

TABLE II. **Ablation study on TVR and TSR.** TVR is the proportion of steps where the target remains visible, and TSR is the percentage of trials where the target is visible at the final step. Both metrics (%) are evaluated under varying pedestrian counts (5 to 30) to assess the impact of adaptive sampling (Adap.) and trajectory prediction (Traj. Pred.).

Ablation		TVR / %						TSR / %					
Adaptive Trajectory Sampling	MPPI Controller	5	10	15	20	25	30	5	10	15	20	25	30
w/o Adap.	w/ Traj. Pred.	86.15	77.18	61.92	52.98	38.89	41.03	85.00	75.94	59.06	48.44	30.32	31.56
w/o Traj. Pred.	w/o Traj. Pred.	62.56	46.33	29.61	25.41	21.86	19.56	58.44	38.44	19.38	14.06	8.12	5.94
w/o Traj. Pred.	w/ Traj. Pred.	81.52	74.50	59.36	50.01	40.64	36.06	80.62	74.06	55.94	44.68	33.44	24.06
w/ Traj. Pred.	w/o Traj. Pred.	78.32	61.90	47.22	40.17	34.02	32.78	77.50	58.44	42.50	31.88	25.31	21.25
w/ Traj. Pred.	w/ Traj. Pred.	91.96	79.68	70.40	58.76	55.68	44.26	91.25	77.18	65.94	51.88	47.82	34.38