$$U^{\text{AGV}}_{(m,i,\alpha_1)(n,j,\alpha_2)} + U^{\text{AGV}}_{(n,j,\alpha_2)(m,i,\alpha_1)} + 3 - P^Y_{(m,i,\alpha_1),y} - P^Y_{(n,j,\alpha_2),y} - \sum_{x=1}^{x'} \left(P^X_{(m,i,\alpha_1-1),x} + P^X_{(n,j,\alpha_2),x} - P^X_{(m,i,\alpha_1),x} - P^X_{(n,j,\alpha_2-1),x} \right) \geq 0,$$

$$\forall (m,i,\alpha_1), (n,j,\alpha_2) \in W^H \; \forall y \in Y^{\text{R}}, \; \forall x' \in X^{\text{R}}$$