# Number	# Arms_down	# Alarm_on	# Northbound_present	# Southbound_present	# north_approach	# north_depart	# south_approach	# south_depart	# time_elapsed	safety_hazard	# Transition State
	0	0	0	0	0	0	0	0	0	0 No	0
	1	0	0	0	1	0	0	1	0	0 Yes 16, 17	
	2	0	0	1	0	1	0	0	0	0 Yes 16, 17	
	3	0	0	1	1	1	0	1	0	0 Yes 16, 17	
	4	0	1	0	0	0	0	0	0	1 No	0
	5	0	1	0	1	0	0	1	0	1 Yes 17	4
	6	0	1	1	0	1	0	0	0	1 Yes 17	4
	7	0	1	1	1	1	0	1	0	1 Yes 17	4
	8	1	0	0	0	0	0	0	0	0 No	4
	9	1	0	0	1	0	0	1	0	0 Yes 16	
	10	1	0	1	0	1	0	0	0	0 Yes 16	
	11	1	0	1	1	1	0	1	0	0 Yes 16	
	12	1	1	0	0	0	0	0	0	1 No	0
	13	1	1	0	1	0	0	0	1	1 No	0
	14	1	1	1	0	0	1	0	0	1 No	0
	15	1	1	1	1	0	1	0	1	1 No	0
Number	Invariant 16 The alarm remains active while a train is present.										
		down until all trains depar									
		s never cause unsafe sta									
			m stay on , or previous state								