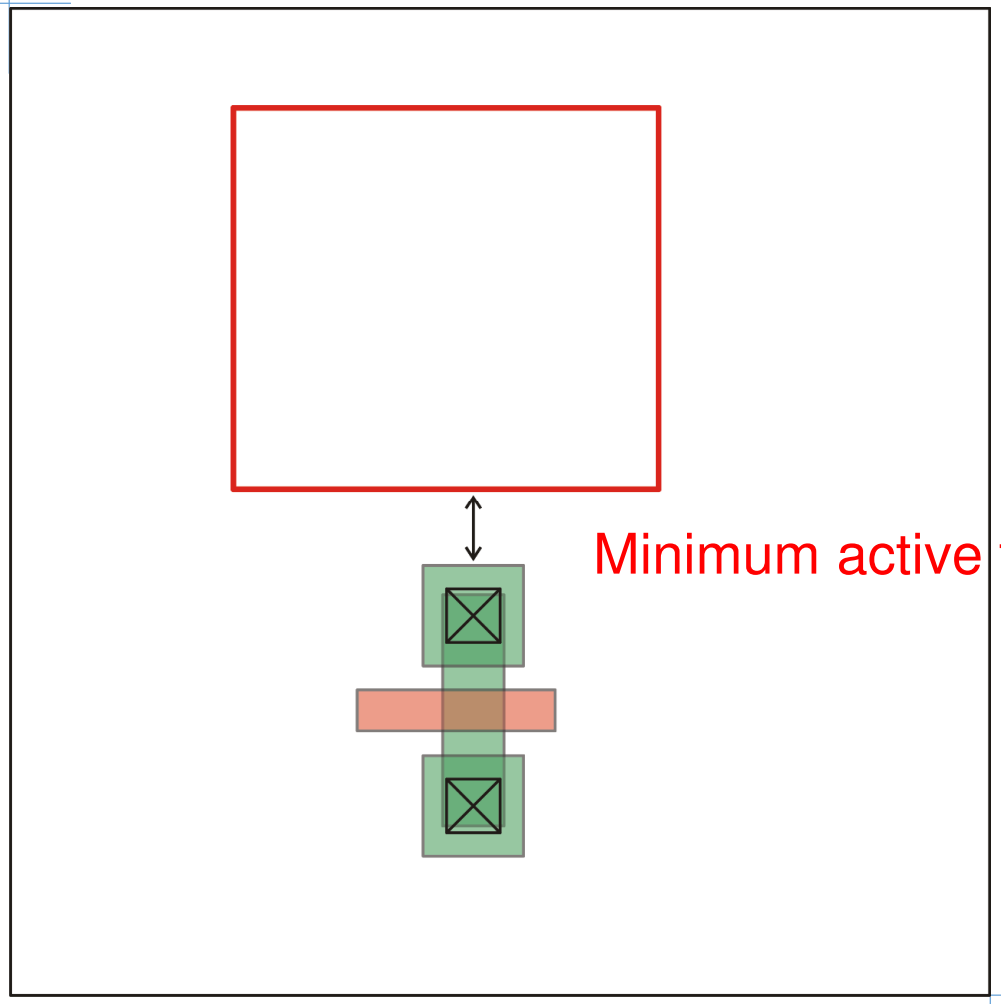


Contact to poly-gate minum spacing

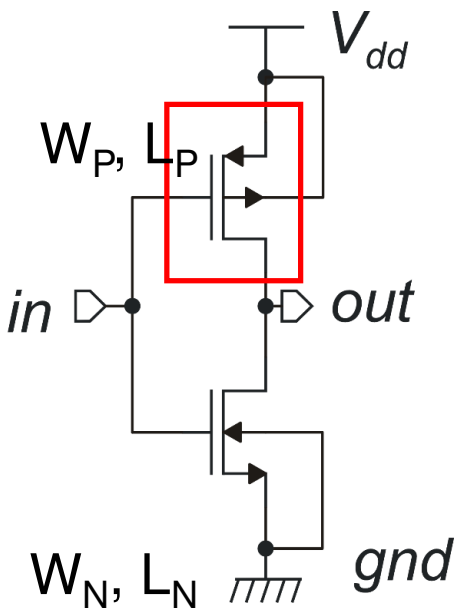
Poly-Active spacing

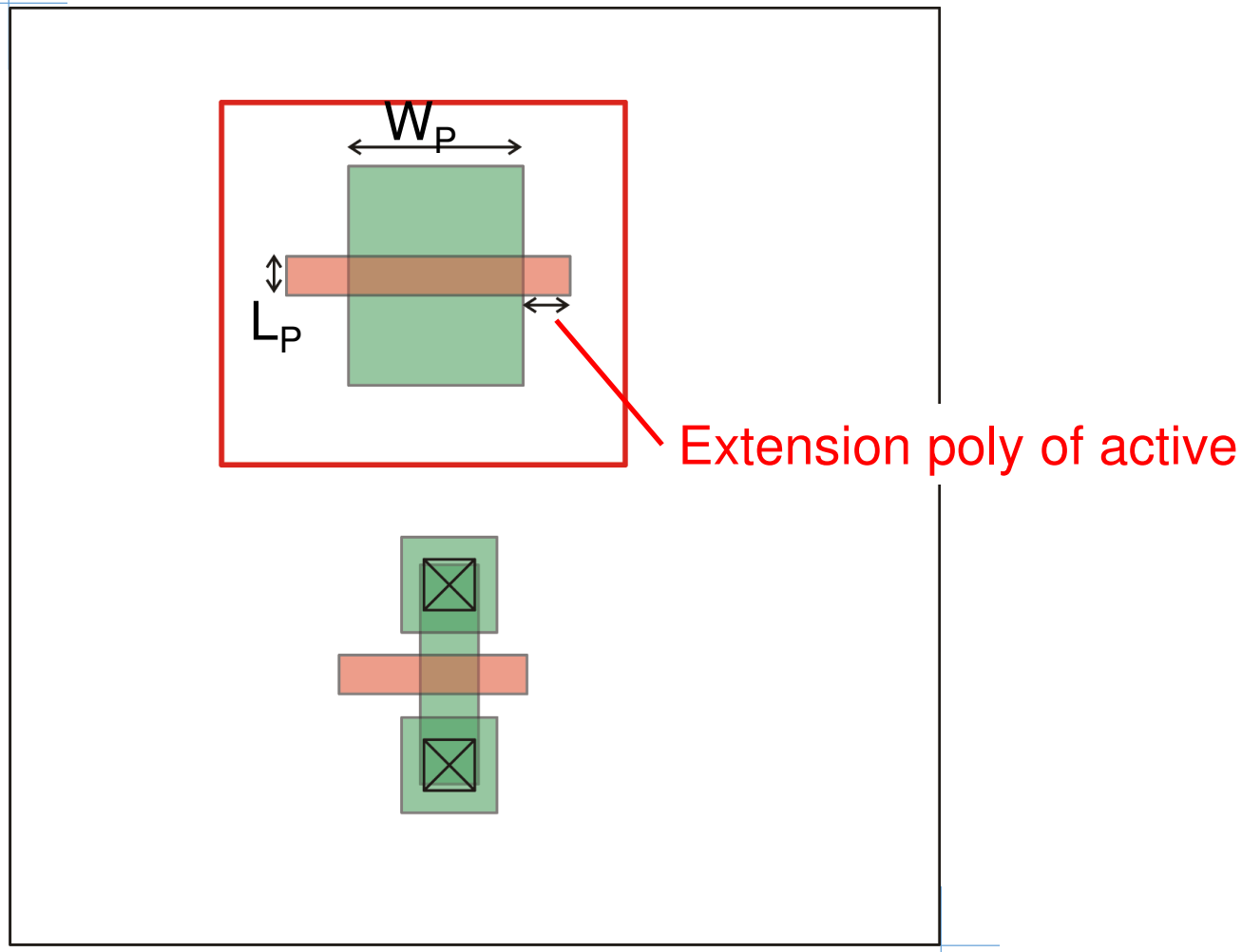
Place the n-MOS as close as possible to the n-well



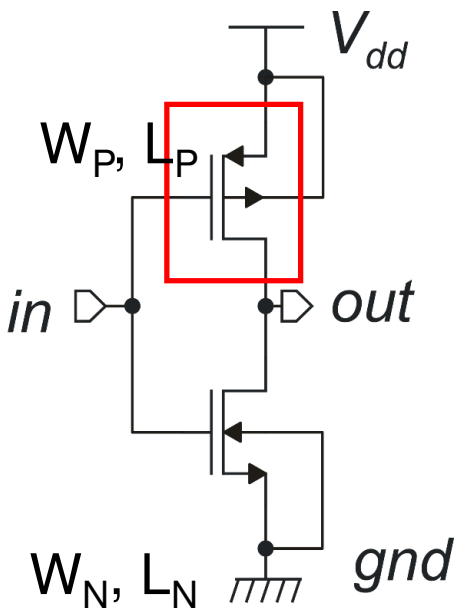


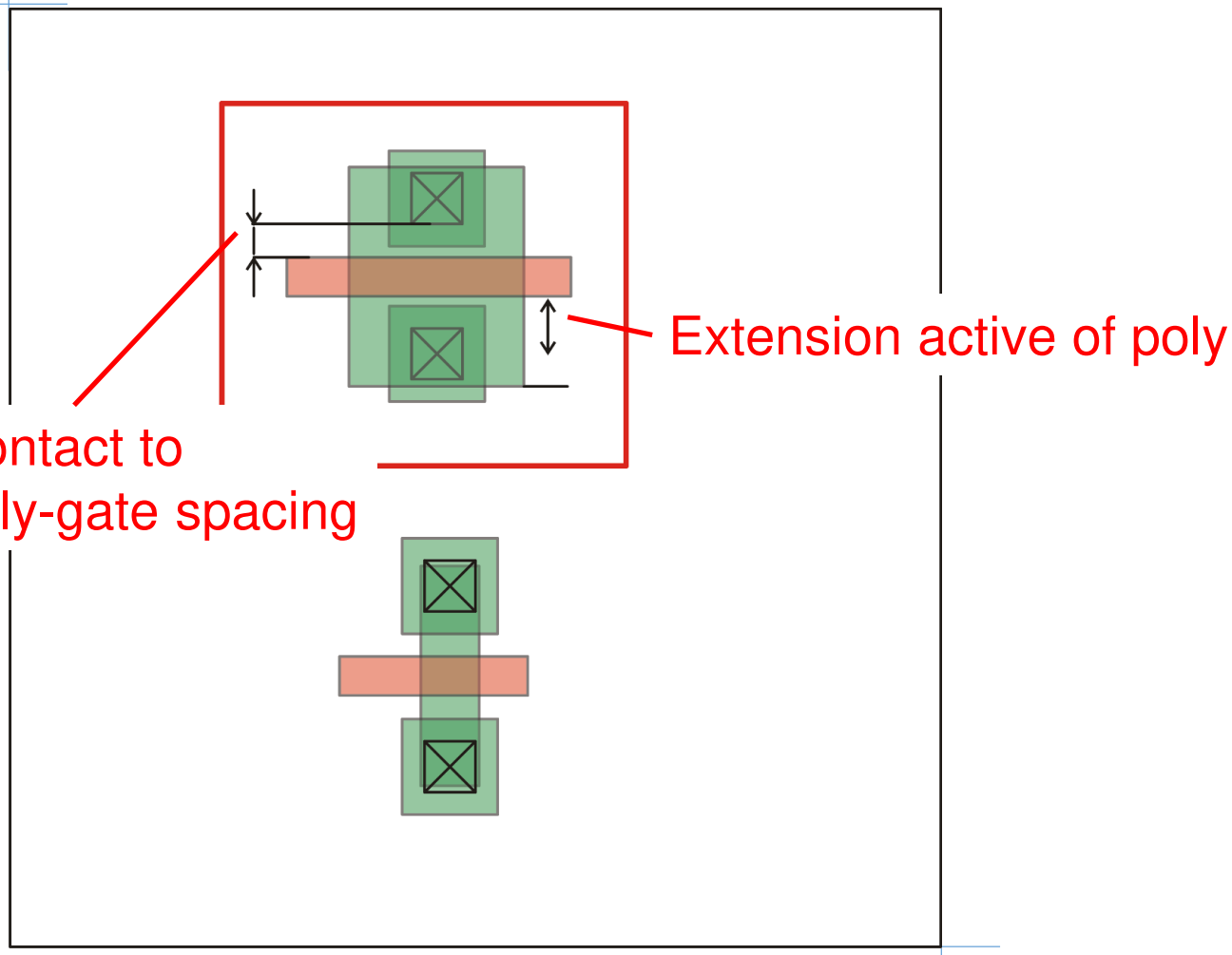
Now draw the p-MOS inside the n-well



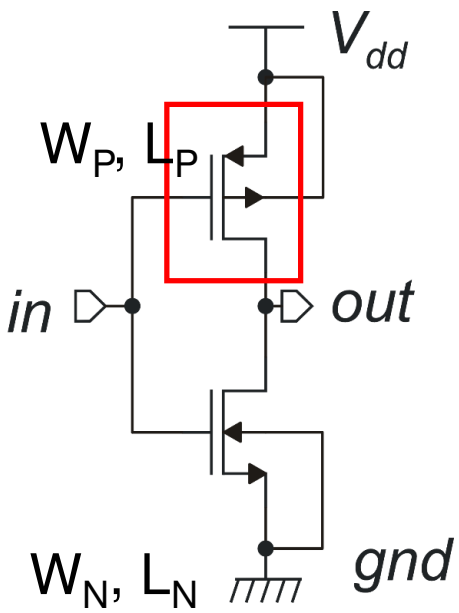


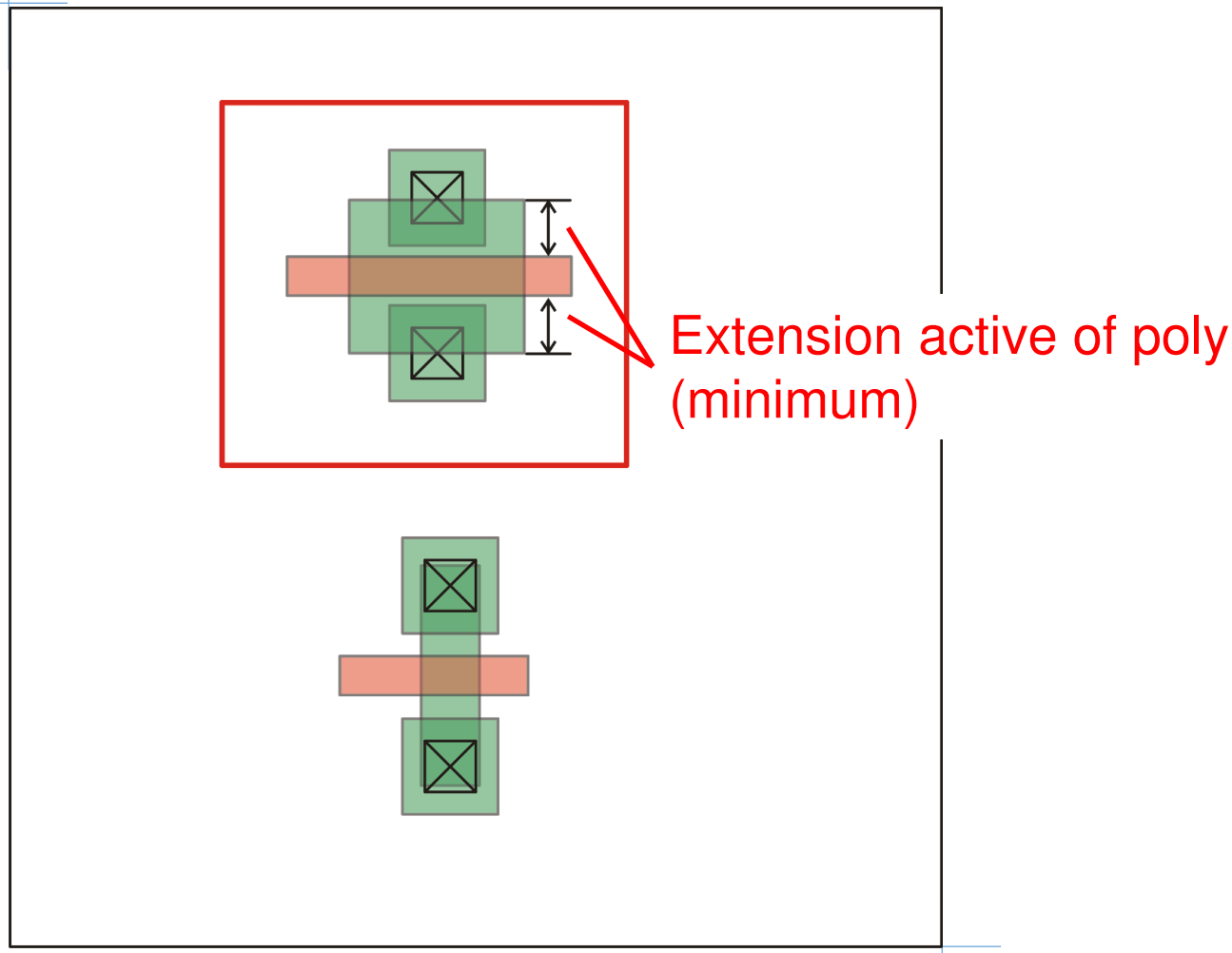
Place the source/drain contact of the



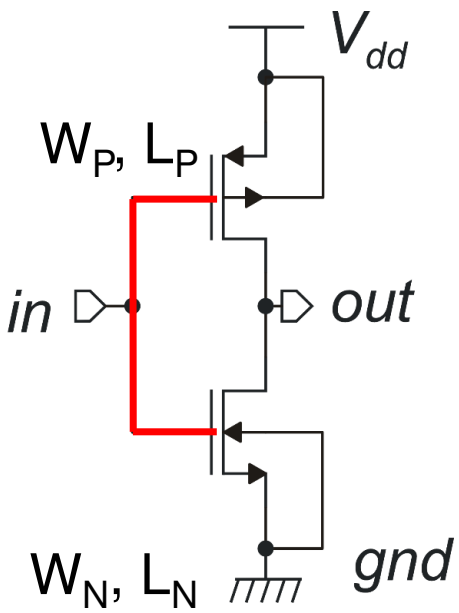


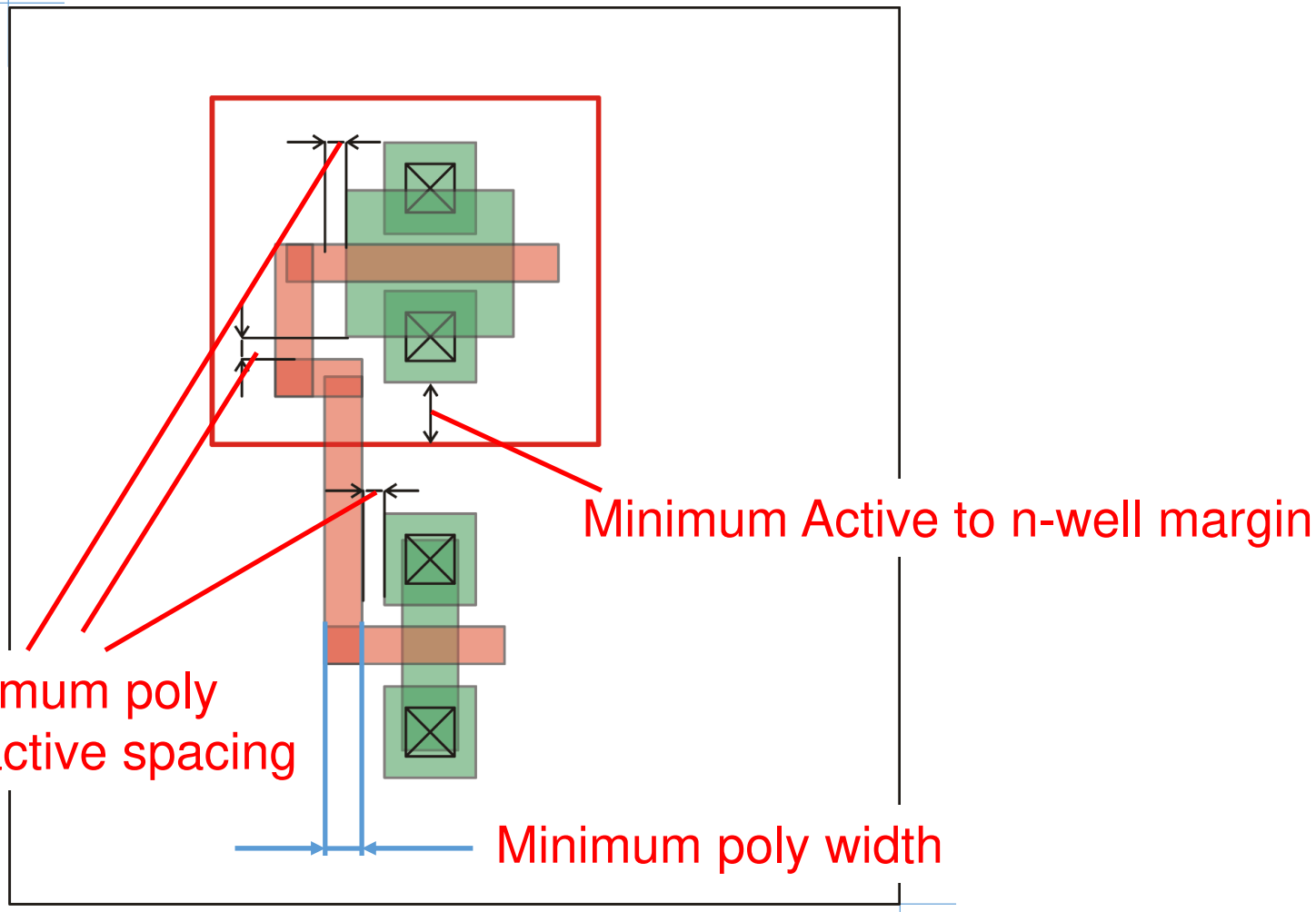
Reduce the active extension to the minimum



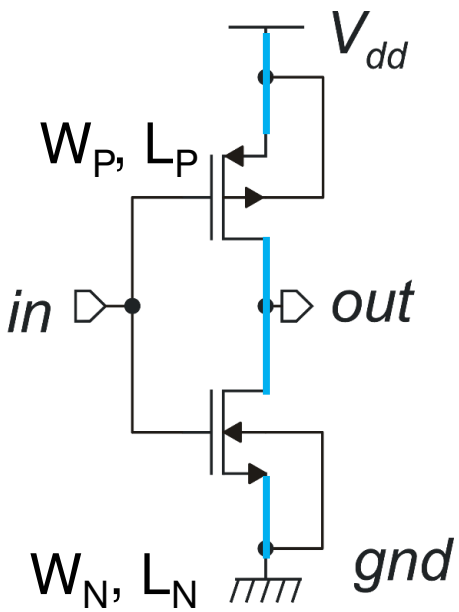


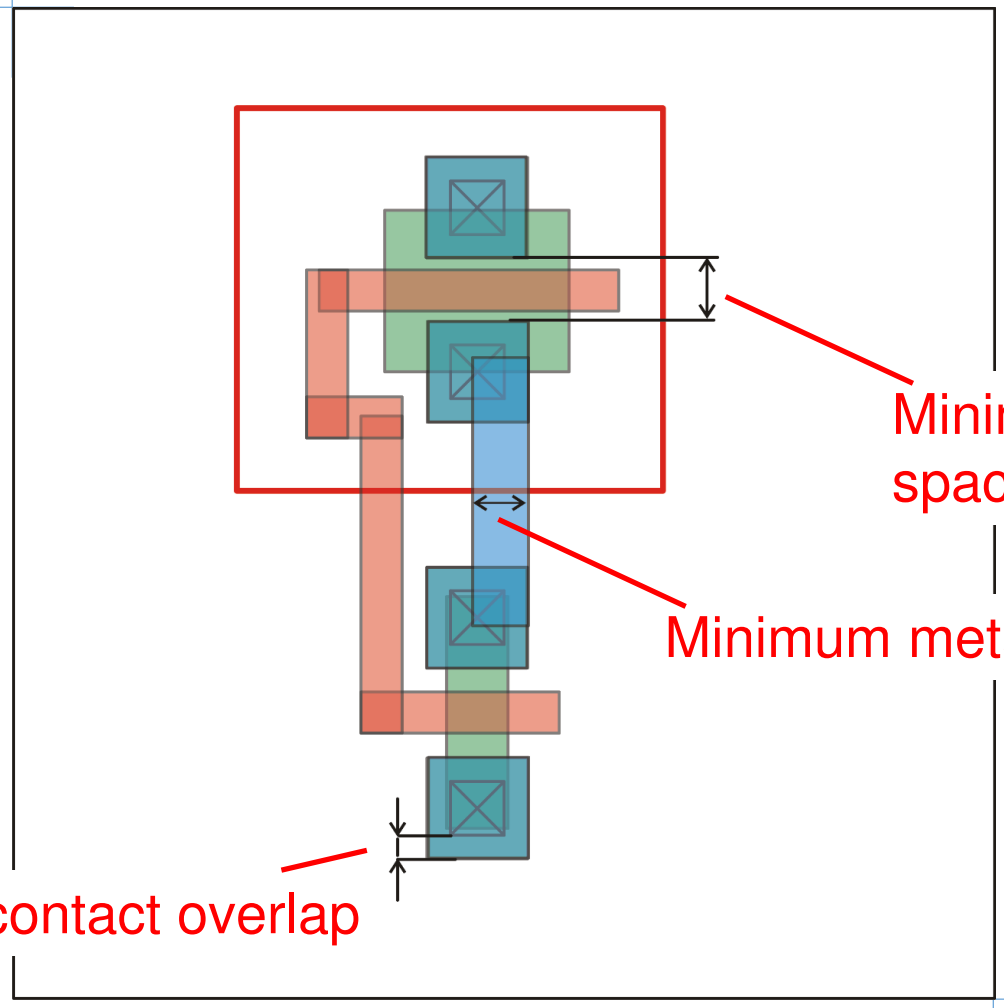
Connect the gates of the n-MOS and p-MOS





Introduce the metal-1 connections



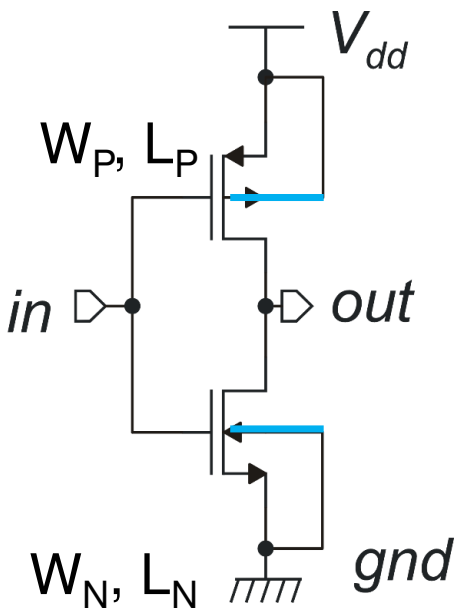


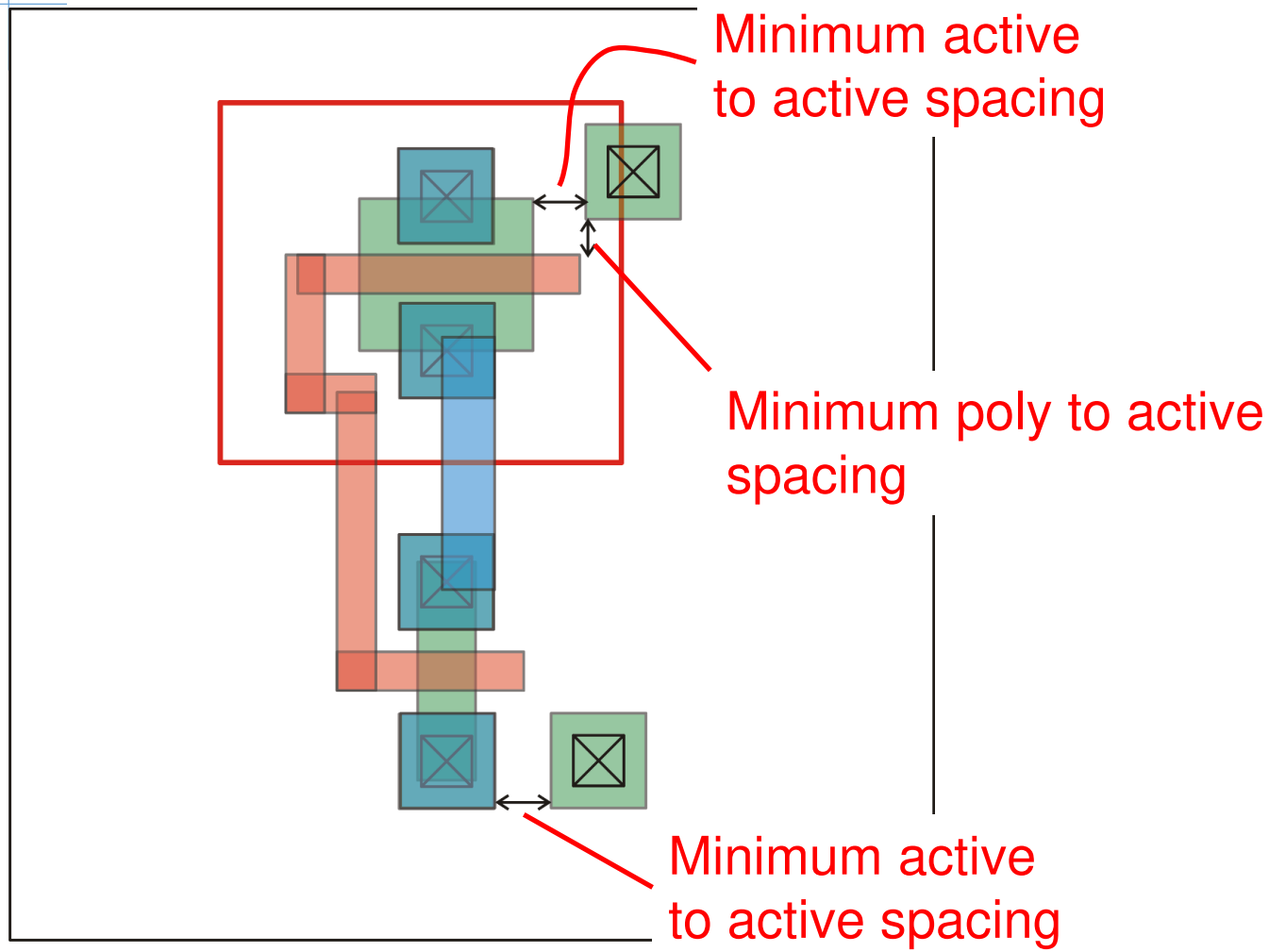
Minimum metal1 to metal1 spacing

Minimum metal1 width

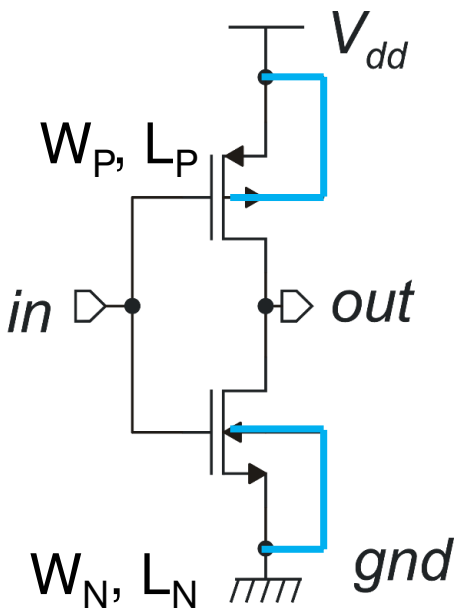
Metal 1 to contact overlap

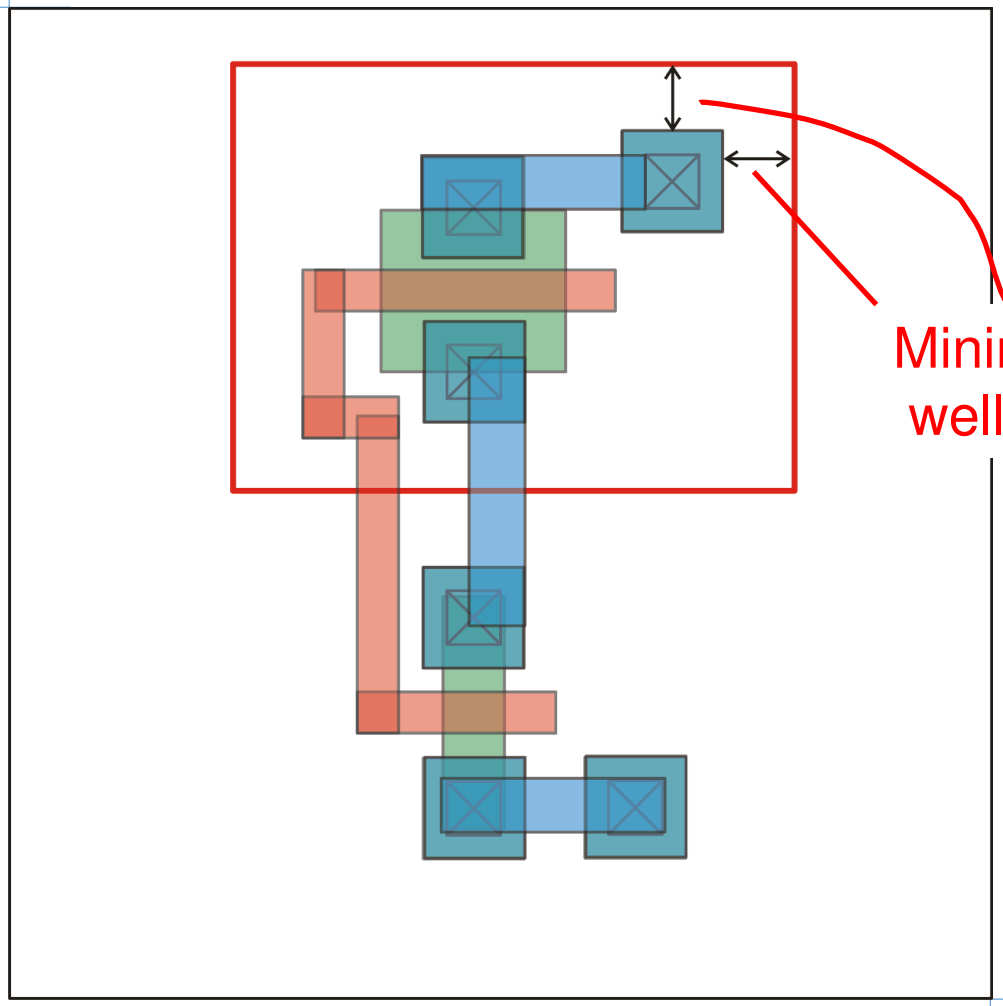
Introduce the substrate and n-well contacts



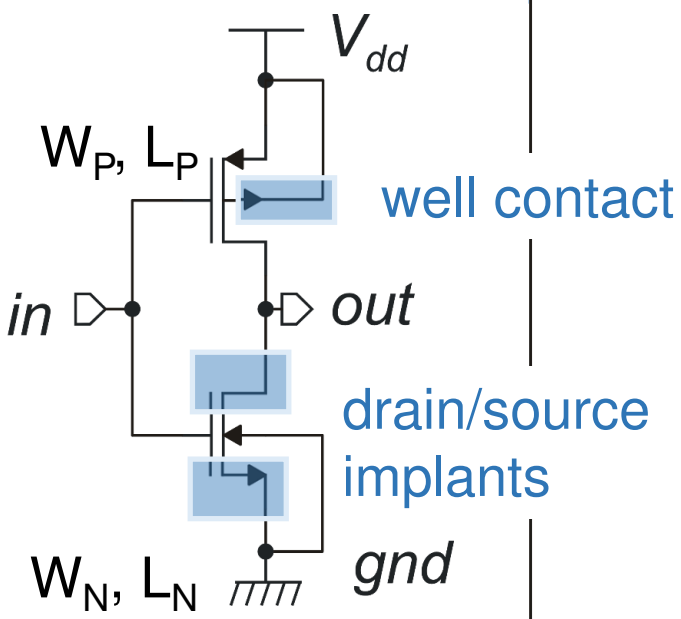


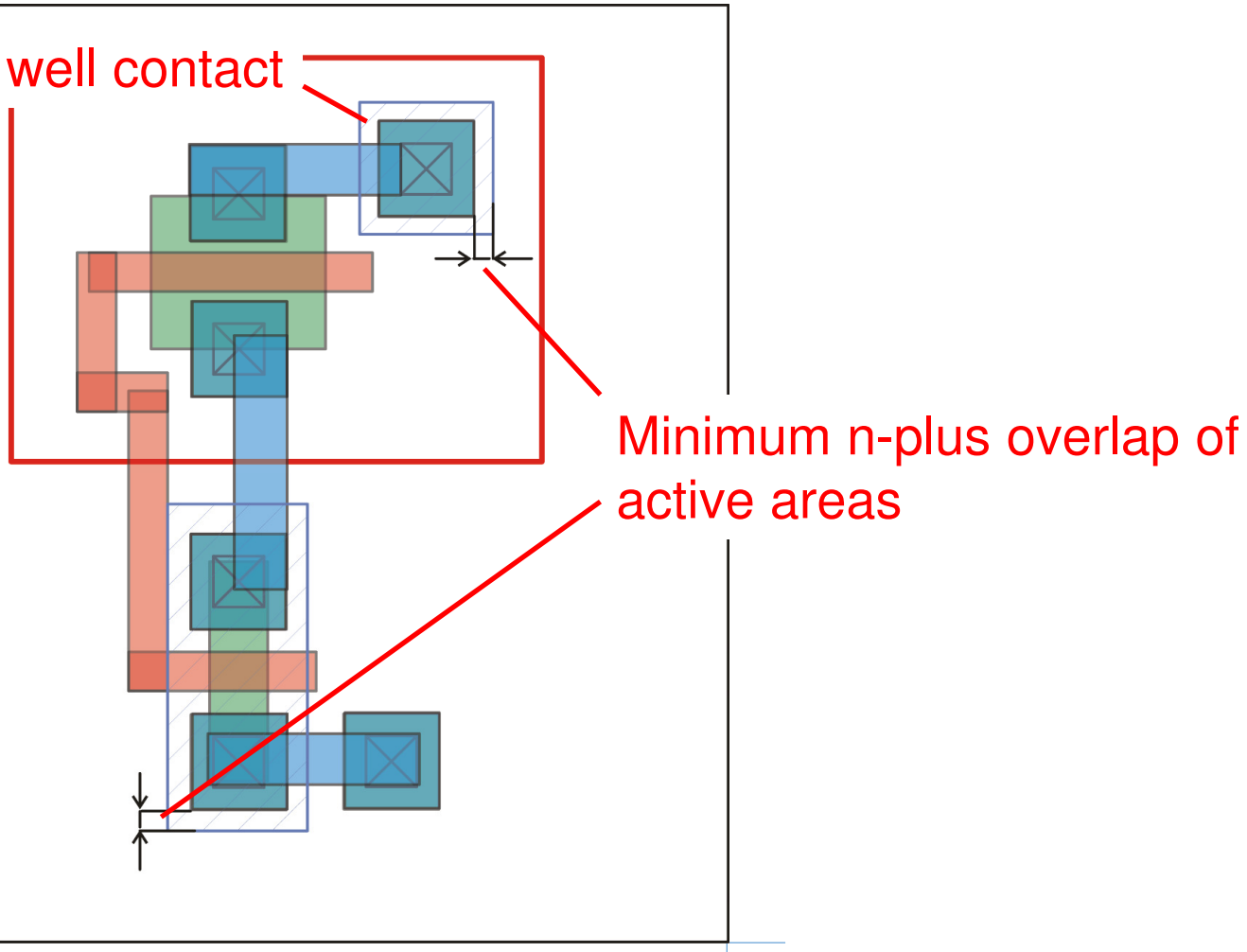
Resize the n-well to comply with all active margins.
Connect sources to bodies



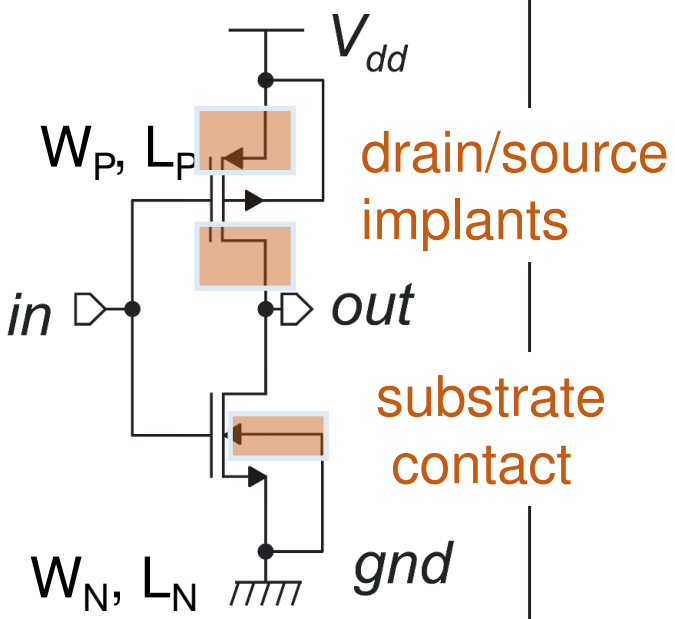


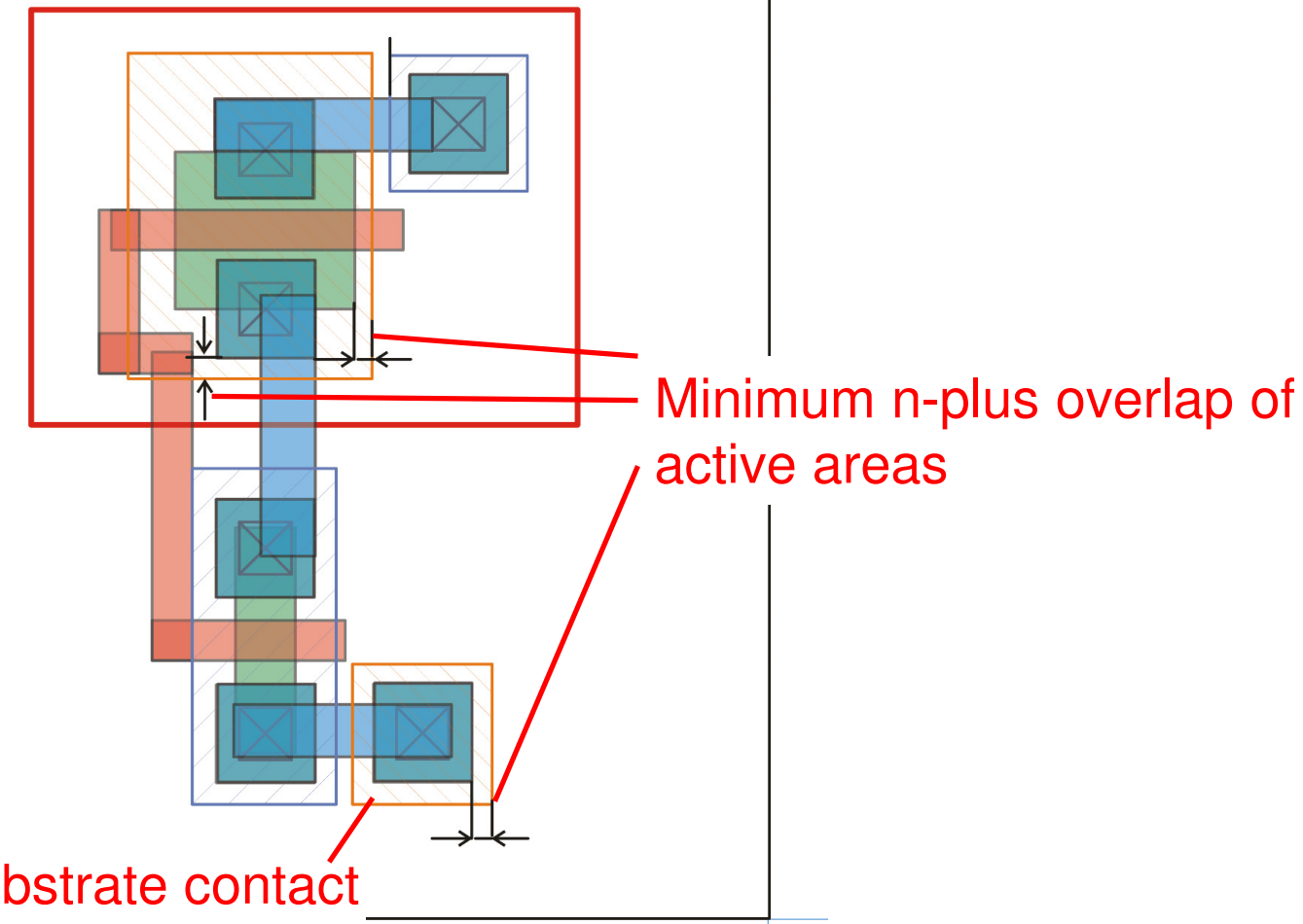
Cover all n-plus active areas with n-plus implant



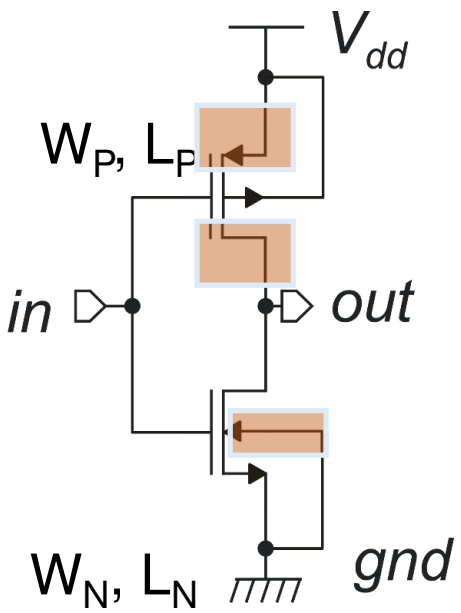


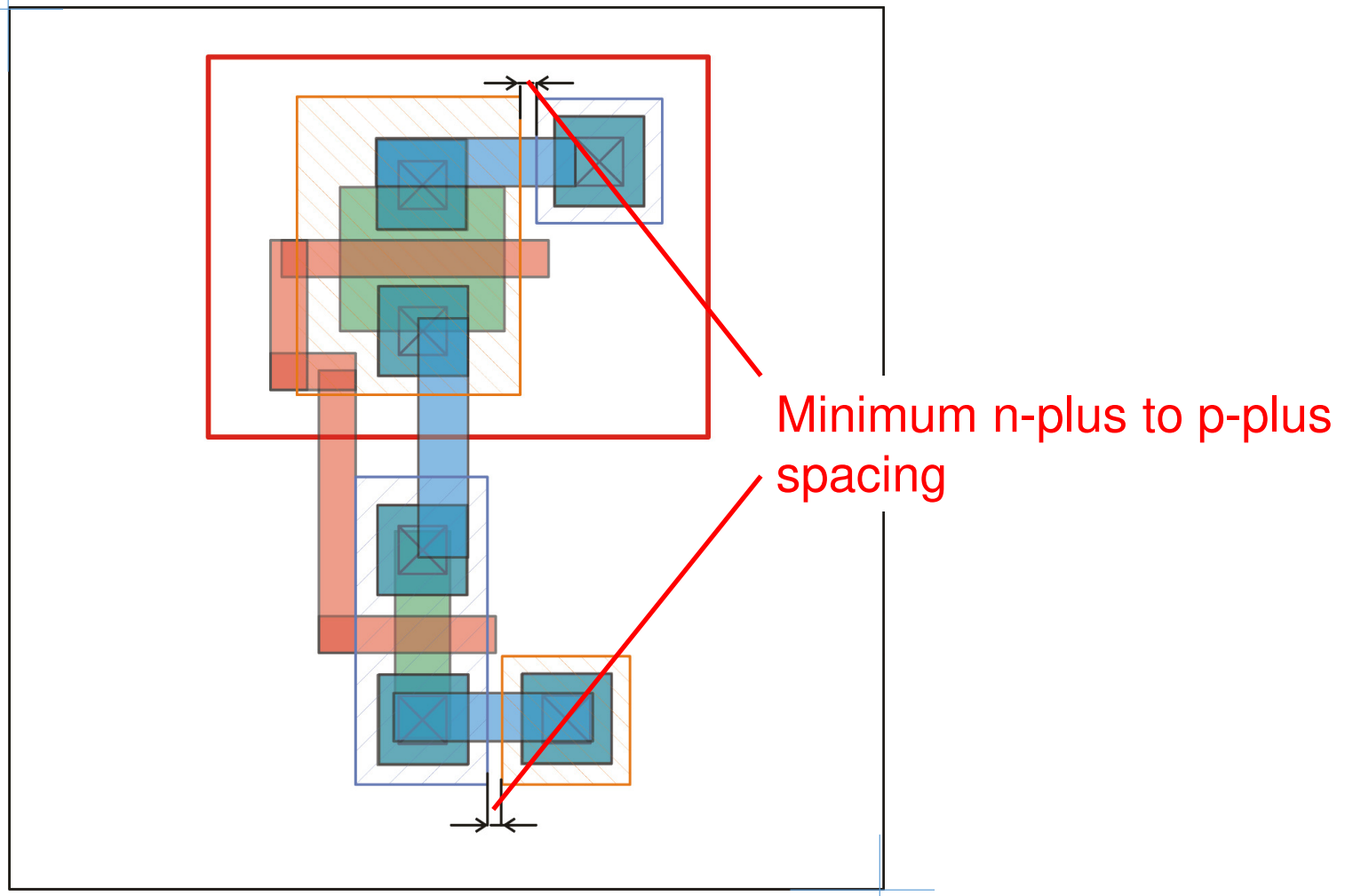
Same thing with p-plus active areas (p-plus implant)



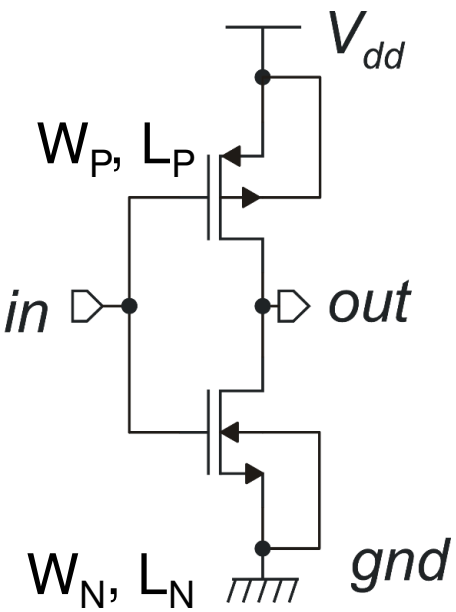


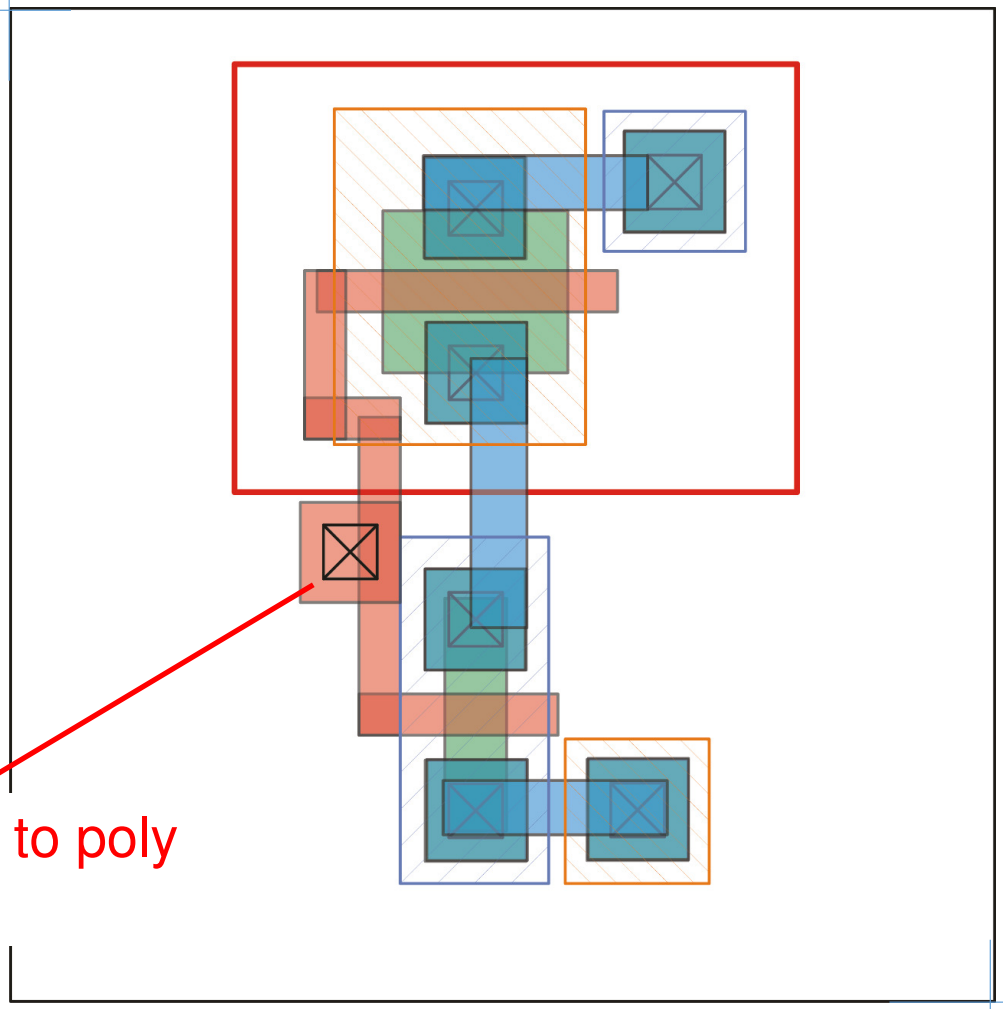
Same thing with p-plus active areas (p-plus implant)





Create a poly-metal1 contact if required





Margin of contact to poly on every-side

Create a poly-metal1 contact if required