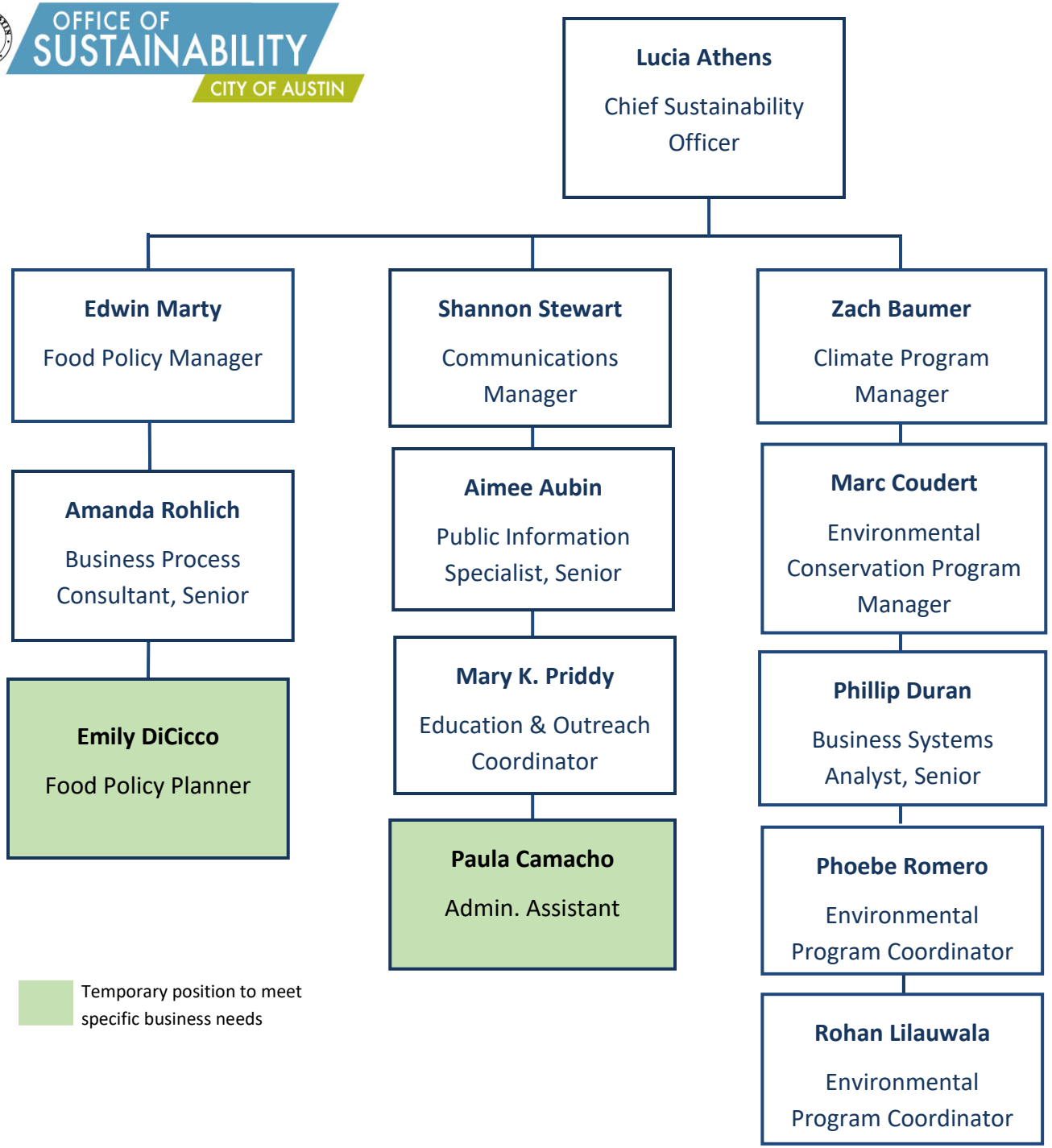updated 12/10/21