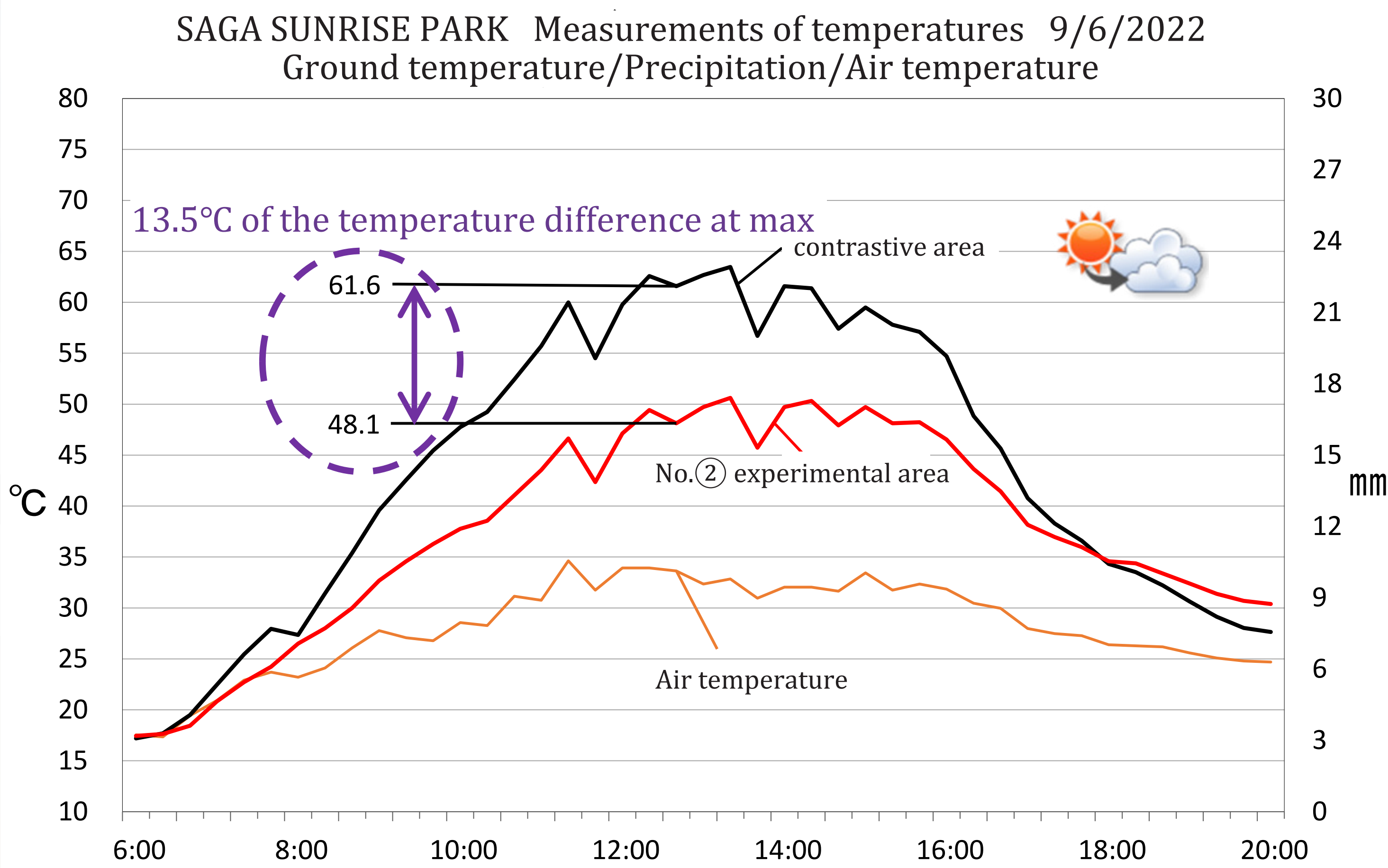


FWG • Permeability & Water-Retention Pavement System[®]

A pavement, which has an ability to permeate and retain of water is effective to lower the temperature of the road-surface, as long as keeps in moisture. However, if the pavement runs dry, it can no longer lower the temperature. In 2022, an experiment was carried out to measure the differences of the ground-temperature at a lot of SAGA SUNRISE PARK (Saga city), where a water level of the underground is high. The experiment had been conducting over 118 days, since Jun.9 to Oct.4, on the experimental area which applied FWG • Permeability & Water-Retention Pavement System, also the contrastive area next to the experimental area as well.

Note: The experimental area was divided into two parts (No.① and ②). No.① with one absorbent pole /m² while No.② with two absorbent poles /m²

Comparison of the temperatures of the surfaces



Between No.② experimental area and the contrastive area;

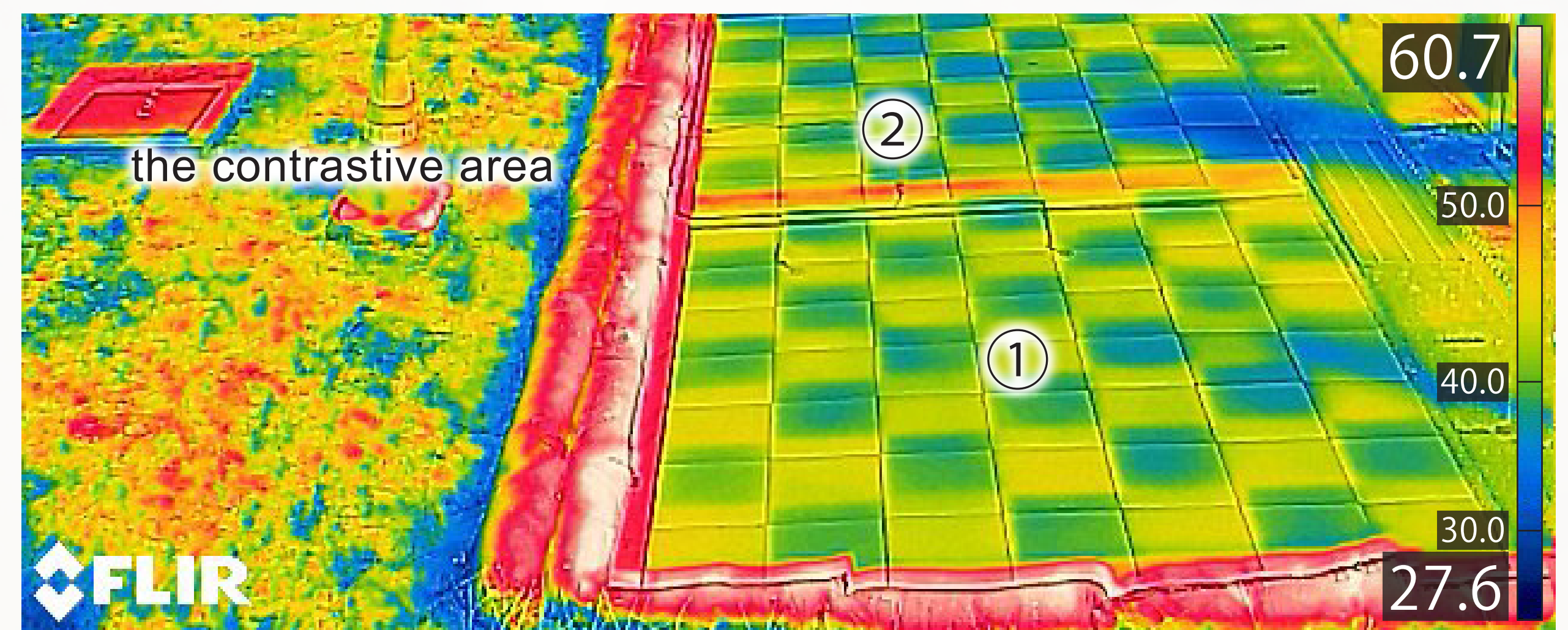
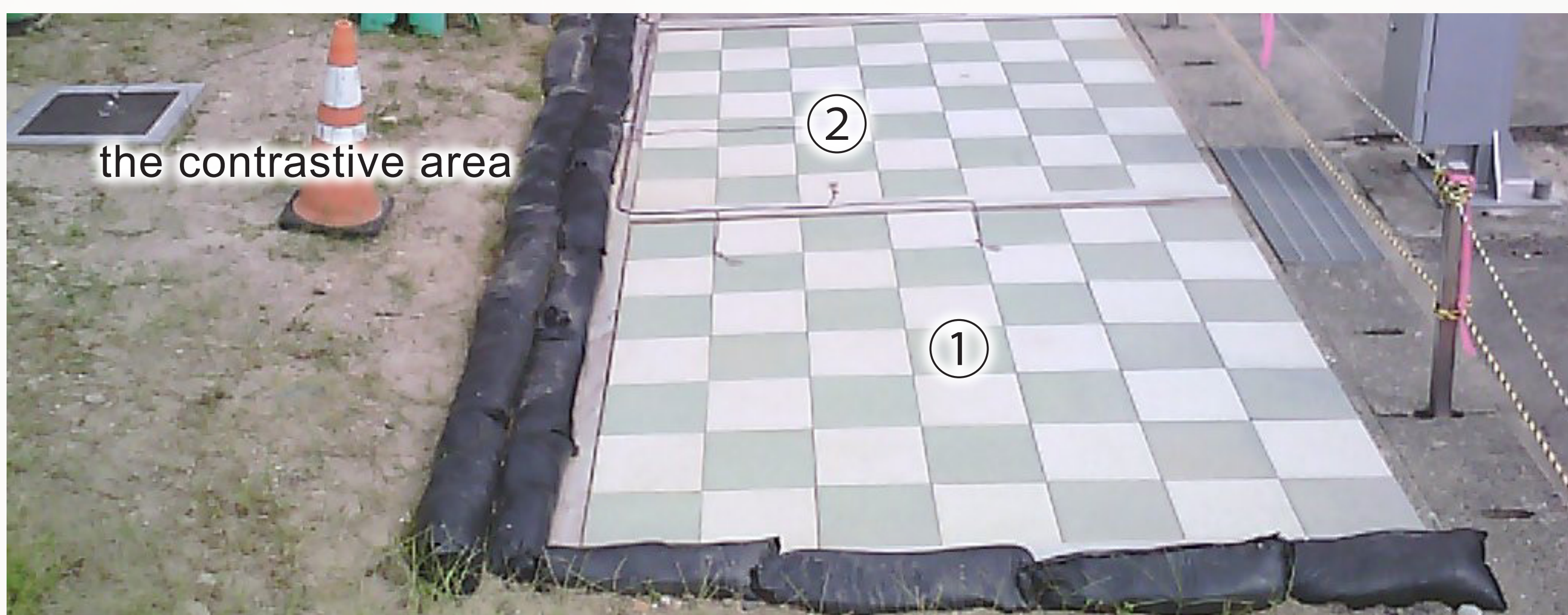
- The maximum temperature difference was 13.5°C, on Jun.9
- There were 88 days whose temperature differences of above 5°C at max. It accounts for 74.6% of total fixed period of time, and 25 days of above 10°C differences, accounts for 21.2%.

The number of days whose temperature differences were above 5°C at max on each experimental areas(No.①, ②). And the maximum temperature differences.

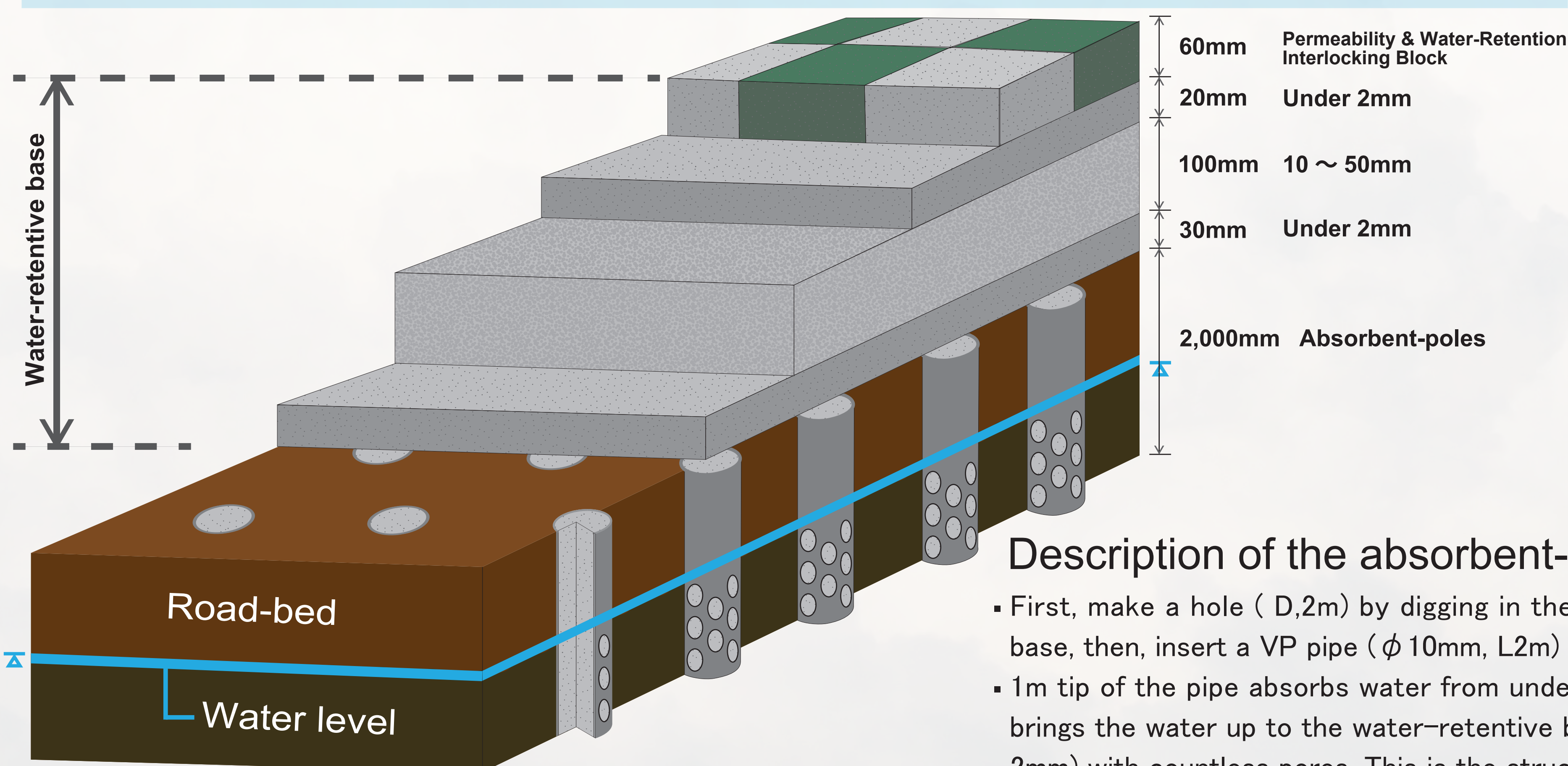
The experimental areas	Total (rate in total)	The maximum temperature differences
①	71days (60.2%)	11.4°C
②	88days (74.6%)	13.5°C

※ It was confirmed that the ground-temperature of No.② experimental area where two absorbent poles /m² were embedded in the underground, showed a larger number of differences, compared to No.① experimental area where one absorbent pole /m² was embedded.

Comparison with a thermograph



FWG • Permeability & Water - Retention Pavement System utilizing underground water[®]
Cross section of FWG • Permeability & Water - Retention Pavement System
absorbing underground water[®]



Shapes of Miracle Sol



Water-absorbent Miracle Sol
10 ~ 50mm (WG-04)

Description of the absorbent-pole

- Note: D(depth) φ(caliber) L(length)
- First, make a hole (D,2m) by digging in the road-bed where underneath the water-retentive base, then, insert a VP pipe (φ 10mm, L2m) into the hole, lastly, fill the pipe with Miracle Sol.
 - 1m tip of the pipe absorbs water from underground through some pits previously made, then, brings the water up to the water-retentive base by its capillary action of the Miracle Sol(under 2mm) with countless pores. This is the structure of the system.

