

TABLE II
POTHOLE DETECTION ACCURACY (IN PERCENTAGE %) FOR DIFFERENT DENSITY RESOLUTIONS OF THE POINT CLOUD MODELS.

Models	Original		$\sim 0.5 * \text{Original}$		$\sim 0.1 * \text{Original}$		$\sim 0.05 * \text{Original}$	
Model 1	RP = 100	NR = 0	RP = 100	NR = 0	RP = 100	NR = 0	RP = 100	NR = 0
	NP = 0.44	RR = 99.56	NP = 0.40	RR = 99.60	NP = 0.68	RR = 99.32	NP = 0.89	RR = 99.11
Model 2	RP = 100	NR = 0	RP = 100	NR = 0	RP = 99.38	NR = 0.62	RP = 100	NR = 0
	NP = 0.65	RR = 99.35	NP = 0.58	RR = 99.42	NP = 0.98	RR = 99.02	NP = 1.22	RR = 98.78
Model 3	RP = 100	NR = 0	RP = 100	NR = 0	RP = 100	NR = 0	RP = 100	NR = 0
	NP = 0.41	RR = 99.59	NP = 0.36	RR = 99.64	NP = 0.63	RR = 99.37	NP = 0.74	RR = 99.26
Model 4	RP = 99.91	NR = 0.08	RP = 100	NR = 0	RP = 100	NR = 0	RP = 100	NR = 0
	NP = 0.45	RR = 99.55	NP = 0.41	RR = 99.59	NP = 0.76	RR = 99.24	NP = 0.93	RR = 99.07
Model 5	RP = 100	NR = 0	RP = 100	NR = 0	RP = 99.36	NR = 0.64	RP = 100	NR = 0
	NP = 0.62	RR = 99.38	NP = 0.56	RR = 99.44	NP = 0.86	RR = 99.14	NP = 1.25	RR = 98.75
Model 6	RP = 100	NR = 0	RP = 99.57	NR = 0.43	RP = 100	NR = 0	RP = 100	NR = 0
	NP = 0.52	RR = 99.48	NP = 0.46	RR = 99.54	NP = 0.78	RR = 99.22	NP = 1.22	RR = 98.78
Model 7	RP = 99.92	NR = 0.08	RP = 100	NR = 0	RP = 99.15	NR = 0.85	RP = 100	NR = 0
	NP = 0.47	RR = 99.53	NP = 0.44	RR = 99.56	NP = 0.80	RR = 99.20	NP = 1.10	RR = 98.90
Model 8	RP = 100	NR = 0	RP = 100	NR = 0	RP = 100	NR = 0	RP = 100	NR = 0
	NP = 0.48	RR = 99.52	NP = 0.44	RR = 99.56	NP = 0.73	RR = 99.27	NP = 1.06	RR = 98.94
Model 9	RP = 100	NR = 0	RP = 99.13	NR = 0.87	RP = 100	NR = 0	RP = 100	NR = 0
	NP = 0.45	RR = 99.55	NP = 0.37	RR = 99.63	NP = 0.65	RR = 99.35	NP = 0.96	RR = 99.04
Model 10	RP = 99.92	NR = 0.08	RP = 100	NR = 0	RP = 100	NR = 0	RP = 100	NR = 0
	NP = 0.42	RR = 99.58	NP = 0.38	RR = 99.62	NP = 0.68	RR = 99.32	NP = 0.84	RR = 99.16
Model 11	RP = 100	NR = 0	RP = 100	NR = 0	RP = 100	NR = 0	RP = 98.56	NR = 1.44
	NP = 0.59	RR = 99.41	NP = 0.51	RR = 99.49	NP = 0.95	RR = 99.05	NP = 1.03	RR = 98.97
Model 12	RP = 100	NR = 0	RP = 99.36	NR = 0.64	RP = 100	NR = 0	RP = 100	NR = 0
	NP = 0.44	RR = 99.56	NP = 0.36	RR = 99.64	NP = 0.64	RR = 99.36	NP = 0.81	RR = 99.19
Model 13	RP = 99.96	NR = 0.04	RP = 100	NR = 0	RP = 100	NR = 0	RP = 100	NR = 0
	NP = 0.42	RR = 99.58	NP = 0.38	RR = 99.62	NP = 0.65	RR = 99.35	NP = 0.79	RR = 99.21
Average	RP = 99.98	NR = 0.02	RP = 99.85	NR = 0.15	RP = 99.83	NR = 0.17	RP = 99.88	NR = 0.11
	NP = 0.49	RR = 99.51	NP = 0.43	RR = 99.57	NP = 0.75	RR = 99.25	NP = 0.99	RR = 99.01%

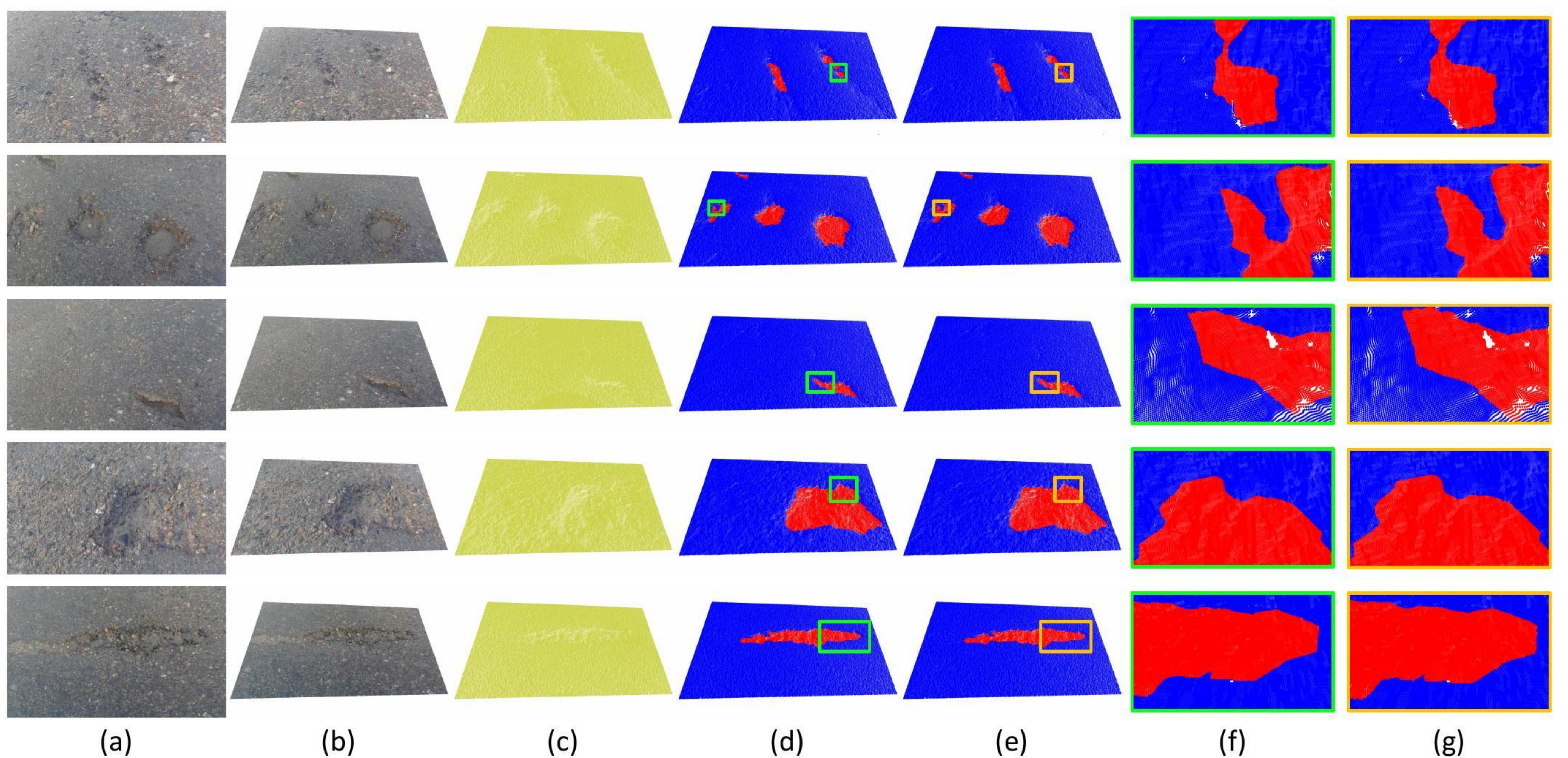


Fig. 15. Pothole detection on real data [64]. (a) RGB images of potholes, (b) corresponding point cloud of potholes with texture, (c) point cloud of potholes, (d) ground truth binary mask of potholes, (e) estimated binary mask of potholes, (f) enlarged details of the ground truth point cloud, (g) enlarged details of the estimated point cloud.