1. (High-level control) Design a controller for the state-space model in (1) such that the following LTL specification

is satisfied.  
3.a Extend the number of waypoints and define the new transition system. Requirements:

* There should be waypoints in all the different labeled areas.
* Every transition between two waypoints should represent a continuous trajectory of your state space model. Make sure that you do not have transitions in your transition system in which the corresponding continuous trajectory switches labels more than once.

3.b Design a controller for your finite transition system. If there does not exist a controller go back to 3.a and add extra waypoints.  
3.c Use the controller designed in Question 1 and the solution of 3.b to design a controller for the state space model (1) that ensures the satisfaction of the LTL specification. Give a simulation of this controller.